

DIGITAL MARKETING COMPANY

# Website Auditor

## Complete Metrics & Scoring Guide

Version 5.2 • Reference edition: October 9, 2026

### **540 catalog entries across 12 scoring dimensions**

471 unique top-level fields + 50 extension checks + 19 coverage checks = 540.

**What gets measured. What it represents. How to act on the evidence.**

A website audit should help you make a better decision, not leave you with a mysterious number. This guide preserves the factor-and-explanation approach of the earlier edition, adds the current coverage work, and provides an individually numbered reference for every entry in the implementation-derived catalog.

Important distinction: this is a field-and-check inventory, not a count of independent tests. Fields include measurements, heuristic estimates, configuration values and contextual evidence. A field can support several rules. A check may be inapplicable or have no evidence on a given page. Nothing here certifies Google indexing, legal compliance, WCAG conformance or a complete security assessment.

PDF generation is deterministic JavaScript with embedded fonts. It does not use an AI model or a metered document-generation API.

Website: [digitalmarketingco.org/free-website-auditor](https://digitalmarketingco.org/free-website-auditor)

Online guide: [digitalmarketingco.org/website-auditor-scoring-guide](https://digitalmarketingco.org/website-auditor-scoring-guide)

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Part I explains the method and the twelve dimensions. Part II lists every catalog entry. Part III records exact base-engine conditional deductions. The printed page numbers below are generated from this document.

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# 1. How to read the total

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Think of the catalog as your toolbox and the report as one inspection. A partial response can leave tools unused; it should not make the toolbox shrink. The headline now comes from the complete source inventory on every build, rather than the last scan stored in the database.

A distinct new parser output or top-level network field adds one field. Reusing the same field in another dimension does not add another. A distinct extension identifier adds one check; pass and fail outcomes sharing that identifier count once. Coverage checks are counted by their unique implementation identifiers. Rewording a recommendation changes no count.

The previous v5.1 headline was 521; v5.2 added 19 passive coverage checks, giving 540. This reference verifies that current inventory. This maintenance update does not invent additional metrics merely to make the total larger. Future additions rebuild the catalog and the downloadable PDF from the same source.

Optional fields belong to supported capacity even when a particular probe or screenshot is unavailable. Transport fields and screenshot references are counted in the legacy field-signal convention but are explicitly contextual, not independent scoring tests. Removing an obsolete entry correctly lowers capacity rather than retaining a misleading historical maximum.

## 2. How scoring works

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Each dimension begins at 100. Applicable base rules subtract points. Extension issue/recommendation outcomes may also subtract points; a positive finding subtracts none. Coverage failures subtract 2 points in their own dimension. Coverage review and not-applicable results subtract none. The dimension is clamped to 0–100.

The content-substance gate then caps scores on thin or empty pages. The cap interpolates between a dimension floor and 100 using the implementation’s substance measure. Floors: content dimensions 12; accessibility, WCAG and mobile 30; performance 45; security 55. This prevents an empty page from receiving a strong score simply because there was little to inspect.

The final score is the rounded weighted sum of those capped dimension scores, clamped to 0–100. The weights below sum to 100%; metrics themselves do not each carry an equal share of the final score.

**SEO: 15%**

**Performance: 14%**

**Security: 10%**

**AI Readiness: 10%**

**AIO (AI Optimization): 9%**

**Accessibility: 8%**

**GEO (Generative Engine Optimization): 8%**

**Mobile & PWA: 8%**

**AEO (Answer Engine Optimization): 6%**

**Schema.org: 6%**

**Local SEO: 4%**

**WCAG (Web Content Accessibility Guidelines): 2%**

The condition tables are internal scoring rules, not statements of Google’s ranking algorithm. Performance proxies inferred from source are not browser or field measurements. Security signatures are leads for investigation, not confirmed exploitability. Structured data never guarantees a rich result; only mark up content actually present and eligible.

Grouped factor explanations retain the earlier guide’s teaching structure. Old fixed deduction badges have been replaced with the current source-derived conditional rubric in Part III. Use that rubric and actual report evidence when estimating score changes, rather than adding grouped factors as if they were independent penalties.

## 3. What changed in the current edition

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Canonical consolidation is reviewed in context: a different canonical is not automatically wrong. Intentional noindex restrictions remain valid. Google-scoped robots headers are distinguished from directives for other crawlers. Optional llms.txt absence and obsolete SearchAction presence do not by themselves determine eligibility.

The v5.1 additions cover duplicate metadata, encoding, legacy frames, image and layout hygiene, DOM size, caching, minification, document.write and additional performance proxies. The v5.2 coverage checks add canonical placement and form, pagination review, indexing/snippet instructions, unresolved link templates, image priority, responsive sizing, ARIA references, breadcrumb positions, coordinates and publication-date order.

### Multiple Title Tags · v5.1

Whether the multiple title tags signal was detected. Multiple <title> tags detected ([observed value]) — search engines may use an unintended title

### Title Tag Count · v5.1

Number of title elements in the HTML. This is the measured count underlying the multiple-title warning.

### Multiple Meta Descriptions · v5.1

Whether the multiple meta descriptions signal was detected. Multiple meta descriptions detected ([observed value]) — engines may ignore them or pick the wrong one

### Meta Description Count · v5.1

Number of meta description elements. More than one can create ambiguous snippet instructions.

### Meta Keywords Length · v5.1

Character length of the meta keywords value. This is descriptive metadata; Google does not use the meta keywords tag for web search ranking.

### Hreflang Element Count · v5.1

The recorded hreflang element count value. [observed value] hreflang annotation(s) present for international targeting

### Meta Refresh Url · v5.1

Destination declared by a meta refresh instruction, when present. Inspect the destination and prefer an appropriate server redirect where possible.

### Nofollow Internal Links · v5.1

Numeric value for nofollow internal links. [observed value] internal link(s) use rel="nofollow" — this wastes internal link equity

### Charset Type · v5.1

The recorded charset type value. Character encoding declared as [observed value]

### Content Type Header · v5.1

The HTTP Content-Type response value, including its declared character encoding when supplied.

### Conflicting Character Encoding · v5.1

Whether the conflicting character encoding signal was detected. Conflicting character-encoding declarations detected — can cause garbled text and indexing issues

## **Has Frames · v5.1**

Whether the frames signal was detected. Legacy frames/framesets detected ([observed value]) — content inside frames is poorly indexed

## **Frameset Count · v5.1**

Number of legacy frameset elements detected; these are separate from modern iframe embeds.

## **Css Validation Hints · v5.1**

The observed list of css validation hints. Inline CSS validation hints: [observed value]

## **Broken Images · v5.1**

Numeric value for broken images. [observed value] image(s) have a missing or empty src — broken images hurt UX and image search

## **Images Without Dimensions · v5.1**

Numeric value for images without dimensions. [observed value] image(s) lack explicit width/height — a common cause of layout shift (CLS)

## **Animated Gif Count · v5.1**

Numeric value for animated gif count. [observed value] animated GIF(s) detected — GIFs are far larger than modern video formats

## **Dom Element Count · v5.1**

The recorded dom element count value. Excessive DOM size ([observed value] elements) — increases memory use and slows rendering

## **Has Efficient Cache Policy · v5.1**

Whether the efficient cache policy signal was detected. Efficient cache policy on the document ([observed value])

## **Cache Control Value · v5.1**

The received Cache-Control header used to explain the cache-policy assessment. The right policy depends on whether content is public or sensitive.

## **Css Minified · v5.1**

Whether the css minified signal was detected. Inline CSS does not appear minified

## **Js Minified · v5.1**

Whether the js minified signal was detected. Inline JavaScript does not appear minified

## **Document Write Count · v5.1**

The recorded document write count value. document.write() used [observed value] time(s) — blocks the parser and delays rendering

## **Speed Index Estimate Ms · v5.1**

Deterministic Speed Index proxy in milliseconds inferred from source and resource composition. Not a browser paint measurement or field-data result.

## **Tti Estimate Ms · v5.1**

Deterministic time-to-interactive proxy in milliseconds. It is not measured interactive readiness on a real device.

## **Tbt Estimate Ms · v5.1**

Deterministic total-blocking-time proxy in milliseconds. It is not measured browser long-task duration.

## **Canonical absolute · v5.2**

Canonical must be an absolute HTTP(S) URL.

## **Canonical fragment · v5.2**

Canonical must not identify a fragment.

## **Canonical credentials · v5.2**

Canonical must not expose URL credentials.

## **Canonical head · v5.2**

Canonical annotations belong in the document head.

## **Pagination canonical · v5.2**

Distinct paginated content needs its own canonical; review whether this URL is a duplicate filter.

## **Pagination noindex · v5.2**

Review noindex on genuine pagination; preserve exclusions for filtered duplicates.

## **Header meta index conflict · v5.2**

Conflicting index directives: the more restrictive directive applies.

## **Snippet eligibility · v5.2**

Noindex/nosnippet/max-snippet:0 limits eligibility for Google AI supporting links; intentional restrictions are not errors.

## **Main snippet exclusion · v5.2**

Review whether all main content is excluded from search snippets.

## **Citation placeholder links · v5.2**

Content links must not contain unexpanded template placeholders.

## **Answer snippet exclusion · v5.2**

Review snippet exclusions on marked-up answers; do not add answer markup to unrelated pages.

## **High priority lazy image · v5.2**

High-priority images should not be lazy-loaded; actual LCP requires a browser measurement.

## **Responsive sizes width descriptors · v5.2**

Width-descriptor srcsets without sizes default to viewport width; verify download sizing.

## **Aria labelledby targets · v5.2**

Every aria-labelledby reference must resolve to an existing element.

## **Aria describedby targets · v5.2**

Every aria-describedby reference must resolve to an existing element.

## **Breadcrumb sequence · v5.2**

Breadcrumb positions must form a consecutive sequence beginning at 1.

### **Geo coordinate ranges · v5.2**

Published geographic coordinates must be numeric and within valid ranges.

### **Publication date order · v5.2**

Article dates must parse and modification must not precede publication.

### **Url template links · v5.2**

Search templates belong in metadata, not literal crawlable links.

## 4. SEO — 15%

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SEO evaluates on-page search engine optimization fundamentals: title tags, meta descriptions, heading hierarchy, canonical tags, link architecture, keyword targeting, E-E-A-T signals, readability metrics, Open Graph / Twitter Card completeness, and content depth signals that determine organic search visibility.

### Factor / What it represents / Why it matters

#### Title Tag Presence & Length

The <title> element is the single most important on-page SEO signal. Google displays it in SERPs and uses it for ranking. Optimal length is 50–60 characters (Google 2025–2026 recommendation); shorter titles waste ranking potential, longer titles get truncated.

#### Meta Description Presence & Length

Meta descriptions generate the snippet text in SERPs. A missing or poorly-sized description (optimal: 120–160 chars) leads Google to auto-generate snippets, often yielding lower click-through rates.

#### Meta Keywords Tag

The legacy engine records this field and applies a small internal rubric deduction when missing. Google does not use meta keywords for web search ranking; this internal score is not a Google ranking rule.

#### H1 Heading (Count & Content)

Exactly one H1 per page is best practice. Multiple H1s dilute topical focus; a missing H1 removes the primary heading signal. We also check whether the H1 contains your primary keyword (h1ContainsKeyword).

#### Heading Hierarchy (H2–H6)

We parse the full heading hierarchy (h2Count, h3Count, headingCount) and detect heading gaps — skipping from H2 to H4, for example, breaks semantic structure and confuses crawlers.

#### Canonical Tag & Consistency

Missing or multiple canonical annotations are scored. A different canonical URL can intentionally consolidate equivalent content and receives no mismatch penalty. Distinct pagination normally needs its own canonical.

#### Open Graph Tags (Completeness)

We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

#### Twitter Card Tags

Separate from OG, Twitter cards require twitter:card, twitter:title, twitter:description, twitter:image. We verify twitterCardType (summary\_large\_image is optimal) and flag twitterMissing tags.

#### Social Sharing Completeness

We calculate ogSharingCompleteness (0–100) combining OG + Twitter Card coverage. We also detect social share widgets (hasSocialShareButtons, socialShareWidgets) that amplify content distribution.

#### Image Alt Text Coverage

Every image needs descriptive alt text. We count imagesWithoutAlt and imagesWithEmptyAlt separately — empty alt="" is valid only for decorative images. Missing alt text loses both SEO image ranking and accessibility.

## Internal Link Architecture

We measure internalLinks, internalLinkRatio, internalLinkDensityPer1k (links per 1,000 words), and anchorTextDiversity. A ratio below 0.5 or density below 2 per 1k words signals poor internal linking.

## External Link Quality

We count externalLinks, externalLinksWithoutRel (missing noopener/noreferrer), and analyze the dofollowExternalLinks vs. nofollowExternalLinks ratio (externalLinkDofollowRatio). Excessive dofollow outbound links dilute PageRank.

## Broken & Empty Links

brokenAnchors (href="#" or empty href) and emptyLinks waste crawl budget and create dead-end user experiences. We also detect internalBrokenLinkPatterns for systematic link rot.

## URL Length & Structure

URLs over 75 characters are harder to share and may be truncated in SERPs. We measure urlLength and check keywordInUrl for topical relevance.

## Keyword Targeting & Density

We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

## Content Depth & Word Count

wordCount, paragraphCount, and avgWordsPerParagraph measure content substance. Pages under 300 words are flagged as thinContentSignal. We also check titleH1Overlap — high overlap suggests lazy optimization.

## Readability & Writing Quality

fleschReadingEase measures text complexity (60–70 is ideal for web). passiveVoiceRatio above 20% reduces engagement. contentReadabilityHints provide specific improvement suggestions.

## E-E-A-T Signals

We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

## Robots Meta & Directives

hasRobotsMeta and robotsContent describe indexing instructions. A canonical does not override noindex. Intentional exclusions are reviewed rather than automatically penalized; where directives conflict, the more restrictive instruction applies.

## Favicon & Touch Icons

hasFavicon and hasAppleTouchIcon affect brand recognition in browser tabs, bookmarks, and mobile home screens. Missing favicons look unprofessional in SERPs.

## Doctype & Charset

A valid doctype declaration and hasCharset (UTF-8) ensure proper rendering across all browsers and correct character encoding for international content.

## Deprecated HTML Tags

deprecatedTags like <font>, <center>, <marquee> signal unmaintained code and may cause rendering inconsistencies across modern browsers.

## Meta Refresh Redirect

metaRefresh redirects are discouraged by Google — they prevent proper HTTP status code handling, confuse crawlers, and degrade user experience.

## Redirect Chain Length

Each hop in a redirectChainLength wastes crawl budget and adds latency. More than 2 redirects signals poor URL management.

## Title-Brand Suffix Duplication

titleBrandSuffixDuplicated detects "| Brand | Brand" patterns where the brand name appears twice in the title, wasting valuable character space.

## Cloudflare Email Obfuscation

cfEmailObfuscationDetected with high cfEmailObfuscationCount can interfere with crawlers parsing contact information and may affect E-E-A-T signals.

## Zero-Click Optimization

zeroClickOptimized checks for TL;DR blocks (tldrBlockCount), definition lead paragraphs (definitionLeadParagraphs), and hasTableOfContents — content patterns that win featured snippets and AI Overviews.

## Entity Salience & Mentions

entitySalienceScore measures how prominently key entities appear. relatedEntityMentions and entityMentions help search engines build topical authority graphs.

## Bingeworthy Content Signals

bingeworthySignals detect internal content loops, "related posts" sections, and series navigation that increase session duration and pages per visit.

## Enhanced OG Image & Article Dates

ogImageUrl quality, articlePublishedTime, and articleModifiedTime provide temporal signals for content freshness in social shares and news carousels.

## Hreflang on Non-Canonical Pages

hreflangOnNonCanonical is a critical error: serving hreflang tags on non-canonical URLs creates conflicting language signals that can cause wrong-language pages in SERPs.

## BreadcrumbList Schema Coverage · v5.0

When breadcrumb navigation is present in the UI but no BreadcrumbList JSON-LD is found, Google cannot render breadcrumb rich results. We detect breadcrumb UI (nav[aria-label="breadcrumb"], ol[itemtype\*="BreadcrumbList"]) and cross-check for matching structured data.

## E-E-A-T Authorship Linkage · v5.0

We check for verifiable authorship markup — rel="author", itemprop="author", and sameAs identity links. Author linkage strengthens Google's Experience/Expertise signals; its absence weakens the trust half of E-E-A-T.

## IndexNow Protocol Adoption · v5.0

We look for an IndexNow signal (an indexnow reference or the {key}.txt verification file in robots.txt). Adopting IndexNow (Bing/Yandex/Seznam) pushes instant crawl notifications when content changes, accelerating discovery of new and updated pages.

## 5. Performance — 14%

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Performance measures page load efficiency through Core Web Vitals proxy estimates, resource optimization, bundle analysis, CDN usage, compression, font loading strategies, and third-party script impact. Google uses CWV as direct ranking signals since 2021.

### Factor / What it represents / Why it matters

#### LCP Estimate (Largest Contentful Paint)

lcpEstimateMs is our proxy for the largest above-fold element render time. We estimate from hero image size, font preloading, render-blocking resources, and server timing. Google threshold:  $\leq 2.5$ s good,  $\leq 4$ s needs improvement.

#### CLS Estimate (Cumulative Layout Shift)

clsEstimate proxies visual stability from images without width/height attributes (imagesWithWidthHeight), font loading strategy, dynamic content injection, and ad placeholders. Google threshold:  $\leq 0.1$  good.

#### INP Estimate (Interaction to Next Paint)

inpEstimateMs proxies input responsiveness from JavaScript bundle size (totalJsBundleKb), long task script hints (longTaskScriptHints), third-party script count, and main-thread blocking indicators. Google threshold:  $\leq 200$ ms good.

#### HTML Document Size

htmlSizeKb over 100KB indicates bloated markup. Excessive inline styles (inlineStyles) and inline scripts (inlineScripts) inflate document size and delay first render.

#### CSS Bundle Size & Optimization

totalCssBundleKb measures all CSS payload. renderBlockingCssCount identifies files blocking first paint. unusedCssHint detects dead CSS. criticalCssDetected rewards above-fold CSS inlining.

#### JavaScript Bundle Size & Loading

totalJsBundleKb measures total JS payload. We check asyncScripts, deferScripts vs. renderBlockingScripts ratio. longTaskScriptHints identify scripts likely to cause long tasks ( $>50$ ms).

#### Image Optimization

hasLazyImages, lazyImageCount, eagerAboveFold (should be 1–3), hasSrcset for responsive images, and hasWebpAvif for modern formats. imageFormats breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

#### Font Loading Strategy

hasFontDisplay (font-display: swap/optional) prevents FOIT. fontPreloadMissed detects critical fonts not preloaded. variableFontsUsed rewards modern font technology. fontFileCount over 4 indicates excessive font requests.

#### Resource Hints (Preconnect/Prefetch/Preload)

hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

#### Async/Defer Script Optimization

renderBlockingScripts (neither async nor defer) delay parsing. The ratio of asyncScripts + deferScripts to total scripts indicates optimization maturity.

## Third-Party Script Impact

thirdPartyScriptCount and thirdPartyDomains measure external dependency load. Each third-party domain adds DNS lookup, connection, and TLS handshake overhead.

## CDN & Compression

cdnDetected and cdnProvider indicate edge caching. compressionType (br > gzip > none) directly affects transfer size. Brotli compression reduces payloads 15–20% more than gzip.

## Server Response Time (TTFB)

ttfbMs measures time to first byte. Under 200ms is excellent; over 600ms indicates server-side bottlenecks. httpVersion (HTTP/2 or HTTP/3 enables multiplexing).

## Server Timing Headers

serverTimingHeaders expose backend performance metrics (db, cache, render times) for debugging. Their presence signals performance-aware engineering.

## Framework Detection & SPA Analysis

isModernFramework, spaDetected, and jsFrameworkDetected identify React, Next.js, Vue, Angular, etc. SPAs require special SSR/SSG consideration for SEO and initial load performance.

## Analytics Setup Quality

We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

## Image Width/Height Attributes

imagesWithWidthHeight prevents CLS. Images without explicit dimensions cause layout shifts when they load, directly impacting Core Web Vitals CLS score.

## Speculation Rules API · v5.0

We detect <script type="speculationrules">, the modern API that prerenders/prefetches likely next navigations for near-instant page transitions. Its absence is a missed opportunity for perceived-instant navigation on multi-page journeys.

## LCP fetchpriority Hint · v5.0

We check whether any image declares fetchpriority="high". Marking the LCP hero image with fetchpriority="high" lets the browser prioritize it during initial load, directly improving Largest Contentful Paint.

## Image decoding="async" Coverage · v5.0

On pages with 4+ images we measure the share carrying decoding="async". Below 50% coverage, image decode work competes with the main thread. Adding decoding="async" to non-critical images keeps decoding off the main thread.

## modulepreload for ES Modules · v5.0

When ES modules (type="module") are used without <link rel="modulepreload">, the browser discovers dependencies late, creating waterfall latency on the module graph. Preloading critical modules removes that latency.

## 6. Security — 10%

Security is the cyber security backbone of your website — it protects your users' data, defends against cyber attacks, and safeguards your site's reputation. Cyber security is now a direct ranking factor: Google uses HTTPS as a ranking signal, and browsers actively warn visitors away from sites with weak cybersecurity. Version 5.0 dramatically expands our cyber security auditing with a full OWASP Top 10:2025 mapping (A01-A10) layered on top of the existing OWASP Top 10 2021, OWASP ASVS 5.0, the Web Security Testing Guide (WSTG) and CWE coverage — providing a broader set of security heuristics, not an exhaustive penetration test. It adds broken-access-control and SSRF probes, security misconfiguration and source-map exposure, software-supply-chain and SBOM checks, cryptographic-failure and cleartext-PII detection, injection sinks and GraphQL introspection, insecure-design anti-automation gaps, phishing-resistant-auth and cookie-prefix checks, software/data-integrity failures, security-logging gaps and exceptional-condition (soft-404 / fail-open) handling — on top of exposed secrets and sensitive paths, CORS misconfiguration, DOM-XSS sinks, supply-chain / third-party JavaScript risk, session & CSRF heuristics, dangerous HTTP methods, directory listing and information disclosure. Together these checks highlight evidence requiring validation; they cannot establish the complete security posture of a system. Every cyber security check is 100% deterministic (HTTP fetch + HTML parsing + light non-destructive active probes) and consumes zero AI/LLM credits.

### Factor / What it represents / Why it matters

#### HTTPS Encryption

isHttps verifies TLS encryption. Without HTTPS, browsers display "Not Secure" warnings, forms transmit data in plaintext, and Google applies a ranking penalty.

#### Mixed Content

hasMixedContent detects HTTP resources loaded on HTTPS pages. Browsers may block these resources, breaking functionality and displaying security warnings.

#### HSTS (Strict-Transport-Security)

HSTS forces HTTPS-only connections. We check hstsMaxAge ( $\geq 31536000$  recommended) and hstsPreload (inclusion in browser preload lists for zero-trust-on-first-use protection).

#### Content-Security-Policy (CSP)

CSP is the primary defense against XSS attacks. A missing CSP leaves your site vulnerable to injected scripts that can steal cookies, credentials, and user data.

#### CSP Strictness Score

cspStrictnessScore (0-100) evaluates directive count, cspUsesNonce vs. cspUnsafeInlineCount, frame-ancestors restrictions, and default-src fallbacks. Nonce-based CSP is significantly stronger than unsafe-inline.

#### Permissions-Policy Depth

permissionsPolicyFeatures and permissionsPolicyDepth measure how many browser APIs (camera, microphone, geolocation, payment) are explicitly restricted. Without this header, any embedded iframe can access sensitive device features.

#### X-Content-Type-Options

The nosniff directive in headers prevents MIME-type sniffing attacks where browsers misinterpret file types, potentially executing malicious content.

#### X-Frame-Options

Prevents clickjacking by controlling iframe embedding. DENY or SAMEORIGIN values stop malicious sites from framing your pages.

## Referrer-Policy

Controls how much URL information leaks via the Referer header. strict-origin-when-cross-origin balances analytics needs with privacy.

## Cross-Origin Policies (COOP/CORP/COEP)

hasCorsHeaders and cross-origin isolation headers protect against Spectre side-channel attacks by isolating your page's browsing context from cross-origin resources.

## Outdated Library Detection

jqueryVersion and outdatedLibraryHints detect libraries with known CVEs: jQuery <3.5 (XSS), Angular <1.8 (sandbox escapes), Bootstrap <5 (XSS via data attributes).

## Cookie Security

cookieSecurityIssues identifies cookies without Secure (sent over HTTP), HttpOnly (accessible to JavaScript), and SameSite (vulnerable to CSRF) attributes.

## Insecure Form Actions

formActionsInsecure counts forms submitting to HTTP endpoints, transmitting user data in plaintext — a PCI-DSS and GDPR violation.

## Subresource Integrity (SRI)

hasSubresourceIntegrity and sriCount verify that external scripts include integrity hashes, preventing supply-chain attacks where CDN-hosted scripts are modified.

## External Link Security

externalLinksWithoutRel counts links with target="\_blank" but missing rel="noopener noreferrer", enabling reverse tabnabbing attacks.

## Privacy Policy & Cookie Consent

hasPrivacyPolicy and hasCookieConsent are GDPR/CCPA legal requirements. Non-compliance can result in fines up to 4% of annual global revenue.

## Rate Limiting

hasRateLimitHeaders (X-RateLimit-\*, Retry-After) indicate protection against brute-force attacks, credential stuffing, and API abuse.

## Server/Technology Exposure

headers like Server, X-Powered-By, and X-AspNet-Version expose your technology stack, giving attackers a targeted roadmap of known vulnerabilities.

## Framework / Server Version Disclosure

frameworkVersionExposed detects a specific software version leaked in the Server or X-Powered-By header or the generator meta tag (e.g. "nginx/1.18.0", "PHP/7.4.3", "WordPress 5.9"). A precise version lets an attacker look up the exact list of published CVEs affecting your stack — the single highest-value fingerprint for targeted exploitation.

## Technology Fingerprint Exposure

serverTechExposed aggregates every technology-revealing signal in your headers and markup (Server, X-Powered-By, X-AspNet-Version, X-Generator, framework-specific cookies and comment signatures). Even without a version number, each fingerprint narrows the attacker's search space and enables stack-specific attacks.

## **security.txt Vulnerability Disclosure (RFC 9116)**

We fetch /.well-known/security.txt and validate it per RFC 9116 (securityTxtPresent, securityTxtLocation, securityTxtIssues). A valid, future-dated file with a Contact and Expires field gives ethical researchers a standardized channel to report vulnerabilities responsibly instead of disclosing them publicly.

## **Internal Server Error Probe (5xx Handling)**

We request a deliberately non-existent path and inspect the response (errorProbeStatusCode). A clean 404 is correct; a 500-class Internal Server Error on a missing route signals an unhandled exception that can leak internal state and indicates fragile error handling.

## **Error & Stack Trace Leakage**

errorLeakagePatterns scans responses for exposed stack traces, absolute file paths, SQL fragments, and framework debug output. Leaked traces hand attackers a map of your file system, framework internals, and query structure — one of the most damaging low-effort information disclosures (CWE-209).

## **Debug & Verbose Diagnostics Exposure**

debugInfoLeakage detects debug mode left enabled in production: profiler toolbars, verbose diagnostic headers, and development-only banners. Debug output erodes the defense-in-depth "security by obscurity" layer and frequently reveals environment variables and internal routes.

## **Email Address Harvesting Exposure**

exposedEmails / exposedEmailCount surface raw email addresses printed in the page source. Intentional contact addresses are informational only, but unprotected mailto and inline addresses are trivially scraped by spam and phishing bots — obfuscation or a contact form is recommended.

## **Exposed Secrets & API Keys · v4.9.1**

exposedSecrets scans inline scripts and markup for high-signal credential patterns (AWS access keys, Stripe live keys, Google API keys, GitHub/Slack tokens, JWTs, SendGrid keys, private-key blocks and inline Firebase config). Hard-coded live credentials in client-side code are a critical CWE-798 exposure — anyone can read and abuse them. Maps to OWASP A07.

## **Publicly Accessible Sensitive Paths · v4.9.1**

exposedSensitivePaths performs non-destructive GET probes of common leak points (/git/config, /.env, /.svn/entries, /.DS\_Store, /server-status) with content-based confirmation. Exposed VCS folders or environment files can hand attackers your entire source and secrets (CWE-538/CWE-548, OWASP A05).

## **Password Field on Insecure Form · v4.9.1**

passwordFieldInsecureForm flags any form containing a password input whose action resolves to http://. Credentials are then transmitted in clear text and trivially intercepted (CWE-319, ASVS 9.1, OWASP A02).

## **CORS Reflected Origin with Credentials · v4.9.1**

corsReflectedWithCredentials detects Access-Control-Allow-Credentials: true combined with a reflected or wildcard Origin — effectively letting any website make authenticated cross-origin requests to your API (CWE-942/CWE-346, OWASP A05).

## **CORS Wildcard Origin · v4.9.1**

corsWildcard flags Access-Control-Allow-Origin: \*, which makes API responses readable by any site. A strict server-side origin allowlist is recommended.

## **HTTP Basic Auth over HTTP · v4.9.1**

basicAuthOverHttp detects a WWW-Authenticate: Basic challenge served over an unencrypted channel. Basic-Auth credentials are only base64-encoded, so they are effectively sent in the clear (CWE-319).

## **Directory Listing Enabled · v4.9.1**

directoryListingDetected identifies auto-generated index pages that expose your file/folder structure to anyone. Disable autoindex / Options -Indexes (CWE-548, OWASP A05).

## **Dangerous HTTP Methods · v4.9.1**

dangerousHttpMethods inspects the OPTIONS Allow header for TRACE/TRACK (enable Cross-Site Tracing) and PUT/DELETE/CONNECT/PATCH (may allow unauthorized modification). Only the verbs your app needs should be enabled (CWE-650).

## **DOM-XSS Sinks in Inline Scripts · v4.9.1**

dangerousJsSinks detects risky client-side sinks (eval, document.write, innerHTML assignment, Function(), setTimeout with a string, insertAdjacentHTML). Combined with untrusted input these are classic DOM-based XSS vectors (CWE-79, OWASP A03).

## **Untrusted / Abandoned Third-Party Scripts · v4.9.1**

untrustedCrossDomainScripts flags scripts loaded from higher-risk or historically compromised CDNs (e.g. polyfill-style hosts). Supply-chain compromise of a single script can run arbitrary code on every page (CWE-1104/CWE-829, OWASP A08).

## **Software Composition Inventory (SBOM) · v4.9.1**

scriptInventoryCount and detectedLibraries catalogue every script resource and fingerprinted client-side library, giving you a lightweight software bill of materials to cross-reference against known CVEs.

## **Session ID in URL · v4.9.1**

sessionIdInUrl detects session-token-like parameters in URLs. Session IDs in URLs leak through Referer headers, server logs, and browser history and enable session fixation (CWE-598/CWE-384, ASVS 3.x).

## **Anti-CSRF Token Heuristic · v4.9.1**

stateChangingFormsWithoutCsrftoken counts state-changing POST forms that show no visible anti-CSRF token (search forms excluded). This is a low-confidence heuristic — SameSite cookies may still protect them — but missing tokens warrant review (CWE-352, OWASP A01).

## **Open Redirect Parameters · v4.9.1**

openRedirectParams inspects links for redirect/return/next/url parameters carrying absolute URLs, a common phishing pivot when unvalidated (CWE-601).

## **Insecure WebSocket (ws://) · v4.9.1**

insecureWebSocketCount finds unencrypted ws:// endpoints in markup/scripts. WebSocket traffic should always use the encrypted wss:// scheme (CWE-319).

## **CSP Delivered via <meta> Only · v4.9.1**

cspViaMetaOnly flags a policy delivered only through a meta tag, which cannot enforce frame-ancestors or report-uri and is easier to bypass. Serve the CSP as an HTTP header.

## **CSP Missing Hardening Directives · v4.9.1**

cspMissingDirectives checks for absent object-src, base-uri and frame-ancestors directives — common gaps that leave known CSP bypasses open.

## **Sensitive-Page Cache-Control · v4.9.1**

missingCacheControlOnSensitive verifies login/account/checkout pages send Cache-Control: no-store so confidential data is not cached by browsers or shared proxies (CWE-525, ASVS 8.2).

## **Untrusted iframe Without sandbox · v4.9.1**

iframeSandboxMissing counts iframes embedding third-party origins without a sandbox attribute, meaning embedded content runs with full privileges.

## **HTML Comment & Private-IP Leakage · v4.9.1**

htmlCommentLeaks scans developer comments for TODOs, credentials, internal URLs and debug notes; privateIpDisclosure flags RFC 1918 internal IPs in the source — both reveal internal details useful to attackers (CWE-200).

## **robots.txt Sensitive-Path Disclosure · v4.9.1**

robotsSensitivePaths surfaces admin/private Disallow entries that act as a roadmap for attackers. Protect sensitive paths with authentication rather than obscurity.

## **Legacy X-XSS-Protection & Inline Handlers · v4.9.1**

xssProtectionLegacy flags the deprecated X-XSS-Protection header (can introduce bugs in old browsers); inlineEventHandlerCount and javascriptUrlCount measure inline on\*= handlers and javascript: URLs that force CSP unsafe-inline and widen the XSS surface.

## **Authentication Surface Detection · v4.9.1**

hasLoginForm and hasPasswordResetForm identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: cspHasReporting, clearSiteDataSupported and crossOriginIsolated (COOP+COEP) are recognised as hardening wins.

## **A01:2025 · Broken Access Control & SSRF · v5.0**

A light, non-destructive probe checks whether a privileged/admin path (e.g. /admin, /dashboard, /api/admin) is reachable with real admin markup and no auth challenge. We also flag IDOR-prone direct object references in links and SSRF-style references to cloud instance-metadata endpoints (169.254.169.254). Recommendation references centralized, deny-by-default authorization (OPA / Casbin) and ASVS L2 access-control verification.

## **A02:2025 · Security Misconfiguration & Source-Map Exposure · v5.0**

Probes for publicly readable debug/diagnostic endpoints (phpinfo, Spring Boot /actuator, Symfony /\_profiler) and publicly served JavaScript source maps that leak original source. Recommendation references hardened, environment-specific configuration baselines and disabling source maps in production.

## **A03:2025 · Software Supply Chain Failures · v5.0**

Probes for exposed dependency manifests / lockfiles (package.json, composer.json, yarn.lock, Gemfile.lock), measures the Subresource-Integrity coverage ratio across cross-origin scripts (distinct from mere SRI presence), and detects a published SBOM (CycloneDX / SPDX). Recommendation references SLSA provenance and signed, pinned dependencies.

## **A04:2025 · Cryptographic Failures · v5.0**

Detects weak-hash usage (MD5 / SHA-1) in client scripts and sensitive PII form fields submitted in cleartext over HTTP. Recommendation references modern algorithms (SHA-256+/Argon2/bcrypt) and TLS-only transmission of sensitive data.

## **A05:2025 · Injection · v5.0**

Flags raw-HTML binding sinks (React dangerouslySetInnerHTML, Vue v-html), production GraphQL introspection (light probe), and Markdown rendering without a sanitizer. Recommendation references context-aware output encoding and DOMPurify-style sanitization.

## **A06:2025 · Insecure Design · v5.0**

Detects high-value forms (login, signup, password reset, contact) with no anti-automation challenge (CAPTCHA/Turnstile/hCaptcha) and file-upload inputs without type/size constraints. Recommendation references threat modeling and abuse-case-driven design.

### **A07:2025 · Authentication Failures · v5.0**

Checks for the absence of a phishing-resistant factor (WebAuthn / passkey / TOTP MFA), missing autocomplete tokens on identifier fields, and session cookies lacking the `__Host-` / `__Secure-` prefix. Recommendation references passkey adoption and hardened session cookies.

### **A08:2025 · Software & Data Integrity Failures · v5.0**

Flags dynamically-injected remote scripts loaded without integrity verification and opaque serialized state passed in URL parameters (deserialization/tampering risk). Recommendation references signed updates and integrity-verified pipelines.

### **A09:2025 · Security Logging & Alerting Failures · v5.0**

Detects the presence/absence of client-side error & security monitoring (Sentry, Datadog RUM, Bugsnag, Rollbar). Absence is surfaced as a recommendation to add tamper-evident, centrally-aggregated monitoring and alerting.

### **A10:2025 · Mishandling of Exceptional Conditions · v5.0**

A random non-existent path is probed; a soft-404 / fail-open response (HTTP 200 for an unknown route) signals exceptional conditions handled insecurely. Recommendation references fail-closed error handling and correct status semantics.

## 7. AI Readiness — 10%

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AI Readiness measures how well your content can be discovered, parsed, and cited by AI systems like ChatGPT, Claude, Perplexity, and Google's AI Overviews. In 2026, AI-mediated search is the fastest-growing traffic channel. This dimension now includes a comprehensive 26-field `llms.txt` deep audit plus expanded v5.0 AI-readiness signals.

### Factor / What it represents / Why it matters

#### Structured Data for AI

`hasSchemaOrg` and `schemaTypes` provide machine-readable context. Without structured data, AI must infer meaning from unstructured HTML — a lossy process that reduces citation accuracy.

#### AI Crawler Governance (`robots.txt`)

We check 12+ AI crawlers (GPTBot, ClaudeBot, PerplexityBot, Google-Extended, Amazonbot, Bytespider, etc.) across both meta tags (`aiCrawlerBlocked`) and `robots.txt` (`robotsTxtAiCrawlerRules`). `additionalAiCrawlersAllowed` and `additionalAiCrawlersBlocked` provide granular per-crawler governance.

#### `Robots.txt` Deep Analysis

`robotsTxtExists` is foundational. We parse `robotsTxtSitemapRefs` (sitemap declarations), `robotsTxtBlocksAssets` (CSS/JS blocking hurts rendering), and `robotsTxtBlocksAll` (Disallow: / blocks everything).

#### `llms.txt` File Existence

Absence receives no penalty. Google AI features do not require a special AI text file. If supplied, its content can be reviewed as optional documentation.

#### `llms-full.txt` Companion File

`llmsFullTxtExists` checks for `/llms-full.txt`, the extended version containing comprehensive content for deep AI ingestion. Together, `llmsTxtByteSize` and `llmsFullTxtByteSize` indicate content depth.

#### `llms.txt` Structure & Sections

`llmsTxtSectionCount` measures document organization. `llmsTxtHasStructuredSections` and `llmsTxtHasMarkdownFormatting` indicate proper Markdown structure that AI parsers can reliably extract.

#### `llms.txt` Metadata Quality

`llmsTxtHasTitle`, `llmsTxtHasDescription`, `llmsTxtHasVersionOrDate`, and `llmsTxtHasCanonicalDomain` provide essential metadata that helps AI models understand your organization and content currency.

#### `llms.txt` URL Inventory

`llmsTxtHasUrlList` and `llmsTxtUrlCount` indicate how many pages you've indexed for AI consumption. `llmsTxtBrokenUrlPatterns` detects URLs in `llms.txt` that appear malformed or incomplete.

#### `llms.txt` Service & API Documentation

`llmsTxtHasServiceList` and `llmsTxtHasApiDocs` signal that you've documented your offerings in a format AI agents can parse for tool-use and function-calling scenarios.

#### `llms.txt` Legal & Citation Framework

`llmsTxtHasLicenseOrTerms`, `llmsTxtHasPreferredCitation`, and `llmsTxtHasContentGuidelines` establish how AI models should attribute and use your content — critical for responsible AI adoption.

## **lms.txt Contact & Discovery**

lmsTxtHasContactInfo provides a feedback channel for AI developers. lmsTxtHasLinkToFull connects the summary to the full version. lmsTxtLinkedFromHtml and lmsTxtLinkedFromRobotsTxt measure discoverability.

## **lms.txt Overall Quality Score**

lmsTxtOverallScore (0–100) is our composite assessment. lmsTxtIssues and lmsTxtRecommendations provide actionable feedback for improving your lms.txt implementation.

## **RAG-Friendliness Score**

ragFriendlinessScore (0–100) measures how well content can be chunked for vector embedding. headingsWithIds and sectionAnchorsCount enable precise chunk targeting in Retrieval-Augmented Generation pipelines.

## **Content Provenance Signals**

hasProvenanceSignals detects attributions like "according to [source]" and "our research found" that make claims verifiable and citation-worthy for AI systems.

## **Semantic HTML Elements**

semanticElementCount vs. nonSemanticDivCount ratio reveals structural clarity. semanticElements (article, section, aside, figure, main, nav) provide meaning AI can parse without heuristics.

## **FAQ/Q&A Content Patterns**

faqCount, hasQAPattern, and definitionLists detect question-answer content — the most extractable format for AI citation and knowledge graph population.

## **Freshness Signals**

dateModified, datePublished, hasFreshnessSignals, and contentFreshnessSignal ("fresh"/"aging"/"stale") measure how current your content appears to AI models.

## **Social Links & Entity Signals**

hasSocialLinks and socialPlatforms help AI confirm your brand's entity identity in the Knowledge Graph, improving entity disambiguation accuracy.

## **HTML-to-Text Ratio**

htmlToTextRatio below 10% indicates markup-heavy, content-light pages. A 20–70% ratio indicates content-rich pages that AI models can meaningfully process.

## **JS Content Dependency**

jsContentRatio measures how much content requires JavaScript to render. AI crawlers generally do not execute JS, so high ratios mean AI sees an empty page.

## **Descriptive Alt Text for Multimodal AI · v5.0**

On pages with 3+ images we measure the share whose alt text is genuinely descriptive (≥15 characters). Below 50%, multimodal models cannot understand or cite your imagery. Rich, standalone alt text makes images machine-interpretable for AI systems that reason over pictures.

## 8. AIO (AI Optimization) — 9%

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AIO measures content quality and conversion signals that make your page valuable for AI model training and citation. It combines content depth, entity markup, E-E-A-T schema signals, conversion rate optimization (CRO), citation readiness, and social proof indicators.

### Factor / What it represents / Why it matters

#### Content Depth (Word Count)

wordCount under 300 triggers thinContentSignal. Pages over 1,500 words are 3× more likely to appear in AI-generated responses due to topical comprehensiveness.

#### Structured Q&A Content

faqCount and hasQAPattern detect question-answer formatting — the highest-value content pattern for AI citation, directly matching user query intent.

#### Entity Markup Strength

entityMentions and strong/em/mark tags highlight key entities. entitySalienceScore measures how prominently entities appear, helping AI extract knowledge triples.

#### E-E-A-T Schema Signals

hasPersonSchema, hasArticleSchema, hasReviewSchema, and hasServiceSchema provide machine-readable E-E-A-T signals that AI models use to assess content authority.

#### CTA Elements & Above-Fold CTA

clearCtaCount and hasAboveFoldCta measure conversion optimization. formUsabilityScore evaluates form UX. Three or more CTAs with action-oriented text indicate a mature conversion funnel.

#### Trust Signals & Social Proof

hasTrustSignals, trustSignalTypes, hasSocialProof, and hasTrustBadges evaluate conversion confidence signals — testimonials, trust badges, client logos, and review counts.

#### Citation Readiness

citationCount (5+ external citations), quoteCount (blockquote elements), and originalDataSignals demonstrate research depth that AI models prefer to cite.

#### Statistics/Data Point Density

statisticCount measures concrete numbers and percentages in content. Data-rich content reads as authoritative analysis rather than opinion, increasing AI citation probability.

#### Author/Expertise Signals

hasAuthorInfo, hasExpertiseSignals, and hasAuthorBox provide visible accountability. uniqueInsightPatterns detect phrases like "our research found" signaling first-hand expertise.

#### Urgency & Value Proposition

hasUrgencyElements (limited-time offers, countdown timers) and hasValueProposition (clear benefit statements) are conversion accelerators that indicate commercial intent optimization.

#### Speakable Schema

hasSpeakableSchema tells voice assistants which page sections are suitable for text-to-speech, optimizing for the growing voice search channel.

## **Value Proposition in Headings**

H1 should clearly communicate what you offer, for whom, and why it matters. We check for benefit-oriented language patterns in heading text.

## **Named-Entity Consistency · v5.0**

We extract the primary entity/brand token from the <title>, the H1, and the schema "name" property, then verify all three resolve to the same entity. Inconsistent naming across these three anchors forces AI systems to guess your identity; aligning them yields a single, unambiguous entity for citation and knowledge-graph resolution.

## 9. Accessibility — 8%

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Accessibility ensures your website is usable by people with disabilities — visual, auditory, motor, and cognitive. Beyond ethical obligation, accessibility improves SEO, reduces legal risk (ADA/EAA compliance), and expands your audience by ~15% of the global population.

### Factor / What it represents / Why it matters

#### Language Declaration (lang)

hasLangAttr and htmlLang are parsed by screen readers to select the correct speech synthesis voice. Without lang, every word may be mispronounced. hasLangOnParts detects partial language declarations for multilingual content.

#### Skip Navigation Link

hasSkipNav allows keyboard-only users to bypass navigation menus (often 20+ links) and jump directly to main content.

#### Semantic Landmarks

hasMainLandmark, hasNavLandmark, and hasFooterLandmark enable screen reader users to navigate by page regions using shortcut keys.

#### Image Alt Text

imagesWithoutAlt renders images invisible to screen readers. imagesWithEmptyAlt (alt="") is valid only for decorative images — informative images require descriptive text.

#### Form Labels & Usability

formsWithoutLabels vs. formsWithLabels ratio determines form accessibility. formErrorIdentification checks that error messages are associated with their respective fields.

#### Focus Styles

hasFocusStyles verifies visible focus indicators — the only way keyboard users can track their position on the page. Custom :focus-visible styles are preferred over browser defaults.

#### ARIA Implementation

hasAria, ariaCount, and ariaRoles provide accessibility metadata for custom interactive elements. ariaHiddenOnFocusable detects the critical error of hiding focusable elements from screen readers.

#### Button Labels

emptyButtonCount counts buttons without text content or aria-label. These are announced as just "button" with no context, making navigation impossible.

#### Color Contrast

contrastIssueCount and colorContrastHints detect WCAG 1.4.3 violations. 4.5:1 contrast ratio is required for normal text, 3:1 for large text (18px+).

#### Video Captions

videosWithoutCaptions excludes 466 million people worldwide with hearing loss and misses indexable text content for SEO.

#### CAPTCHA Accessibility

hasCaptcha without captchaHasAlternative (audio or logic-based) completely blocks blind users from completing forms.

## **Duplicate IDs**

duplicateIds break ARIA references (aria-labelledby, aria-describedby) and form label associations, causing assistive technology failures.

## **HTML Validity / Nesting Errors**

htmlNestingErrors (e.g., <p> inside <p>, interactive elements inside <a>) cause assistive technology parsing failures and unpredictable behavior.

## **Tables & Iframes**

tablesWithoutHeaders (missing <th>) make data tables unnavigable by screen readers. tablesWithCaption rewards properly described tables. iframesWithTitle vs. iframeCount measures embedded content accessibility.

## **Tab Index Management**

tabindexCount and negativeTabIndex audit keyboard navigation order. Negative tabindex removes elements from tab order; excessive positive values create confusing navigation sequences.

## **Text Spacing Overrides (WCAG 2.2 1.4.12) · v5.0**

We scan inline styles for line-height, letter-spacing, or word-spacing locked with !important. Locking spacing blocks users who apply custom stylesheets or spacing bookmarklets to improve readability, violating WCAG 2.2 Success Criterion 1.4.12 Text Spacing.

## **Forced-Colors / High-Contrast Support · v5.0**

We check for @media (forced-colors), prefers-contrast, or -ms-high-contrast handling. Without it, Windows High Contrast / forced-colors users may lose essential UI (icons, borders, focus rings) that rely on background images or removed color.

## **Consistent Help Mechanism (WCAG 2.2 3.2.6) · v5.0**

We detect a discoverable help affordance (contact/help/support link). WCAG 2.2 Success Criterion 3.2.6 requires help access to appear in a consistent location across pages so users with cognitive disabilities can reliably find assistance.

## 10. GEO (Generative Engine Optimization) — 8%

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GEO focuses on content formatting that AI-powered search engines (Google AI Overviews, Perplexity, ChatGPT Search) extract and cite, plus internationalization depth for global reach. It rewards structured, data-rich, citable content with clear question-answer patterns and proper i18n signals.

### Factor / What it represents / Why it matters

#### Question-Answer Patterns

hasQAPattern and question-based H2/H3 headings with concise answers are the #1 content pattern cited in AI Overviews and Perplexity responses.

#### Data/Comparison Tables

tableCount measures structured tabular data. Generative AI frequently cites tables for comparison queries ("X vs Y") because they provide pre-structured, extractable information.

#### Content Depth (>1000 words)

wordCount over 1,000 with uniqueInsightPatterns makes pages 5× more likely to be cited by generative engines. thinContentSignal triggers at <300 words.

#### List-Based Content

listCount and orderedListCount detect the second most-extracted content format by generative engines after tables. Numbered steps and bullet points are AI's preferred citation structure.

#### Hreflang (with Self-Ref & x-default)

hasHreflang, hreflangValues, hreflangMissingSelfRef, and hreflangMissingXDefault are critical for international SEO. Missing self-referencing tags or x-default causes wrong-language content in localized AI results.

#### Statistics/Data Density

statisticCount measures specific numbers and percentages. Pages with concrete data points are treated as more authoritative by generative engines than opinion-based content.

#### Original Research Signals

originalDataSignals detect charts, figures, and data tables suggesting first-party research that generative AI models cite preferentially over derivative content.

#### Content Freshness

contentFreshnessSignal ("fresh"/"aging"/"stale") based on dateModified and datePublished. Content over 1 year old is progressively deprioritized by generative engines.

#### Unique Insight Patterns

uniqueInsightPatterns count phrases like "our research found," "we discovered," "based on our analysis" that signal first-hand expertise generative engines recognize.

#### RTL & i18n Support

hasRtlSupport (direction: rtl for Arabic/Hebrew), hasCurrencyFormatting, and i18nSignalCount measure internationalization depth beyond basic hreflang tags.

#### FAQ Count

faqCount directly measures the volume of question-answer pairs available for AI extraction. 5+ FAQs significantly increase citation probability.

## **Question-Phrased Sub-Headings · v5.0**

On pages with 3+ sub-headings we measure the share phrased as natural-language questions (starting with what/how/why/when/where/who/which or ending in ?). Below 20%, generative engines struggle to extract and cite direct answers. Converting key sections into questions maps content to how users actually query AI.

## **Comparison Tables & Step-by-Step Blocks · v5.0**

We look for comparison tables (or "vs"/"versus"/"compared to" language) and ordered step-by-step blocks (3+ ordered list items). These are the structured formats generative engines most readily lift into citable answers; their absence limits extractability.

## 11. Mobile & PWA — 8%

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Mobile-first indexing means Google primarily uses the mobile version of your content for ranking. Over 60% of web traffic is mobile. This dimension evaluates responsive design, PWA readiness, touch usability, safe area handling, orientation support, page weight sustainability, and app-like install capability.

### Factor / What it represents / Why it matters

#### Viewport Meta Tag

hasViewport is the most critical mobile signal. Without viewport meta, mobile browsers render at desktop width (typically 980px), making text unreadably small and buttons untappable.

#### Viewport Zoom Restriction

viewportDisablesZoom (maximum-scale=1, user-scalable=no) prevents users from zooming, violating WCAG 1.4.4. Google penalizes zoom-restricted viewports in mobile-first indexing.

#### Touch Target Size

smallTouchTargets counts interactive elements smaller than 44×44px (Apple HIG) / 48×48px (Material Design). Undersized targets cause accidental clicks and "fat finger" frustration.

#### Fixed-Width Elements

hasFixedWidthElements detects elements with fixed pixel widths over 800px that cause horizontal scrolling on mobile — a severe usability failure.

#### Web App Manifest

hasManifest enables PWA features: add-to-homescreen, custom theme colors, splash screens, and app-like display modes.

#### PWA Install Readiness

installPromptReady requires manifest + service worker + HTTPS for the browser's PWA install prompt to appear.

#### Manifest Icon Coverage

manifestIconsCount < 4 means distorted or missing icons across devices. Apple, Android, and Windows each need different icon sizes.

#### Service Worker

hasServiceWorker enables offline capability, background sync, push notifications, and aggressive caching strategies for near-instant return visits.

#### Responsive Images (srcset)

hasSrcset prevents mobile devices from downloading full-resolution desktop images, wasting 40–70% bandwidth on unnecessary pixels.

#### Popup/Interstitial Detection

hasPopupOrModal triggers Google's intrusive interstitial penalty when popups cover more than 50% of mobile viewport content.

#### Touch Feedback

touchFeedbackDetected (CSS :active states, tap-highlight) provides visual confirmation that a user's tap registered, reducing perceived latency.

## Safe Area Insets

hasSafeAreaInsets (env(safe-area-inset-\*)) ensures content avoids notches, rounded corners, and home indicators on modern smartphones.

## Orientation Handling

hasOrientationHandling detects CSS @media (orientation: landscape) or orientation-lock meta tags for proper landscape/portrait adaptation.

## Hamburger Menu Detection

hasHamburgerMenu confirms mobile navigation pattern implementation, though we don't penalize for alternative patterns like tab bars.

## Page Weight (Sustainability)

estimatedPageWeightKb and sustainabilityScore evaluate total transfer size. Pages over 3MB are heavy for mobile data; under 1MB is lightweight. Lower page weight also reduces carbon footprint.

## Apple Web-App Meta Tags · v5.0

We check apple-mobile-web-app-capable, -status-bar-style, and -title. Missing two or more of these produces a poor iOS home-screen install experience — wrong status-bar styling, generic title, and no standalone display. Complete tags deliver a polished app-like install on iPhone/iPad.

## viewport-fit=cover for Notched Devices · v5.0

When the viewport meta lacks viewport-fit=cover, content cannot extend edge-to-edge on notched / Dynamic-Island devices and safe-area-inset padding has no effect. Adding it (with safe-area-inset padding) lets your layout render correctly around modern device cutouts.

## 12. AEO (Answer Engine Optimization) — 6%

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AEO optimizes for direct answer results — featured snippets, People Also Ask boxes, voice search results, and knowledge panels. These position-zero results capture clicks before traditional organic listings. AEO evaluates FAQ schema, snippet readiness, voice content, and direct answer patterns.

### Factor / What it represents / Why it matters

#### FAQPage Schema

hasFAQSchema is the most direct path to expandable FAQ rich results in Google. Combined with `faqCount`, we measure both schema implementation and content availability.

#### Featured Snippet Readiness

Position-zero snippets capture ~35% of all clicks. `conciseAnswerBlocks` (40–60 word paragraphs after question headings) are the required format for snippet extraction.

#### Speakable Schema

hasSpeakableSchema identifies which content sections voice assistants (Google Assistant, Alexa, Siri) should read aloud in response to voice queries.

#### HowTo Schema & Patterns

hasHowToSchema enables rich step-by-step results. `hasHowToPattern` detects instructional content structure even without formal schema markup.

#### Concise Answer Blocks

`conciseAnswerBlocks` count paragraphs between 10–50 words that directly answer questions — the exact format targeted by Google's snippet extraction algorithm.

#### Direct Answer Patterns

`directAnswerPatterns` detect definitional statements ("X is defined as...", "X refers to...") that are the #1 pattern extracted for knowledge panel answers.

#### Breadcrumb Navigation & Schema

`hasBreadcrumbSchema` and `hasBreadcrumbNav` enable breadcrumb rich results showing site hierarchy in SERPs, improving click-through rates by 20–30%.

#### Voice-Ready Content Length

`voiceReadyContentLength` checks that paragraphs are under 30 words — the optimal length for voice assistant readback without losing listener attention.

#### Video Content & Schema

`hasVideoObject` schema enables video rich results that appear in ~25% of featured snippet positions, capturing visual-first searchers.

#### Definition Lists

`definitionLists` (`<dl>/<dt>/<dd>`) are semantic HTML elements specifically designed for term-definition pairs that answer engines can extract.

#### Q&A Pattern Coverage

`hasQAPattern` combined with `faqCount` measures the breadth of question-answer content. 5+ Q&A pairs significantly increase chances of appearing in People Also Ask boxes.

## **Concise Answer Under Question Heading · v5.0**

We check whether a self-contained 40–60 word answer paragraph directly follows a question-phrased H2/H3. This exact format is what Google's snippet extraction and voice assistants lift verbatim. Leading each question section with a ~40–60 word answer is the single highest-leverage pattern for winning featured snippets and voice answers.

## 13. Schema.org — 6%

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Schema.org provides the vocabulary that search engines and AI use to understand your content explicitly. This dimension evaluates implementation depth, type diversity, property completeness, tiered impact analysis, rich results eligibility, and nested schema sophistication.

### Factor / What it represents / Why it matters

#### Schema Presence

Zero hasSchemaOrg is the single largest penalty. Without any structured data, search engines and AI have no machine-readable understanding of your content type, author, or organization.

#### Tier 1 Schema Types

missingHighImpactSchemas identifies absent Tier 1 types: Organization, WebSite, Article, Product, FAQPage, BreadcrumbList, LocalBusiness. schemaTier maps each detected type to its impact tier.

#### Tier 2 Schema Types

hasPersonSchema, hasHowToSchema, hasServiceSchema, hasEventSchema, hasReviewSchema extend rich result eligibility beyond core types.

#### Property Completeness

schemaPropertyCompleteness scores each schema type's property coverage (0–100%). An Organization with only a name is far less useful than one with address, phone, logo, sameAs, and foundingDate.

#### JSON-LD Format

jsonLdOnly is preferred by Google. hasMicrodataOrRdfa is legacy — JSON-LD is easier to maintain, doesn't interfere with HTML structure, and supports server-side rendering.

#### Schema Validity

schemaValidityHints detect JSON-LD parse errors, missing required fields, and type mismatches. Invalid schema is silently ignored by search engines. hasDeprecatedSchemaProperties flags obsolete properties.

#### sameAs Entity Linking

hasSameAs and sameAsLinks count connections to Wikipedia, Wikidata, LinkedIn, and social profiles that help search engines disambiguate your brand entity in the Knowledge Graph.

#### SearchAction Schema

Google retired the sitelinks search box in November 2024. This markup does not unlock that feature and its absence receives no penalty.

#### Action Schemas (Buy/Subscribe)

hasBuyAction and hasSubscribeAction signal conversion intent, potentially enabling direct purchase/subscribe rich results in AI-powered commerce.

#### Rich Results Eligibility

richResultsEligible and additionalRichResults enumerate which rich results your schema qualifies for: FAQ dropdowns, star ratings, how-to steps, product cards, event listings.

#### Nested Schema Depth

nestedSchemaDepth and schemaDepth measure nesting sophistication. Deeper nesting (author within Article, offers within Product, review within LocalBusiness) enables richer Knowledge Graph connections.

## Schema Type Count & Diversity

schemaCount and schemaTypes diversity measure implementation breadth. More distinct, valid types provide richer machine-readable context.

### Page-Type-Aware Schema Maximization · v5.0

A new engine detects the dominant page type from content signals and recommends the maximal schema plus the high-value properties not yet present: FAQPage when 3+ Q&A blocks exist, HowTo for step-by-step content, Article/BlogPosting (with author, datePublished, dateModified, image, publisher) for long-form pages, Product (with offers, aggregateRating, review) for commerce pages, and LocalBusiness (with address, geo, openingHoursSpecification, telephone) for local pages. A connected @graph of 4+ types is rewarded as structured-data maturity.

## 14. Local SEO — 4%

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Local SEO determines your visibility in location-based searches ("near me" queries, Google Maps, local packs). It evaluates business information consistency (NAP), local schema markup, geographic signals, review data, and service area coverage.

### Factor / What it represents / Why it matters

#### NAP (Name, Address, Phone)

hasNAP and napDetails consistency is the #1 local ranking factor. NAP must match your Google Business Profile exactly across all web presences.

#### LocalBusiness Schema

hasLocalBusinessSchema and localBusinessTypes provide Google with structured business data: name, address, phone, hours, geo coordinates, price range, and payment methods.

#### Phone Number

phoneNumbers with clickable tel: links are essential for mobile users and signal local business legitimacy. Multiple numbers may indicate multi-location businesses.

#### Google Maps Embed

hasGoogleMapsEmbed provides visual location confirmation and helps Google associate your site with a specific geographic point for local pack ranking.

#### Address Microdata

hasAddressMicrodata (PostalAddress schema) makes your address machine-readable for accurate parsing by search engines and mapping services.

#### Geo Meta Tags

hasGeoMeta (geo.region, geo.placename, geo.position) meta tags explicitly declare your geographic targeting for regional search results.

#### Opening Hours

hasOpeningHours is a top local ranking factor. Business hours appear prominently in local pack results and Google Knowledge Panels.

#### Review/Rating Schema

reviewCountFromSchema and averageRating display star ratings in SERPs. Reviews are the #2 local ranking factor after NAP consistency.

#### Service Area Schema

hasServiceAreaSchema defines your service radius beyond your physical address, critical for service-area businesses (plumbers, electricians, delivery).

#### Multiple Locations

hasMultipleLocations detects multi-location business patterns that may need separate location pages for optimal local pack coverage.

#### Email & Contact Methods

emailAddresses and additional contact methods (contact forms, chat widgets) provide alternative communication channels that improve local engagement signals.

## **City/Region in Title, H1 & Intro · v5.0**

When local-business signals (tel: link or a street address) are present but no explicit "City, State" appears in the title, H1, or opening paragraph, we flag it. Placing your city/region in these prominent locations reinforces local relevance for "near me" and geo-modified queries.

## **NAP Phone Consistency · v5.0**

We compare the visible phone number against the schema telephone property. A mismatch (after normalization) directly undermines local ranking, which depends on identical Name/Address/Phone across visible content, structured data, and directories. If a phone is shown but absent from schema, we recommend adding telephone so NAP is machine-verifiable.

## 15. WCAG (Web Content Accessibility Guidelines) — 2%

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WCAG extends basic accessibility into deep compliance with W3C's Web Content Accessibility Guidelines 2.2. It evaluates motion sensitivity, contrast, cognitive load, keyboard accessibility, ARIA validity, and the newest 2.2 criteria (focus-not-obscured, accessible authentication, dragging alternatives).

### Factor / What it represents / Why it matters

#### Reduced Motion Support

hasReducedMotion checks for @media (prefers-reduced-motion). reducedMotionEnforced verifies that animations are actually disabled, not just detected. Users with vestibular disorders experience nausea from animations (WCAG 2.3.3).

#### High Contrast Mode

hasHighContrastMode checks for @media (forced-colors) / @media (-ms-high-contrast) support. Users with low vision depend on forced-colors mode to make content readable.

#### Link Distinguishability

linkDistinguishable verifies links are identifiable by more than just color (WCAG 1.4.1). Underline, font-weight, or border-bottom must supplement color changes.

#### Text Resize (rem/em)

hasTextResize checks for relative font units. Pixel font sizes don't scale when users increase browser zoom to 200% (WCAG 1.4.4 requirement).

#### Focus Not Obscured (WCAG 2.4.11)

focusNotObscured is a WCAG 2.2 criterion. Sticky headers, floating CTAs, and cookie banners can cover the focus indicator, making keyboard navigation impossible.

#### Accessible Authentication (WCAG 3.3.8)

accessibleAuth checks that login forms support autocomplete attributes and password managers. Authentication must not demand cognitive function tests (WCAG 2.2).

#### Dragging Alternatives (WCAG 2.5.7)

draggingAlternative verifies that drag-and-drop interactions have click/tap alternatives. Users with motor impairments cannot perform dragging motions (WCAG 2.2).

#### ARIA Live Regions

ariaLiveRegionCount measures dynamic content announcements. Toast notifications, form validation messages, and chat updates are invisible to screen readers without aria-live="polite" or "assertive".

#### Color Contrast Issues

contrastIssueCount from colorContrastHints measures WCAG 1.4.3 violations. Poor contrast affects 300 million color-blind users and 2.2 billion people with vision impairment worldwide.

#### Cognitive Load Score

cognitiveLoadScore evaluates auto-playing carousels, excessive animations, information density, and simultaneous dynamic updates that increase cognitive burden for users with ADHD, autism, and cognitive disabilities.

## Heading Level Skips

headingLevelSkips (e.g., H2 → H4 skipping H3) breaks screen reader navigation and content hierarchy understanding.

## ARIA Role Validity

ariaRoleValidity audits all ARIA roles for correctness. Invalid roles (role="modal" instead of role="dialog") are ignored by assistive technology, breaking custom widget accessibility.

## Autoplay Media

autoplayMedia violates WCAG 1.4.2. Auto-playing audio/video is disorienting for cognitive disabilities and interrupts screen reader output. timeBasedMedia counts all time-based media elements.

## Timing Adjustable

timingAdjustable verifies that session timeouts and auto-advancing content can be extended or paused (WCAG 2.2.1). Users with motor or cognitive disabilities need more time.

## Form Error Identification

formErrorIdentification and hasErrorSuggestions check that form validation errors are clearly described and associated with the correct field (WCAG 3.3.1, 3.3.3).

## Content on Hover/Focus (WCAG 2.2 1.4.13) · v5.0

We count interactive elements (links, buttons, role="button") relying on native title tooltips. When 3+ do, we flag it: native title tooltips are not dismissable, hoverable, or persistent, failing WCAG 2.2 Success Criterion 1.4.13. Replace them with accessible tooltip components that meet all three requirements.

## Part II — Complete metric inventory

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The following 540 entries exhaust the catalog. IDs are stable references, not ranking positions. An entry marked contextual has no direct base-score consumer; it can still support fetching, reporting, another derived signal or an extension. “Observed value” in a rule explanation is a runtime interpolation, not missing research.

### 1. Title Brand Suffix Duplicated

**field:**titleBrandSuffixDuplicated

Field signal · seo · boolean

Whether the title brand suffix duplicated signal was detected.

Why it matters: titleBrandSuffixDuplicated detects "| Brand | Brand" patterns where the brand name appears twice in the title, wasting valuable character space.

Scoring context: Title tag contains a duplicated brand suffix (e.g., "My Page | Brand | Brand") — wastes title space and looks unprofessional in SERPs

Implementation: app/api/website-auditor/analyze/route.ts:524

### 2. Canonical Mismatch

**field:**canonicalMismatch

Field signal · seo · boolean

Whether the canonical mismatch signal was detected.

Scoring context: Review: canonical URL ([observed value]) differs from the fetched URL. This is expected for intentional duplicate/filter URLs and is not a confirmed defect.

Implementation: app/api/website-auditor/analyze/route.ts:525

### 3. Cf Email Obfuscation Detected

**field:**cfEmailObfuscationDetected

Field signal · seo · boolean

Whether the cf email obfuscation detected signal was detected.

Why it matters: cfEmailObfuscationDetected with high cfEmailObfuscationCount can interfere with crawlers parsing contact information and may affect E-E-A-T signals.

Scoring context: Cloudflare Email Protection detected ([observed value] obfuscated links) — these appear as /cdn-cgi/l/email-protection and return 404 to crawlers

Implementation: app/api/website-auditor/analyze/route.ts:526

### 4. Cf Email Obfuscation Count

**field:**cfEmailObfuscationCount

Field signal · seo · number

Numeric value for cf email obfuscation count.

Why it matters: cfEmailObfuscationDetected with high cfEmailObfuscationCount can interfere with crawlers parsing contact information and may affect E-E-A-T signals.

Implementation: app/api/website-auditor/analyze/route.ts:527

## 5. Internal Broken Link Patterns

### field:internalBrokenLinkPatterns

Field signal · seo · string[]

The observed list of internal broken link patterns.

Why it matters: brokenAnchors (href="#" or empty href) and emptyLinks waste crawl budget and create dead-end user experiences. We also detect internalBrokenLinkPatterns for systematic link rot.

Scoring context: [observed value] suspicious internal link pattern(s) detected: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:528

## 6. Content Fingerprint

### field:contentFingerprint

Field signal · Contextual / supporting evidence · string

A deterministic hash of normalized page text for comparing near-duplicate content during site-wide analysis; it is not an originality or plagiarism verdict.

Implementation: app/api/website-auditor/analyze/route.ts:530

## 7. Url Depth

### field:urlDepth

Field signal · Contextual / supporting evidence · number

Number of path segments in the audited URL, used to describe its place in the site hierarchy.

Implementation: app/api/website-auditor/analyze/route.ts:531

## 8. Schema Drift Signals

### field:schemaDriftSignals

Field signal · Contextual / supporting evidence · string[]

Recorded differences or warning hints about structured-data consistency for site-wide comparison.

Implementation: app/api/website-auditor/analyze/route.ts:532

## 9. Internal Link Targets

### field:internalLinkTargets

Field signal · Contextual / supporting evidence · string[]

Collected same-site link destinations used to understand navigation and discover related pages.

Implementation: app/api/website-auditor/analyze/route.ts:533

## 10. Orphan Page Signal

### field:orphanPageSignal

Field signal · Contextual / supporting evidence · boolean

A page-level heuristic for weak internal connectivity, not proof that no other page links here.

Implementation: app/api/website-auditor/analyze/route.ts:534

## 11. Content Topic Words

### field:contentTopicWords

Field signal · Contextual / supporting evidence · string[]

Extracted topical words used to compare the subject matter of pages in a site-wide audit.

Implementation: app/api/website-auditor/analyze/route.ts:535

## 12. Url Length

### field:urlLength

Field signal · seo · number

Numeric value for url length.

Why it matters: URLs over 75 characters are harder to share and may be truncated in SERPs. We measure urlLength and check keywordInUrl for topical relevance.

Scoring context: URL is very long ([observed value] chars) — may be truncated in SERPs and harder to share URL is longer than recommended ([observed value] chars)

Implementation: app/api/website-auditor/analyze/route.ts:570

## 13. External Links Without Rel

### field:externalLinksWithoutRel

Field signal · seo, security · number

Numeric value for external links without rel.

Why it matters: We count externalLinks, externalLinksWithoutRel (missing noopener/noreferrer), and analyze the dofollowExternalLinks vs. nofollowExternalLinks ratio (externalLinkDofollowRatio). Excessive dofollow outbound links dilute PageRank.

Scoring context: [observed value] external links missing rel="nofollow noopener noreferrer" — potential link equity leakage [observed value] external links missing recommended rel attributes All external links have proper rel attributes (nofollow/noopener)

Implementation: app/api/website-auditor/analyze/route.ts:571

## 14. Hreflang Missing Self Ref

### field:hreflangMissingSelfRef

Field signal · geo · boolean

Whether the hreflang missing self ref signal was detected.

Why it matters: hasHreflang, hreflangValues, hreflangMissingSelfRef, and hreflangMissingXDefault are critical for international SEO. Missing self-referencing tags or x-default causes wrong-language content in localized AI results.

Scoring context: Hreflang set is missing a self-referencing tag — reduces geo-targeting accuracy

Implementation: app/api/website-auditor/analyze/route.ts:572

## 15. Hreflang Missing X Default

### field:hreflangMissingXDefault

Field signal · geo · boolean

Whether the hreflang missing x default signal was detected.

Why it matters: hasHreflang, hreflangValues, hreflangMissingSelfRef, and hreflangMissingXDefault are critical for international SEO. Missing self-referencing tags or x-default causes wrong-language content in localized AI results.

Scoring context: Hreflang set is missing x-default fallback

Implementation: app/api/website-auditor/analyze/route.ts:573

## 16. Hreflang On Non Canonical

### field:hreflangOnNonCanonical

Field signal · seo · boolean

Whether the hreflang on non canonical signal was detected.

Why it matters: hreflangOnNonCanonical is a critical error: serving hreflang tags on non-canonical URLs creates conflicting language signals that can cause wrong-language pages in SERPs.

Scoring context: Hreflang tags found on a non-canonical page — search engines may ignore them

Implementation: `app/api/website-auditor/analyze/route.ts:574`

## 17. Redirect Chain Length

**field:redirectChainLength**

Field signal · seo, performance · number

Numeric value for redirect chain length.

Why it matters: Each hop in a redirectChainLength wastes crawl budget and adds latency. More than 2 redirects signals poor URL management.

Scoring context: Long redirect chain ([observed value] hops) — slows crawling and dilutes PageRank Redirect chain with [observed value] hops No redirect chain — direct URL resolution

Implementation: `app/api/website-auditor/analyze/route.ts:575`

## 18. Html Nesting Errors

**field:htmlNestingErrors**

Field signal · accessibility · string[]

The observed list of html nesting errors.

Why it matters: htmlNestingErrors (e.g., `<p>` inside `<p>`, interactive elements inside `<a>`) cause assistive technology parsing failures and unpredictable behavior.

Scoring context: [observed value] HTML validity issues detected — affects assistive technology parsing [observed value] minor HTML validity issue(s) — common in modern framework component patterns [observed value] minor HTML validity issue(s)

Implementation: `app/api/website-auditor/analyze/route.ts:576`

## 19. Total Css Kb

**field:totalCssKb**

Field signal · performance · number

Numeric value for total css kb.

Scoring context: Large CSS payload (~[observed value]KB across [observed value] files) — slows rendering Moderate CSS payload (~[observed value]KB) Lean CSS payload (~[observed value]KB)

Implementation: `app/api/website-auditor/analyze/route.ts:577`

## 20. Total Js Kb

**field:totalJsKb**

Field signal · performance · number

Numeric value for total js kb.

Scoring context: Heavy JavaScript payload (~[observed value]KB across [observed value] files) Moderate JavaScript payload (~[observed value]KB) Large JS bundle (~[observed value]KB) even for framework app

Implementation: `app/api/website-auditor/analyze/route.ts:578`

## 21. Duplicate Title And Og

**field:duplicateTitleAndOg**

Field signal · seo · boolean

Whether the duplicate title and og signal was detected.

Why it matters: We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each

missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Scoring context: Title and description are identical to Open Graph tags — missed optimization opportunity

Implementation: `app/api/website-auditor/analyze/route.ts:579`

## 22. Duplicate Desc And Og

**field:duplicateDescAndOg**

Field signal · seo · boolean

Whether the duplicate desc and og signal was detected.

Why it matters: We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Scoring context: Title and description are identical to Open Graph tags — missed optimization opportunity

Implementation: `app/api/website-auditor/analyze/route.ts:580`

## 23. Multiple Title Tags

**field:multipleTitleTags**

Field signal · seo · boolean

Whether the multiple title tags signal was detected.

Scoring context: Multiple <title> tags detected ([observed value]) — search engines may use an unintended title

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 24. Title Tag Count

**field:titleTagCount**

Field signal · seo · any

Number of title elements in the HTML. This is the measured count underlying the multiple-title warning.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 25. Multiple Meta Descriptions

**field:multipleMetaDescriptions**

Field signal · seo · boolean

Whether the multiple meta descriptions signal was detected.

Scoring context: Multiple meta descriptions detected ([observed value]) — engines may ignore them or pick the wrong one

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 26. Meta Description Count

**field:metaDescriptionCount**

Field signal · seo · any

Number of meta description elements. More than one can create ambiguous snippet instructions.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 27. Meta Keywords Length

### field:metaKeywordsLength

Field signal · Contextual / supporting evidence · any

Character length of the meta keywords value. This is descriptive metadata; Google does not use the meta keywords tag for web search ranking.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 28. Hreflang Element Count

### field:hreflangElementCount

Field signal · seo · any

The recorded hreflang element count value.

Scoring context: [observed value] hreflang annotation(s) present for international targeting

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 29. Meta Refresh Url

### field:metaRefreshUrl

Field signal · Contextual / supporting evidence · string

Destination declared by a meta refresh instruction, when present. Inspect the destination and prefer an appropriate server redirect where possible.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 30. Nofollow Internal Links

### field:nofollowInternalLinks

Field signal · seo · number

Numeric value for nofollow internal links.

Scoring context: [observed value] internal link(s) use rel="nofollow" — this wastes internal link equity

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 31. Charset Type

### field:charsetType

Field signal · seo · any

The recorded charset type value.

Scoring context: Character encoding declared as [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 32. Content Type Header

### field:contentTypeHeader

Field signal · Contextual / supporting evidence · string

The HTTP Content-Type response value, including its declared character encoding when supplied.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 33. Conflicting Character Encoding

### field:conflictingCharacterEncoding

Field signal · seo · boolean

Whether the conflicting character encoding signal was detected.

Scoring context: Conflicting character-encoding declarations detected — can cause garbled text and indexing issues

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 34. Has Frames

**field:hasFrames**

Field signal · seo · boolean

Whether the frames signal was detected.

Scoring context: Legacy frames/framesets detected ([observed value]) — content inside frames is poorly indexed

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 35. Frameset Count

**field:framesetCount**

Field signal · seo · any

Number of legacy frameset elements detected; these are separate from modern iframe embeds.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 36. Css Validation Hints

**field:cssValidationHints**

Field signal · seo · string[]

The observed list of css validation hints.

Scoring context: Inline CSS validation hints: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 37. Broken Images

**field:brokenImages**

Field signal · seo · number

Numeric value for broken images.

Scoring context: [observed value] image(s) have a missing or empty src — broken images hurt UX and image search

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 38. Images Without Dimensions

**field:imagesWithoutDimensions**

Field signal · performance, mobile · number

Numeric value for images without dimensions.

Scoring context: [observed value] image(s) lack explicit width/height — a common cause of layout shift (CLS) [observed value] image(s) without explicit width/height — most impactful for layout stability (CLS) on mobile (see Performance for remediation)

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 39. Animated Gif Count

**field:animatedGifCount**

Field signal · performance · number

Numeric value for animated gif count.

Scoring context: [observed value] animated GIF(s) detected — GIFs are far larger than modern video formats

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 40. Dom Element Count

### field:domElementCount

Field signal · performance · any

The recorded dom element count value.

Scoring context: Excessive DOM size ([observed value] elements) — increases memory use and slows rendering

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 41. Has Efficient Cache Policy

### field:hasEfficientCachePolicy

Field signal · performance · boolean

Whether the efficient cache policy signal was detected.

Scoring context: Efficient cache policy on the document ([observed value])

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 42. Cache Control Value

### field:cacheControlValue

Field signal · performance · string

The received Cache-Control header used to explain the cache-policy assessment. The right policy depends on whether content is public or sensitive.

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 43. Css Minified

### field:cssMinified

Field signal · performance · boolean

Whether the css minified signal was detected.

Scoring context: Inline CSS does not appear minified

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 44. Js Minified

### field:jsMinified

Field signal · performance · boolean

Whether the js minified signal was detected.

Scoring context: Inline JavaScript does not appear minified

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 45. Document Write Count

### field:documentWriteCount

Field signal · performance · any

The recorded document write count value.

Scoring context: `document.write()` used [observed value] time(s) — blocks the parser and delays rendering

Implementation: `app/api/website-auditor/analyze/route.ts:992`

## 46. Speed Index Estimate Ms

### field:speedIndexEstimateMs

Field signal · performance · number

Deterministic Speed Index proxy in milliseconds inferred from source and resource composition. Not a browser paint measurement or field-data result.

Implementation: app/api/website-auditor/analyze/route.ts:992

## 47. Tti Estimate Ms

### field:ttiEstimateMs

Field signal · performance · number

Deterministic time-to-interactive proxy in milliseconds. It is not measured interactive readiness on a real device.

Implementation: app/api/website-auditor/analyze/route.ts:992

## 48. Tbt Estimate Ms

### field:tbtEstimateMs

Field signal · performance · number

Deterministic total-blocking-time proxy in milliseconds. It is not measured browser long-task duration.

Implementation: app/api/website-auditor/analyze/route.ts:992

## 49. Data Confidence Score

### field:dataConfidenceScore

Field signal · Contextual / supporting evidence · number

Heuristic confidence in the amount and quality of evidence available to this audit. It is not statistical certainty or a guarantee of coverage.

Implementation: app/api/website-auditor/analyze/route.ts:522

## 50. Has Rtl Support

### field:hasRtlSupport

Field signal · mobile · boolean

Whether the rtl support signal was detected.

Why it matters: hasRtlSupport (direction: rtl for Arabic/Hebrew), hasCurrencyFormatting, and i18nSignalCount measure internationalization depth beyond basic hreflang tags.

Scoring context: RTL text direction support detected

Implementation: app/api/website-auditor/analyze/route.ts:518

## 51. Has Currency Formatting

### field:hasCurrencyFormatting

Field signal · Contextual / supporting evidence · boolean

Whether the currency formatting signal was detected.

Why it matters: hasRtlSupport (direction: rtl for Arabic/Hebrew), hasCurrencyFormatting, and i18nSignalCount measure internationalization depth beyond basic hreflang tags.

Implementation: app/api/website-auditor/analyze/route.ts:519

## 52. I18n Signal Count

### field:i18nSignalCount

Field signal · mobile · number

Numeric value for i18n signal count.

Why it matters: hasRtlSupport (direction: rtl for Arabic/Hebrew), hasCurrencyFormatting, and i18nSignalCount measure internationalization depth beyond basic hreflang tags.

Scoring context: [observed value] internationalization signals detected (hreflang, lang, dir, locale meta)

Implementation: app/api/website-auditor/analyze/route.ts:520

## 53. Estimated Page Weight Kb

### field:estimatedPageWeightKb

Field signal · mobile · number

Numeric value for estimated page weight kb.

Why it matters: estimatedPageWeightKb and sustainabilityScore evaluate total transfer size. Pages over 3MB are heavy for mobile data; under 1MB is lightweight. Lower page weight also reduces carbon footprint.

Scoring context: Estimated page weight ~[observed value]KB — heavy for mobile data plans Page weight ~[observed value]KB — acceptable for framework SSR apps with code splitting Lightweight page (~[observed value]KB) — fast on mobile networks

Implementation: app/api/website-auditor/analyze/route.ts:515

## 54. Sustainability Score

### field:sustainabilityScore

Field signal · Contextual / supporting evidence · number

Numeric value for sustainability score.

Why it matters: estimatedPageWeightKb and sustainabilityScore evaluate total transfer size. Pages over 3MB are heavy for mobile data; under 1MB is lightweight. Lower page weight also reduces carbon footprint.

Implementation: app/api/website-auditor/analyze/route.ts:516

## 55. Install Prompt Ready

### field:installPromptReady

Field signal · Contextual / supporting evidence · boolean

Whether the install prompt ready signal was detected.

Why it matters: installPromptReady requires manifest + service worker + HTTPS for the browser's PWA install prompt to appear.

Implementation: app/api/website-auditor/analyze/route.ts:509

## 56. Manifest Icons Count

### field:manifestIconsCount

Field signal · mobile · number

Numeric value for manifest icons count.

Why it matters: manifestIconsCount < 4 means distorted or missing icons across devices. Apple, Android, and Windows each need different icon sizes.

Scoring context: Web app manifest includes [observed value] icon sizes — good coverage Only [observed value] manifest icon size(s) — recommend at least 4 (192, 384, 512, maskable)

Implementation: app/api/website-auditor/analyze/route.ts:510

## 57. Has Safe Area Insets

### field:hasSafeAreaInsets

Field signal · mobile · boolean

Whether the safe area insets signal was detected.

Why it matters: hasSafeAreaInsets (env(safe-area-inset-\*)) ensures content avoids notches, rounded corners, and home indicators on modern smartphones.

Scoring context: CSS safe-area-inset handling detected — notch/dynamic-island compatible

Implementation: app/api/website-auditor/analyze/route.ts:511

## 58. Has Orientation Handling

### field:hasOrientationHandling

Field signal · mobile · boolean

Whether the orientation handling signal was detected.

Why it matters: hasOrientationHandling detects CSS @media (orientation: landscape) or orientation-lock meta tags for proper landscape/portrait adaptation.

Scoring context: Orientation handling declared in manifest or meta

Implementation: app/api/website-auditor/analyze/route.ts:512

## 59. Touch Feedback Detected

### field:touchFeedbackDetected

Field signal · mobile · boolean

Whether the touch feedback detected signal was detected.

Why it matters: touchFeedbackDetected (CSS :active states, tap-highlight) provides visual confirmation that a user's tap registered, reducing perceived latency.

Scoring context: Touch feedback CSS detected (active states or touch-action)

Implementation: app/api/website-auditor/analyze/route.ts:513

## 60. Focus Not Obscured

### field:focusNotObscured

Field signal · wcag · boolean

Whether the focus not obscured signal was detected.

Why it matters: focusNotObscured is a WCAG 2.2 criterion. Sticky headers, floating CTAs, and cookie banners can cover the focus indicator, making keyboard navigation impossible.

Scoring context: Multiple fixed/sticky elements may obscure focused content (WCAG 2.4.11)

Implementation: app/api/website-auditor/analyze/route.ts:503

## 61. Accessible Auth

### field:accessibleAuth

Field signal · wcag · boolean

Whether the accessible auth signal was detected.

Why it matters: accessibleAuth checks that login forms support autocomplete attributes and password managers. Authentication must not demand cognitive function tests (WCAG 2.2).

Scoring context: Authentication form may require cognitive tasks without alternatives (WCAG 3.3.8) Accessible authentication detected (autocomplete, no CAPTCHA barriers) — WCAG 3.3.8

Implementation: app/api/website-auditor/analyze/route.ts:504

## 62. Dragging Alternative

### field:draggingAlternative

Field signal · wcag · boolean

Whether the dragging alternative signal was detected.

Why it matters: draggingAlternative verifies that drag-and-drop interactions have click/tap alternatives. Users with motor impairments cannot perform dragging motions (WCAG 2.2).

Scoring context: Drag-and-drop detected without pointer-based alternative (WCAG 2.5.7)

Implementation: `app/api/website-auditor/analyze/route.ts:505`

## 63. Aria Live Region Count

### field:ariaLiveRegionCount

Field signal · wcag · number

Numeric value for aria live region count.

Why it matters: ariaLiveRegionCount measures dynamic content announcements. Toast notifications, form validation messages, and chat updates are invisible to screen readers without `aria-live="polite"` or `"assertive"`.

Scoring context: [observed value] ARIA live regions for dynamic content announcements

Implementation: `app/api/website-auditor/analyze/route.ts:506`

## 64. Reduced Motion Enforced

### field:reducedMotionEnforced

Field signal · wcag · boolean

Whether the reduced motion enforced signal was detected.

Why it matters: hasReducedMotion checks for `@media (prefers-reduced-motion)`. `reducedMotionEnforced` verifies that animations are actually disabled, not just detected. Users with vestibular disorders experience nausea from animations (WCAG 2.3.3).

Scoring context: Reduced motion enforced: animations disabled when `prefers-reduced-motion` is set

Implementation: `app/api/website-auditor/analyze/route.ts:507`

## 65. Passive Voice Ratio

### field:passiveVoiceRatio

Field signal · seo · number

Numeric value for passive voice ratio.

Why it matters: fleschReadingEase measures text complexity (60–70 is ideal for web). `passiveVoiceRatio` above 20% reduces engagement. `contentReadabilityHints` provide specific improvement suggestions.

Scoring context: Low passive voice ratio ([observed value]%) — clear, active writing style Moderate passive voice ([observed value]%) High passive voice ratio ([observed value]%) — harder for AI/voice extraction

Implementation: `app/api/website-auditor/analyze/route.ts:494`

## 66. Has Table Of Contents

### field:hasTableOfContents

Field signal · seo · boolean

Whether the table of contents signal was detected.

Why it matters: `zeroClickOptimized` checks for TL;DR blocks (`tldrBlockCount`), definition lead paragraphs (`definitionLeadParagraphs`), and `hasTableOfContents` — content patterns that win featured snippets and AI

Overviews.

Scoring context: Table of Contents detected — improves dwell time and jump-link navigation Long content without Table of Contents

Implementation: `app/api/website-auditor/analyze/route.ts:495`

## 67. Zero Click Optimized

**field:zeroClickOptimized**

Field signal · seo · boolean

Whether the zero click optimized signal was detected.

Why it matters: zeroClickOptimized checks for TL;DR blocks (`tldrBlockCount`), definition lead paragraphs (`definitionLeadParagraphs`), and `hasTableOfContents` — content patterns that win featured snippets and AI Overviews.

Scoring context: Zero-click optimized: [observed value] TL;DR/summary block(s) + [observed value] definition-style lead paragraph(s)

Implementation: `app/api/website-auditor/analyze/route.ts:496`

## 68. Tldr Block Count

**field:tldrBlockCount**

Field signal · seo · number

Numeric value for tldr block count.

Why it matters: zeroClickOptimized checks for TL;DR blocks (`tldrBlockCount`), definition lead paragraphs (`definitionLeadParagraphs`), and `hasTableOfContents` — content patterns that win featured snippets and AI Overviews.

Implementation: `app/api/website-auditor/analyze/route.ts:497`

## 69. Definition Lead Paragraphs

**field:definitionLeadParagraphs**

Field signal · seo · number

Numeric value for definition lead paragraphs.

Why it matters: zeroClickOptimized checks for TL;DR blocks (`tldrBlockCount`), definition lead paragraphs (`definitionLeadParagraphs`), and `hasTableOfContents` — content patterns that win featured snippets and AI Overviews.

Implementation: `app/api/website-auditor/analyze/route.ts:498`

## 70. Entity Salience Score

**field:entitySalienceScore**

Field signal · seo · number

Numeric value for entity salience score.

Why it matters: entitySalienceScore measures how prominently key entities appear. `relatedEntityMentions` and `entityMentions` help search engines build topical authority graphs.

Scoring context: Strong entity salience: [observed value] (score: [observed value]) Moderate entity presence: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:499`

## 71. Related Entity Mentions

### field:relatedEntityMentions

Field signal · seo · string[]

The observed list of related entity mentions.

Why it matters: entitySalienceScore measures how prominently key entities appear. relatedEntityMentions and entityMentions help search engines build topical authority graphs.

Implementation: app/api/website-auditor/analyze/route.ts:500

## 72. Bingeworthy Signals

### field:bingeworthySignals

Field signal · seo · number

Numeric value for bingeworthy signals.

Why it matters: bingeworthySignals detect internal content loops, "related posts" sections, and series navigation that increase session duration and pages per visit.

Scoring context: Strong dwell/engagement signals: [observed value] indicators (ToC, related content, internal links)

Implementation: app/api/website-auditor/analyze/route.ts:501

## 73. Llms Txt Content Quality

### field:llmsTxtContentQuality

Field signal · aiReadiness · string

Heuristic assessment of an optional llms.txt file's content quality. The file is not a requirement for Google indexing or AI features.

Implementation: app/api/website-auditor/analyze/route.ts:455

## 74. Llms Txt Exists

### field:llmsTxtExists

Field signal · aiReadiness · boolean

Whether the llms txt exists signal was detected.

Scoring context: llms.txt detected (score: [observed value]/100, quality: [observed value]) llms-full.txt companion file detected ([observed value]KB) llms.txt has proper title and description block

Implementation: app/api/website-auditor/analyze/route.ts:457

## 75. Llms Full Txt Exists

### field:llmsFullTxtExists

Field signal · aiReadiness · boolean

Whether the llms full txt exists signal was detected.

Why it matters: llmsFullTxtExists checks for /llms-full.txt, the extended version containing comprehensive content for deep AI ingestion. Together, llmsTxtByteSize and llmsFullTxtByteSize indicate content depth.

Scoring context: llms.txt detected (score: [observed value]/100, quality: [observed value]) llms-full.txt companion file detected ([observed value]KB) llms.txt has proper title and description block

Implementation: app/api/website-auditor/analyze/route.ts:458

## 76. Llms Txt Byte Size

### field:llmsTxtByteSize

Field signal · Contextual / supporting evidence · number

Numeric value for llms txt byte size.

Why it matters: llmsFullTxtExists checks for /llms-full.txt, the extended version containing comprehensive content for deep AI ingestion. Together, llmsTxtByteSize and llmsFullTxtByteSize indicate content depth.

Implementation: app/api/website-auditor/analyze/route.ts:459

## 77. Llms Full Txt Byte Size

### field:llmsFullTxtByteSize

Field signal · aiReadiness · number

Numeric value for llms full txt byte size.

Why it matters: llmsFullTxtExists checks for /llms-full.txt, the extended version containing comprehensive content for deep AI ingestion. Together, llmsTxtByteSize and llmsFullTxtByteSize indicate content depth.

Implementation: app/api/website-auditor/analyze/route.ts:460

## 78. Llms Txt Section Count

### field:llmsTxtSectionCount

Field signal · aiReadiness · number

Numeric value for llms txt section count.

Why it matters: llmsTxtSectionCount measures document organization. llmsTxtHasStructuredSections and llmsTxtHasMarkdownFormatting indicate proper Markdown structure that AI parsers can reliably extract.

Implementation: app/api/website-auditor/analyze/route.ts:461

## 79. Llms Txt Has Title

### field:llmsTxtHasTitle

Field signal · aiReadiness · boolean

Whether the llms txt has title signal was detected.

Why it matters: llmsTxtHasTitle, llmsTxtHasDescription, llmsTxtHasVersionOrDate, and llmsTxtHasCanonicalDomain provide essential metadata that helps AI models understand your organization and content currency.

Scoring context: llms.txt has proper title and description block

Implementation: app/api/website-auditor/analyze/route.ts:462

## 80. Llms Txt Has Description

### field:llmsTxtHasDescription

Field signal · aiReadiness · boolean

Whether the llms txt has description signal was detected.

Why it matters: llmsTxtHasTitle, llmsTxtHasDescription, llmsTxtHasVersionOrDate, and llmsTxtHasCanonicalDomain provide essential metadata that helps AI models understand your organization and content currency.

Scoring context: llms.txt has proper title and description block

Implementation: app/api/website-auditor/analyze/route.ts:463

## 81. Llms Txt Has Url List

### field:llmsTxtHasUrlList

Field signal · aiReadiness · boolean

Whether the llms txt has url list signal was detected.

Why it matters: llmsTxtHasUrlList and llmsTxtUrlCount indicate how many pages you've indexed for AI consumption. llmsTxtBrokenUrlPatterns detects URLs in llms.txt that appear malformed or incomplete.

Scoring context: llms.txt references [observed value] URLs for AI navigation

Implementation: `app/api/website-auditor/analyze/route.ts:464`

## 82. Llms Txt Url Count

### field:llmsTxtUrlCount

Field signal · aiReadiness · number

Numeric value for llms txt url count.

Why it matters: llmsTxtHasUrlList and llmsTxtUrlCount indicate how many pages you've indexed for AI consumption. llmsTxtBrokenUrlPatterns detects URLs in llms.txt that appear malformed or incomplete.

Implementation: `app/api/website-auditor/analyze/route.ts:465`

## 83. Llms Txt Broken Url Patterns

### field:llmsTxtBrokenUrlPatterns

Field signal · aiReadiness · string[]

The observed list of llms txt broken url patterns.

Why it matters: llmsTxtHasUrlList and llmsTxtUrlCount indicate how many pages you've indexed for AI consumption. llmsTxtBrokenUrlPatterns detects URLs in llms.txt that appear malformed or incomplete.

Scoring context: llms.txt has [observed value] suspicious URL(s)

Implementation: `app/api/website-auditor/analyze/route.ts:466`

## 84. Llms Txt Has Contact Info

### field:llmsTxtHasContactInfo

Field signal · Contextual / supporting evidence · boolean

Whether the llms txt has contact info signal was detected.

Why it matters: llmsTxtHasContactInfo provides a feedback channel for AI developers. llmsTxtHasLinkToFull connects the summary to the full version. llmsTxtLinkedFromHtml and llmsTxtLinkedFromRobotsTxt measure discoverability.

Implementation: `app/api/website-auditor/analyze/route.ts:467`

## 85. Llms Txt Has Service List

### field:llmsTxtHasServiceList

Field signal · aiReadiness · boolean

Whether the llms txt has service list signal was detected.

Why it matters: llmsTxtHasServiceList and llmsTxtHasApiDocs signal that you've documented your offerings in a format AI agents can parse for tool-use and function-calling scenarios.

Scoring context: llms.txt includes service/product catalog

Implementation: `app/api/website-auditor/analyze/route.ts:468`

## 86. Llms Txt Has Api Docs

### field:llmsTxtHasApiDocs

Field signal · Contextual / supporting evidence · boolean

Whether the llms txt has api docs signal was detected.

Why it matters: llmsTxtHasServiceList and llmsTxtHasApiDocs signal that you've documented your offerings in a format AI agents can parse for tool-use and function-calling scenarios.

Implementation: app/api/website-auditor/analyze/route.ts:469

## 87. Llms Txt Has Link To Full

### field:llmsTxtHasLinkToFull

Field signal · aiReadiness · boolean

Whether the llms txt has link to full signal was detected.

Why it matters: llmsTxtHasContactInfo provides a feedback channel for AI developers. llmsTxtHasLinkToFull connects the summary to the full version. llmsTxtLinkedFromHtml and llmsTxtLinkedFromRobotsTxt measure discoverability.

Scoring context: llms.txt links to detailed documentation (llms-full.txt)

Implementation: app/api/website-auditor/analyze/route.ts:470

## 88. Llms Txt Has Structured Sections

### field:llmsTxtHasStructuredSections

Field signal · aiReadiness · boolean

Whether the llms txt has structured sections signal was detected.

Why it matters: llmsTxtSectionCount measures document organization. llmsTxtHasStructuredSections and llmsTxtHasMarkdownFormatting indicate proper Markdown structure that AI parsers can reliably extract.

Scoring context: llms.txt has [observed value] well-organized sections

Implementation: app/api/website-auditor/analyze/route.ts:471

## 89. Llms Txt Has Markdown Formatting

### field:llmsTxtHasMarkdownFormatting

Field signal · aiReadiness · boolean

Whether the llms txt has markdown formatting signal was detected.

Why it matters: llmsTxtSectionCount measures document organization. llmsTxtHasStructuredSections and llmsTxtHasMarkdownFormatting indicate proper Markdown structure that AI parsers can reliably extract.

Scoring context: llms.txt uses proper Markdown formatting for machine readability

Implementation: app/api/website-auditor/analyze/route.ts:472

## 90. Llms Txt Has Version Or Date

### field:llmsTxtHasVersionOrDate

Field signal · aiReadiness · boolean

Whether the llms txt has version or date signal was detected.

Why it matters: llmsTxtHasTitle, llmsTxtHasDescription, llmsTxtHasVersionOrDate, and llmsTxtHasCanonicalDomain provide essential metadata that helps AI models understand your organization and content currency.

Scoring context: llms.txt includes version/date for freshness tracking

Implementation: app/api/website-auditor/analyze/route.ts:473

## 91. Lms Txt Has License Or Terms

### field:llmsTxtHasLicenseOrTerms

Field signal · Contextual / supporting evidence · boolean

Whether the llms txt has license or terms signal was detected.

Why it matters: llmsTxtHasLicenseOrTerms, llmsTxtHasPreferredCitation, and llmsTxtHasContentGuidelines establish how AI models should attribute and use your content — critical for responsible AI adoption.

Implementation: app/api/website-auditor/analyze/route.ts:474

## 92. Lms Txt Has Preferred Citation

### field:llmsTxtHasPreferredCitation

Field signal · aiReadiness · boolean

Whether the llms txt has preferred citation signal was detected.

Why it matters: llmsTxtHasLicenseOrTerms, llmsTxtHasPreferredCitation, and llmsTxtHasContentGuidelines establish how AI models should attribute and use your content — critical for responsible AI adoption.

Scoring context: llms.txt includes citation/attribution guidance

Implementation: app/api/website-auditor/analyze/route.ts:475

## 93. Lms Txt Has Content Guidelines

### field:llmsTxtHasContentGuidelines

Field signal · aiReadiness · boolean

Whether the llms txt has content guidelines signal was detected.

Why it matters: llmsTxtHasLicenseOrTerms, llmsTxtHasPreferredCitation, and llmsTxtHasContentGuidelines establish how AI models should attribute and use your content — critical for responsible AI adoption.

Scoring context: llms.txt provides content usage guidelines for AI

Implementation: app/api/website-auditor/analyze/route.ts:476

## 94. Lms Txt Has Canonical Domain

### field:llmsTxtHasCanonicalDomain

Field signal · aiReadiness · boolean

Whether the llms txt has canonical domain signal was detected.

Why it matters: llmsTxtHasTitle, llmsTxtHasDescription, llmsTxtHasVersionOrDate, and llmsTxtHasCanonicalDomain provide essential metadata that helps AI models understand your organization and content currency.

Scoring context: llms.txt uses canonical domain in URLs

Implementation: app/api/website-auditor/analyze/route.ts:477

## 95. Lms Txt Linked From Html

### field:llmsTxtLinkedFromHtml

Field signal · aiReadiness · boolean

Whether the llms txt linked from html signal was detected.

Why it matters: llmsTxtHasContactInfo provides a feedback channel for AI developers. llmsTxtHasLinkToFull connects the summary to the full version. llmsTxtLinkedFromHtml and llmsTxtLinkedFromRobotsTxt measure discoverability.

Scoring context: llms.txt referenced in HTML for discoverability

Implementation: app/api/website-auditor/analyze/route.ts:478

## 96. Llms Txt Linked From Robots Txt

### field:llmsTxtLinkedFromRobotsTxt

Field signal · Contextual / supporting evidence · boolean

Whether the llms txt linked from robots txt signal was detected.

Why it matters: llmsTxtHasContactInfo provides a feedback channel for AI developers. llmsTxtHasLinkToFull connects the summary to the full version. llmsTxtLinkedFromHtml and llmsTxtLinkedFromRobotsTxt measure discoverability.

Implementation: app/api/website-auditor/analyze/route.ts:479

## 97. Llms Txt Overall Score

### field:llmsTxtOverallScore

Field signal · aiReadiness · number

Numeric value for llms txt overall score.

Why it matters: llmsTxtOverallScore (0-100) is our composite assessment. llmsTxtIssues and llmsTxtRecommendations provide actionable feedback for improving your llms.txt implementation.

Implementation: app/api/website-auditor/analyze/route.ts:480

## 98. Llms Txt Issues

### field:llmsTxtIssues

Field signal · aiReadiness · string[]

The observed list of llms txt issues.

Why it matters: llmsTxtOverallScore (0-100) is our composite assessment. llmsTxtIssues and llmsTxtRecommendations provide actionable feedback for improving your llms.txt implementation.

Implementation: app/api/website-auditor/analyze/route.ts:481

## 99. Llms Txt Recommendations

### field:llmsTxtRecommendations

Field signal · aiReadiness · string[]

The observed list of llms txt recommendations.

Why it matters: llmsTxtOverallScore (0-100) is our composite assessment. llmsTxtIssues and llmsTxtRecommendations provide actionable feedback for improving your llms.txt implementation.

Implementation: app/api/website-auditor/analyze/route.ts:482

## 100. Rag Friendliness Score

### field:ragFriendlinessScore

Field signal · aiReadiness · number

Numeric value for rag friendliness score.

Why it matters: ragFriendlinessScore (0-100) measures how well content can be chunked for vector embedding. headingsWithIds and sectionAnchorsCount enable precise chunk targeting in Retrieval-Augmented Generation pipelines.

Scoring context: High RAG-friendliness ([observed value]/100): [observed value] headings with IDs, [observed value] section anchors Moderate RAG-friendliness ([observed value]/100)

Implementation: app/api/website-auditor/analyze/route.ts:483

## 101. Headings With Ids

### field:headingsWithIds

Field signal · aiReadiness · number

Numeric value for headings with ids.

Why it matters: ragFriendlinessScore (0–100) measures how well content can be chunked for vector embedding. headingsWithIds and sectionAnchorsCount enable precise chunk targeting in Retrieval-Augmented Generation pipelines.

Implementation: app/api/website-auditor/analyze/route.ts:484

## 102. Section Anchors Count

### field:sectionAnchorsCount

Field signal · aiReadiness · number

Numeric value for section anchors count.

Why it matters: ragFriendlinessScore (0–100) measures how well content can be chunked for vector embedding. headingsWithIds and sectionAnchorsCount enable precise chunk targeting in Retrieval-Augmented Generation pipelines.

Implementation: app/api/website-auditor/analyze/route.ts:485

## 103. Additional Ai Crawlers Allowed

### field:additionalAiCrawlersAllowed

Field signal · aiReadiness · string[]

The observed list of additional ai crawlers allowed.

Why it matters: We check 12+ AI crawlers (GPTBot, ClaudeBot, PerplexityBot, Google-Extended, Amazonbot, Bytespider, etc.) across both meta tags (aiCrawlerBlocked) and robots.txt (robotsTxtAiCrawlerRules). additionalAiCrawlersAllowed and additionalAiCrawlersBlocked provide granular per-crawler governance.

Scoring context: Additional AI crawlers allowed: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:486

## 104. Additional Ai Crawlers Blocked

### field:additionalAiCrawlersBlocked

Field signal · aiReadiness · string[]

The observed list of additional ai crawlers blocked.

Why it matters: We check 12+ AI crawlers (GPTBot, ClaudeBot, PerplexityBot, Google-Extended, Amazonbot, Bytespider, etc.) across both meta tags (aiCrawlerBlocked) and robots.txt (robotsTxtAiCrawlerRules). additionalAiCrawlersAllowed and additionalAiCrawlersBlocked provide granular per-crawler governance.

Scoring context: [observed value] additional AI crawlers blocked: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:487

## 105. Has Provenance Signals

### field:hasProvenanceSignals

Field signal · aiReadiness · boolean

Whether the provenance signals signal was detected.

Why it matters: hasProvenanceSignals detects attributions like "according to [source]" and "our research found" that make claims verifiable and citation-worthy for AI systems.

Scoring context: Content provenance signals detected (citations with sources, attributed claims)

Implementation: [app/api/website-auditor/analyze/route.ts:488](#)

## 106. Has Buy Action

**field:hasBuyAction**

Field signal · schemaOrg · boolean

Whether the buy action signal was detected.

Why it matters: hasBuyAction and hasSubscribeAction signal conversion intent, potentially enabling direct purchase/subscribe rich results in AI-powered commerce.

Scoring context: BuyAction/OrderAction schema — enables direct purchase rich results

Implementation: [app/api/website-auditor/analyze/route.ts:489](#)

## 107. Has Subscribe Action

**field:hasSubscribeAction**

Field signal · schemaOrg · boolean

Whether the subscribe action signal was detected.

Why it matters: hasBuyAction and hasSubscribeAction signal conversion intent, potentially enabling direct purchase/subscribe rich results in AI-powered commerce.

Scoring context: SubscribeAction/JoinAction schema detected — conversion-oriented schema

Implementation: [app/api/website-auditor/analyze/route.ts:490](#)

## 108. Has Search Action

**field:hasSearchAction**

Field signal · schemaOrg · boolean

Whether the search action signal was detected.

Scoring context: SearchAction schema present. Google retired the sitelinks search box in November 2024; this markup does not establish eligibility for that feature.

Implementation: [app/api/website-auditor/analyze/route.ts:491](#)

## 109. Additional Rich Results

**field:additionalRichResults**

Field signal · schemaOrg · string[]

The observed list of additional rich results.

Why it matters: richResultsEligible and additionalRichResults enumerate which rich results your schema qualifies for: FAQ dropdowns, star ratings, how-to steps, product cards, event listings.

Scoring context: Additional rich result types: [observed value]

Implementation: [app/api/website-auditor/analyze/route.ts:492](#)

## 110. Password Field Insecure Form

**field:passwordFieldInsecureForm**

Field signal · security · boolean

Whether the password field insecure form signal was detected.

Why it matters: passwordFieldInsecureForm flags any form containing a password input whose action resolves to http://. Credentials are then transmitted in clear text and trivially intercepted (CWE-319, ASVS 9.1, OWASP A02).

Scoring context: A password/login field submits over an insecure (HTTP) form action — credentials transmitted in clear text

Implementation: `app/api/website-auditor/analyze/route.ts:537`

## 111. Basic Auth Over Http

**field:basicAuthOverHttp**

Field signal · security · boolean

Whether the basic auth over http signal was detected.

Why it matters: `basicAuthOverHttp` detects a WWW-Authenticate: Basic challenge served over an unencrypted channel. Basic-Auth credentials are only base64-encoded, so they are effectively sent in the clear (CWE-319).

Scoring context: HTTP Basic Authentication offered over an unencrypted channel (WWW-Authenticate over HTTP) — credentials are base64-encoded, not encrypted

Implementation: `app/api/website-auditor/analyze/route.ts:538`

## 112. Insecure Web Socket Count

**field:insecureWebSocketCount**

Field signal · security · number

Numeric value for insecure web socket count.

Why it matters: `insecureWebSocketCount` finds unencrypted ws:// endpoints in markup/scripts. WebSocket traffic should always use the encrypted wss:// scheme (CWE-319).

Scoring context: [observed value] insecure ws:// WebSocket endpoint(s) referenced — data exchanged unencrypted

Implementation: `app/api/website-auditor/analyze/route.ts:539`

## 113. Xss Protection Legacy

**field:xssProtectionLegacy**

Field signal · security · boolean

Whether the xss protection legacy signal was detected.

Why it matters: `xssProtectionLegacy` flags the deprecated X-XSS-Protection header (can introduce bugs in old browsers); `inlineEventHandlerCount` and `javascriptUrlCount` measure inline on\*= handlers and javascript: URLs that force CSP unsafe-inline and widen the XSS surface.

Scoring context: Legacy X-XSS-Protection header present — deprecated and can introduce vulnerabilities in older browsers

Implementation: `app/api/website-auditor/analyze/route.ts:540`

## 114. Csp Via Meta Only

**field:cspViaMetaOnly**

Field signal · security · boolean

Whether the csp via meta only signal was detected.

Why it matters: `cspViaMetaOnly` flags a policy delivered only through a meta tag, which cannot enforce frame-ancestors or report-uri and is easier to bypass. Serve the CSP as an HTTP header.

Scoring context: Content-Security-Policy is delivered only via a <meta> tag — cannot use report-uri/frame-ancestors and is bypassable CSP is missing key hardening directive(s): [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:541`

## 115. Csp Missing Directives

**field:cspMissingDirectives**

Field signal · security · string[]

The observed list of csp missing directives.

Why it matters: `cspMissingDirectives` checks for absent `object-src`, `base-uri` and `frame-ancestors` directives — common gaps that leave known CSP bypasses open.

Scoring context: CSP is missing key hardening directive(s): [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:542`

## 116. Csp Has Reporting

### **field:cspHasReporting**

Field signal · security · boolean

Whether the csp has reporting signal was detected.

Why it matters: `hasLoginForm` and `hasPasswordResetForm` identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: `cspHasReporting`, `clearSiteDataSupported` and `crossOriginIsolated` (COOP+COEP) are recognised as hardening wins.

Scoring context: CSP includes violation reporting (`report-uri` / `report-to`) — enables monitoring of policy breaches

Implementation: `app/api/website-auditor/analyze/route.ts:543`

## 117. Missing Cache Control On Sensitive

### **field:missingCacheControlOnSensitive**

Field signal · security · boolean

Whether the missing cache control on sensitive signal was detected.

Why it matters: `missingCacheControlOnSensitive` verifies login/account/checkout pages send `Cache-Control: no-store` so confidential data is not cached by browsers or shared proxies (CWE-525, ASVS 8.2).

Scoring context: A sensitive page (login/account/checkout) lacks `Cache-Control: no-store` — confidential data may be cached by browsers/proxies

Implementation: `app/api/website-auditor/analyze/route.ts:544`

## 118. Clear Site Data Supported

### **field:clearSiteDataSupported**

Field signal · security · boolean

Whether the clear site data supported signal was detected.

Why it matters: `hasLoginForm` and `hasPasswordResetForm` identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: `cspHasReporting`, `clearSiteDataSupported` and `crossOriginIsolated` (COOP+COEP) are recognised as hardening wins.

Scoring context: Clear-Site-Data header supported — allows clean logout/state teardown

Implementation: `app/api/website-auditor/analyze/route.ts:545`

## 119. Session Id In Url

### **field:sessionIdInUrl**

Field signal · security · boolean

Whether the session id in url signal was detected.

Why it matters: `sessionIdInUrl` detects session-token-like parameters in URLs. Session IDs in URLs leak through `Referer` headers, server logs, and browser history and enable session fixation (CWE-598/CWE-384, ASVS 3.x).

Scoring context: A session identifier appears to be passed in the URL — session IDs in URLs leak via `referrer` headers, logs, and browser history

Implementation: `app/api/website-auditor/analyze/route.ts:546`

## 120. Autocomplete On Password Field

### field:autocompleteOnPasswordField

Field signal · security · number

Numeric value for autocomplete on password field.

Scoring context: A password field does not disable autocomplete on a shared/sensitive context — may persist credentials on shared devices

Implementation: app/api/website-auditor/analyze/route.ts:547

## 121. State Changing Forms Without Csrp

### field:stateChangingFormsWithoutCsrp

Field signal · security · number

Numeric value for state changing forms without csrf.

Why it matters: stateChangingFormsWithoutCsrp counts state-changing POST forms that show no visible anti-CSRF token (search forms excluded). This is a low-confidence heuristic — SameSite cookies may still protect them — but missing tokens warrant review (CWE-352, OWASP A01).

Scoring context: [observed value] state-changing POST form(s) show no visible anti-CSRF token (heuristic — SameSite cookies may still protect them)

Implementation: app/api/website-auditor/analyze/route.ts:548

## 122. Dangerous Js Sinks

### field:dangerousJsSinks

Field signal · security · string[]

The observed list of dangerous js sinks.

Why it matters: dangerousJsSinks detects risky client-side sinks (eval, document.write, innerHTML assignment, Function(), setTimeout with a string, insertAdjacentHTML). Combined with untrusted input these are classic DOM-based XSS vectors (CWE-79, OWASP A03).

Scoring context: Dangerous client-side sink(s) detected in inline scripts: [observed value] — potential DOM-based XSS vectors

Implementation: app/api/website-auditor/analyze/route.ts:549

## 123. Inline Event Handler Count

### field:inlineEventHandlerCount

Field signal · security · number

Numeric value for inline event handler count.

Why it matters: xssProtectionLegacy flags the deprecated X-XSS-Protection header (can introduce bugs in old browsers); inlineEventHandlerCount and javascriptUrlCount measure inline on\*= handlers and javascript: URLs that force CSP unsafe-inline and widen the XSS surface.

Scoring context: [observed value] inline event handlers (onclick=, onload=, ...) — inline handlers require CSP unsafe-inline and widen the XSS surface

Implementation: app/api/website-auditor/analyze/route.ts:550

## 124. Javascript Url Count

### field:javascriptUrlCount

Field signal · security · number

Numeric value for javascript url count.

Why it matters: xssProtectionLegacy flags the deprecated X-XSS-Protection header (can introduce bugs in

old browsers); inlineEventHandlerCount and javascriptUrlCount measure inline on\*= handlers and javascript: URLs that force CSP unsafe-inline and widen the XSS surface.

Scoring context: [observed value] javascript: URL(s) found — a legacy XSS/injection vector

Implementation: `app/api/website-auditor/analyze/route.ts:551`

## 125. Open Redirect Params

**field:openRedirectParams**

Field signal · security · string[]

The observed list of open redirect params.

Why it matters: openRedirectParams inspects links for redirect/return/next/url parameters carrying absolute URLs, a common phishing pivot when unvalidated (CWE-601).

Scoring context: Possible open-redirect parameter(s) in links: [observed value] — can be abused for phishing (CWE-601)

Implementation: `app/api/website-auditor/analyze/route.ts:552`

## 126. Target Blank Noopener Count

**field:targetBlankNoopenerCount**

Field signal · security · number

Numeric value for target blank noopener count.

Scoring context: [observed value] target="\_blank" link(s) reviewed for tabnabbing — protection already accounted for

Implementation: `app/api/website-auditor/analyze/route.ts:553`

## 127. Untrusted Cross Domain Scripts

**field:untrustedCrossDomainScripts**

Field signal · security · string[]

The observed list of untrusted cross domain scripts.

Why it matters: untrustedCrossDomainScripts flags scripts loaded from higher-risk or historically compromised CDNs (e.g. polyfill-style hosts). Supply-chain compromise of a single script can run arbitrary code on every page (CWE-1104/CWE-829, OWASP A08).

Scoring context: [observed value] script(s) loaded from higher-risk / abandoned third-party origins (e.g. [observed value]) — supply-chain risk

Implementation: `app/api/website-auditor/analyze/route.ts:554`

## 128. Exposed Secrets

**field:exposedSecrets**

Field signal · security · string[]

The observed list of exposed secrets.

Why it matters: exposedSecrets scans inline scripts and markup for high-signal credential patterns (AWS access keys, Stripe live keys, Google API keys, GitHub/Slack tokens, JWTs, SendGrid keys, private-key blocks and inline Firebase config). Hard-coded live credentials in client-side code are a critical CWE-798 exposure — anyone can read and abuse them. Maps to OWASP A07.

Scoring context: Possible secret/API key pattern(s) exposed in page source: [observed value] — CRITICAL if these are live credentials (CWE-798)

Implementation: `app/api/website-auditor/analyze/route.ts:555`

## 129. Script Inventory Count

### field:scriptInventoryCount

Field signal · security · number

Numeric value for script inventory count.

Why it matters: scriptInventoryCount and detectedLibraries catalogue every script resource and fingerprinted client-side library, giving you a lightweight software bill of materials to cross-reference against known CVEs.

Scoring context: [observed value] script resource(s) catalogued for software-composition review

Implementation: app/api/website-auditor/analyze/route.ts:556

## 130. Detected Libraries

### field:detectedLibraries

Field signal · security · string[]

The observed list of detected libraries.

Why it matters: scriptInventoryCount and detectedLibraries catalogue every script resource and fingerprinted client-side library, giving you a lightweight software bill of materials to cross-reference against known CVEs.

Scoring context: Client-side library inventory (SBOM): [observed value][observed value]

Implementation: app/api/website-auditor/analyze/route.ts:557

## 131. Exposed Sensitive Paths

### field:exposedSensitivePaths

Field signal · security · string[]

The observed list of exposed sensitive paths.

Why it matters: exposedSensitivePaths performs non-destructive GET probes of common leak points (/ .git/config, /.env, /.svn/entries, /.DS\_Store, /server-status) with content-based confirmation. Exposed VCS folders or environment files can hand attackers your entire source and secrets (CWE-538/CWE-548, OWASP A05).

Scoring context: Sensitive path(s) publicly accessible: [observed value] — may expose source control, environment secrets or internals

Implementation: app/api/website-auditor/analyze/route.ts:558

## 132. Directory Listing Detected

### field:directoryListingDetected

Field signal · security · boolean

Whether the directory listing detected signal was detected.

Why it matters: directoryListingDetected identifies auto-generated index pages that expose your file/folder structure to anyone. Disable autoindex / Options -Indexes (CWE-548, OWASP A05).

Scoring context: Directory listing appears enabled — file/folder structure is browsable by anyone

Implementation: app/api/website-auditor/analyze/route.ts:559

## 133. Dangerous Http Methods

### field:dangerousHttpMethods

Field signal · security · string[]

The observed list of dangerous http methods.

Why it matters: `dangerousHttpMethods` inspects the `OPTIONS Allow` header for `TRACE/TRACK` (enable Cross-Site Tracing) and `PUT/DELETE/CONNECT/PATCH` (may allow unauthorized modification). Only the verbs your app needs should be enabled (CWE-650).

Scoring context: Potentially dangerous HTTP method(s) advertised: [observed value] — `TRACE/TRACK` enable XST and `PUT/DELETE` may allow unauthorized changes HTTP methods advertised via `OPTIONS`: [observed value] — review that each is required

Implementation: `app/api/website-auditor/analyze/route.ts:560`

## 134. Robots Sensitive Paths

**field:**`robotsSensitivePaths`

Field signal · security · string[]

The observed list of robots sensitive paths.

Why it matters: `robotsSensitivePaths` surfaces `admin/private Disallow` entries that act as a roadmap for attackers. Protect sensitive paths with authentication rather than obscurity.

Scoring context: `robots.txt` discloses sensitive-looking path(s): [observed value] — `Disallow` entries can act as a map for attackers

Implementation: `app/api/website-auditor/analyze/route.ts:561`

## 135. Html Comment Leaks

**field:**`htmlCommentLeaks`

Field signal · security · string[]

The observed list of html comment leaks.

Why it matters: `htmlCommentLeaks` scans developer comments for `TODOs`, credentials, internal URLs and debug notes; `privateIpDisclosure` flags RFC 1918 internal IPs in the source — both reveal internal details useful to attackers (CWE-200).

Scoring context: HTML comments leak potentially sensitive hints: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:562`

## 136. Private Ip Disclosure

**field:**`privateIpDisclosure`

Field signal · security · string[]

The observed list of private ip disclosure.

Why it matters: `htmlCommentLeaks` scans developer comments for `TODOs`, credentials, internal URLs and debug notes; `privateIpDisclosure` flags RFC 1918 internal IPs in the source — both reveal internal details useful to attackers (CWE-200).

Scoring context: A private/internal IP address (RFC 1918) is disclosed in the page source — reveals internal network topology

Implementation: `app/api/website-auditor/analyze/route.ts:563`

## 137. Cors Wildcard

**field:**`corsWildcard`

Field signal · security · boolean

Whether the cors wildcard signal was detected.

Why it matters: `corsWildcard` flags `Access-Control-Allow-Origin: *`, which makes API responses readable by any site. A strict server-side origin allowlist is recommended.

Scoring context: `Access-Control-Allow-Origin: *` — the API is readable by any website

Implementation: `app/api/website-auditor/analyze/route.ts:564`

## 138. Cors Reflected With Credentials

### field:corsReflectedWithCredentials

Field signal · security · boolean

Whether the cors reflected with credentials signal was detected.

Why it matters: corsReflectedWithCredentials detects Access-Control-Allow-Credentials: true combined with a reflected or wildcard Origin — effectively letting any website make authenticated cross-origin requests to your API (CWE-942/CWE-346, OWASP A05).

Scoring context: CORS reflects the request Origin while allowing credentials — effectively allows any site to make authenticated cross-origin requests

Implementation: app/api/website-auditor/analyze/route.ts:565

## 139. Cross Origin Isolated

### field:crossOriginIsolated

Field signal · security · boolean

Whether the cross origin isolated signal was detected.

Why it matters: hasLoginForm and hasPasswordResetForm identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: cspHasReporting, clearSiteDataSupported and crossOriginIsolated (COOP+COEP) are recognised as hardening wins.

Scoring context: Cross-origin isolation enabled (COOP + COEP) — hardened against Spectre-style side-channel and cross-origin leaks

Implementation: app/api/website-auditor/analyze/route.ts:566

## 140. Iframe Sandbox Missing

### field:iframeSandboxMissing

Field signal · security · number

Numeric value for iframe sandbox missing.

Why it matters: iframeSandboxMissing counts iframes embedding third-party origins without a sandbox attribute, meaning embedded content runs with full privileges.

Scoring context: [observed value] untrusted <iframe>(s) without a sandbox attribute — embedded content runs with full privileges

Implementation: app/api/website-auditor/analyze/route.ts:567

## 141. Has Login Form

### field:hasLoginForm

Field signal · security · boolean

Whether the login form signal was detected.

Why it matters: hasLoginForm and hasPasswordResetForm identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: cspHasReporting, clearSiteDataSupported and crossOriginIsolated (COOP+COEP) are recognised as hardening wins.

Scoring context: Login form detected — ensure it is protected by rate limiting, HTTPS and anti-automation controls

Implementation: app/api/website-auditor/analyze/route.ts:568

## 142. Has Password Reset Form

### field:hasPasswordResetForm

Field signal · security · boolean

Whether the password reset form signal was detected.

Why it matters: hasLoginForm and hasPasswordResetForm identify authentication entry points so the report can recommend rate limiting, MFA, and single-use time-limited reset tokens (OWASP A07). Positive signals: cspHasReporting, clearSiteDataSupported and crossOriginIsolated (COOP+COEP) are recognised as hardening wins.

Scoring context: Password-reset flow detected — ensure reset tokens are single-use, time-limited and delivered out-of-band

Implementation: `app/api/website-auditor/analyze/route.ts:581`

## 143. Csp Unsafe Inline Count

### field:cspUnsafeInlineCount

Field signal · security · number

Numeric value for csp unsafe inline count.

Why it matters: cspStrictnessScore (0–100) evaluates directive count, cspUsesNonce vs. cspUnsafeInlineCount, frame-ancestors restrictions, and default-src fallbacks. Nonce-based CSP is significantly stronger than unsafe-inline.

Scoring context: CSP contains [observed value] unsafe-inline directive(s) — weakens XSS protection CSP uses [observed value] unsafe-inline directive(s) — standard requirement for modern SSR frameworks

Implementation: `app/api/website-auditor/analyze/route.ts:433`

## 144. Csp Uses Nonce

### field:cspUsesNonce

Field signal · security · boolean

Whether the csp uses nonce signal was detected.

Why it matters: cspStrictnessScore (0–100) evaluates directive count, cspUsesNonce vs. cspUnsafeInlineCount, frame-ancestors restrictions, and default-src fallbacks. Nonce-based CSP is significantly stronger than unsafe-inline.

Scoring context: CSP uses nonce-based policy — strong inline script protection

Implementation: `app/api/website-auditor/analyze/route.ts:434`

## 145. Csp Strictness Score

### field:cspStrictnessScore

Field signal · security · number

Numeric value for csp strictness score.

Why it matters: cspStrictnessScore (0–100) evaluates directive count, cspUsesNonce vs. cspUnsafeInlineCount, frame-ancestors restrictions, and default-src fallbacks. Nonce-based CSP is significantly stronger than unsafe-inline.

Scoring context: Strong CSP implementation (strictness score: [observed value]/100) CSP strictness score [observed value]/100 — adequate for modern framework apps that require inline styles/scripts Weak CSP implementation (strictness score: [observed value]/100)

Implementation: `app/api/website-auditor/analyze/route.ts:435`

## 146. Permissions Policy Features

### field:permissionsPolicyFeatures

Field signal · security · string[]

The observed list of permissions policy features.

Why it matters: permissionsPolicyFeatures and permissionsPolicyDepth measure how many browser APIs (camera, microphone, geolocation, payment) are explicitly restricted. Without this header, any embedded iframe can access sensitive device features.

Implementation: `app/api/website-auditor/analyze/route.ts:436`

## 147. Permissions Policy Depth

### field:permissionsPolicyDepth

Field signal · security · number

Numeric value for permissions policy depth.

Why it matters: permissionsPolicyFeatures and permissionsPolicyDepth measure how many browser APIs (camera, microphone, geolocation, payment) are explicitly restricted. Without this header, any embedded iframe can access sensitive device features.

Scoring context: Permissions-Policy restricts [observed value] browser features ([observed value]) Permissions-Policy restricts [observed value] feature(s) — consider expanding to more features

Implementation: `app/api/website-auditor/analyze/route.ts:437`

## 148. JQuery Version

### field:jqueryVersion

Field signal · security · string

The recorded jquery version value.

Why it matters: jqueryVersion and outdatedLibraryHints detect libraries with known CVEs: jQuery <3.5 (XSS), Angular <1.8 (sandbox escapes), Bootstrap <5 (XSS via data attributes).

Scoring context: jQuery [observed value] — current version

Implementation: `app/api/website-auditor/analyze/route.ts:438`

## 149. Outdated Library Hints

### field:outdatedLibraryHints

Field signal · security · string[]

The observed list of outdated library hints.

Why it matters: jqueryVersion and outdatedLibraryHints detect libraries with known CVEs: jQuery <3.5 (XSS), Angular <1.8 (sandbox escapes), Bootstrap <5 (XSS via data attributes).

Scoring context: Outdated libraries detected: [observed value] jQuery [observed value] — current version

Implementation: `app/api/website-auditor/analyze/route.ts:439`

## 150. Has Rate Limit Headers

### field:hasRateLimitHeaders

Field signal · security · boolean

Whether the rate limit headers signal was detected.

Why it matters: hasRateLimitHeaders (X-RateLimit-\*, Retry-After) indicate protection against brute-force attacks, credential stuffing, and API abuse.

Scoring context: Rate limiting headers detected — protects against brute-force and DDoS

Implementation: `app/api/website-auditor/analyze/route.ts:440`

## 151. Security Txt Exists

**field:securityTxtExists**

Field signal · security · boolean

Whether the security txt exists signal was detected.

Scoring context: security.txt present and valid ([observed value]) — provides a channel for vulnerability disclosure  
security.txt found but has issues: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:442`

## 152. Security Txt Location

**field:securityTxtLocation**

Field signal · security · string

The recorded security txt location value.

Why it matters: We fetch `/.well-known/security.txt` and validate it per RFC 9116 (`securityTxtPresent`, `securityTxtLocation`, `securityTxtIssues`). A valid, future-dated file with a `Contact` and `Expires` field gives ethical researchers a standardized channel to report vulnerabilities responsibly instead of disclosing them publicly.

Implementation: `app/api/website-auditor/analyze/route.ts:443`

## 153. Security Txt Valid

**field:securityTxtValid**

Field signal · security · boolean

Whether the security txt valid signal was detected.

Scoring context: security.txt present and valid ([observed value]) — provides a channel for vulnerability disclosure

Implementation: `app/api/website-auditor/analyze/route.ts:444`

## 154. Security Txt Issues

**field:securityTxtIssues**

Field signal · security · string[]

The observed list of security txt issues.

Why it matters: We fetch `/.well-known/security.txt` and validate it per RFC 9116 (`securityTxtPresent`, `securityTxtLocation`, `securityTxtIssues`). A valid, future-dated file with a `Contact` and `Expires` field gives ethical researchers a standardized channel to report vulnerabilities responsibly instead of disclosing them publicly.

Scoring context: security.txt present and valid ([observed value]) — provides a channel for vulnerability disclosure  
security.txt found but has issues: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:445`

## 155. Server Tech Exposed

**field:serverTechExposed**

Field signal · security · string[]

The observed list of server tech exposed.

Why it matters: `serverTechExposed` aggregates every technology-revealing signal in your headers and markup (`Server`, `X-Powered-By`, `X-AspNet-Version`, `X-Generator`, framework-specific cookies and comment signatures). Even without a version number, each fingerprint narrows the attacker's search space and enables stack-specific attacks.

Scoring context: Server technology disclosed via response headers/markup: [observed value] Additional technology fingerprints exposed: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:446

## 156. Framework Version Exposed

**field:frameworkVersionExposed**

Field signal · security · string

The recorded framework version exposed value.

Why it matters: frameworkVersionExposed detects a specific software version leaked in the Server or X-Powered-By header or the generator meta tag (e.g. "nginx/1.18.0", "PHP/7.4.3", "WordPress 5.9"). A precise version lets an attacker look up the exact list of published CVEs affecting your stack — the single highest-value fingerprint for targeted exploitation.

Scoring context: Server-side software version disclosed: [observed value] — enables version-based vulnerability (CVE) lookups Server technology disclosed via response headers/markup: [observed value] Additional technology fingerprints exposed: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:447

## 157. Server Error Detected

**field:serverErrorDetected**

Field signal · security · boolean

Whether the server error detected signal was detected.

Scoring context: Requesting a non-existent path returned HTTP [observed value] (Internal Server Error) instead of a clean 404 — unhandled exception

Implementation: app/api/website-auditor/analyze/route.ts:448

## 158. Error Probe Status Code

**field:errorProbeStatusCode**

Field signal · security · number

Numeric value for error probe status code.

Why it matters: We request a deliberately non-existent path and inspect the response (errorProbeStatusCode). A clean 404 is correct; a 500-class Internal Server Error on a missing route signals an unhandled exception that can leak internal state and indicates fragile error handling.

Implementation: app/api/website-auditor/analyze/route.ts:449

## 159. Error Leakage Patterns

**field:errorLeakagePatterns**

Field signal · security · string[]

The observed list of error leakage patterns.

Why it matters: errorLeakagePatterns scans responses for exposed stack traces, absolute file paths, SQL fragments, and framework debug output. Leaked traces hand attackers a map of your file system, framework internals, and query structure — one of the most damaging low-effort information disclosures (CWE-209).

Scoring context: Error output leaks sensitive internal details: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:450

## 160. Debug Info Leakage

### field:debugInfoLeakage

Field signal · security · string[]

The observed list of debug info leakage.

Why it matters: debugInfoLeakage detects debug mode left enabled in production: profiler toolbars, verbose diagnostic headers, and development-only banners. Debug output erodes the defense-in-depth "security by obscurity" layer and frequently reveals environment variables and internal routes.

Scoring context: Debug/verbose diagnostics exposed: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:451

## 161. Exposed Emails

### field:exposedEmails

Field signal · security · string[]

The observed list of exposed emails.

Why it matters: exposedEmails / exposedEmailCount surface raw email addresses printed in the page source. Intentional contact addresses are informational only, but unprotected mailto and inline addresses are trivially scraped by spam and phishing bots — obfuscation or a contact form is recommended.

Implementation: app/api/website-auditor/analyze/route.ts:452

## 162. Exposed Email Count

### field:exposedEmailCount

Field signal · security · number

Numeric value for exposed email count.

Why it matters: exposedEmails / exposedEmailCount surface raw email addresses printed in the page source. Intentional contact addresses are informational only, but unprotected mailto and inline addresses are trivially scraped by spam and phishing bots — obfuscation or a contact form is recommended.

Scoring context: [observed value] email address(es) exposed in page source (e.g. [observed value]) — can be harvested for spam/phishing

Implementation: app/api/website-auditor/analyze/route.ts:453

## 163. Lcp Estimate Ms

### field:lcpEstimateMs

Field signal · performance · number

Numeric value for lcp estimate ms.

Why it matters: lcpEstimateMs is our proxy for the largest above-fold element render time. We estimate from hero image size, font preloading, render-blocking resources, and server timing. Google threshold:  $\leq 2.5s$  good,  $\leq 4s$  needs improvement.

Scoring context: Estimated LCP:  $\sim$ [observed value]ms — within Google's "good" threshold ( $< 2.5s$ ) Estimated LCP:  $\sim$ [observed value]ms — needs improvement (goal:  $< 2.5s$ ) Poor estimated LCP:  $\sim$ [observed value]ms — exceeds 4s threshold

Implementation: app/api/website-auditor/analyze/route.ts:426

## 164. Cls Estimate

### field:clsEstimate

Field signal · performance · number

Numeric value for cls estimate.

Why it matters: clsEstimate proxies visual stability from images without width/height attributes (imagesWithWidthHeight), font loading strategy, dynamic content injection, and ad placeholders. Google threshold:  $\leq 0.1$  good.

Scoring context: High estimated CLS: [observed value] — exceeds Google's 0.25 threshold Moderate estimated CLS: [observed value] — above 0.1 "good" threshold Estimated CLS: [observed value] — within Google's "good" threshold ( $< 0.1$ )

Implementation: `app/api/website-auditor/analyze/route.ts:427`

## 165. Inp Estimate Ms

**field:inpEstimateMs**

Field signal · performance · number

Numeric value for inp estimate ms.

Why it matters: inpEstimateMs proxies input responsiveness from JavaScript bundle size (totalJsBundleKb), long task script hints (longTaskScriptHints), third-party script count, and main-thread blocking indicators. Google threshold:  $\leq 200$ ms good.

Scoring context: Estimated INP:  $\sim$ [observed value]ms — within Google's "good" threshold ( $< 200$ ms) Estimated INP:  $\sim$ [observed value]ms — needs improvement (goal:  $< 200$ ms) Estimated INP:  $\sim$ [observed value]ms — acceptable for framework-hydrated app

Implementation: `app/api/website-auditor/analyze/route.ts:428`

## 166. Font Preload Missed

**field:fontPreloadMissed**

Field signal · performance · boolean

Whether the font preload missed signal was detected.

Why it matters: hasFontDisplay (font-display: swap/optional) prevents FOIT. fontPreloadMissed detects critical fonts not preloaded. variableFontsUsed rewards modern font technology. fontFileCount over 4 indicates excessive font requests.

Scoring context: Web fonts loaded without preload — causes FOIT/FOUT flash

Implementation: `app/api/website-auditor/analyze/route.ts:429`

## 167. Variable Fonts Used

**field:variableFontsUsed**

Field signal · performance · boolean

Whether the variable fonts used signal was detected.

Why it matters: hasFontDisplay (font-display: swap/optional) prevents FOIT. fontPreloadMissed detects critical fonts not preloaded. variableFontsUsed rewards modern font technology. fontFileCount over 4 indicates excessive font requests.

Scoring context: Variable fonts detected — reduces total font file downloads

Implementation: `app/api/website-auditor/analyze/route.ts:430`

## 168. Server Timing Headers

**field:serverTimingHeaders**

Field signal · performance · string

The recorded server timing headers value.

Why it matters: serverTimingHeaders expose backend performance metrics (db, cache, render times) for debugging. Their presence signals performance-aware engineering.

Scoring context: Server-Timing header present — enables performance debugging

Implementation: [app/api/website-auditor/analyze/route.ts:431](#)

## 169. Clear Cta Count

**field:clearCtaCount**

Field signal · aio · number

Numeric value for clear cta count.

Why it matters: clearCtaCount and hasAboveFoldCta measure conversion optimization. formUsabilityScore evaluates form UX. Three or more CTAs with action-oriented text indicate a mature conversion funnel.

Scoring context: Strong CRO: [observed value] clear call-to-action elements detected [observed value] call-to-action element(s) detected

Implementation: [app/api/website-auditor/analyze/route.ts:417](#)

## 170. Has Above Fold Cta

**field:hasAboveFoldCta**

Field signal · aio · boolean

Whether the above fold cta signal was detected.

Why it matters: clearCtaCount and hasAboveFoldCta measure conversion optimization. formUsabilityScore evaluates form UX. Three or more CTAs with action-oriented text indicate a mature conversion funnel.

Scoring context: Above-the-fold CTA detected — captures immediate visitor attention

Implementation: [app/api/website-auditor/analyze/route.ts:418](#)

## 171. Form Usability Score

**field:formUsabilityScore**

Field signal · aio · number

Numeric value for form usability score.

Why it matters: clearCtaCount and hasAboveFoldCta measure conversion optimization. formUsabilityScore evaluates form UX. Three or more CTAs with action-oriented text indicate a mature conversion funnel.

Scoring context: Good form usability score: [observed value]/100 Low form usability score ([observed value]/100) — may reduce form completions

Implementation: [app/api/website-auditor/analyze/route.ts:419](#)

## 172. Has Trust Signals

**field:hasTrustSignals**

Field signal · aio · boolean

Whether the trust signals signal was detected.

Why it matters: hasTrustSignals, trustSignalTypes, hasSocialProof, and hasTrustBadges evaluate conversion confidence signals — testimonials, trust badges, client logos, and review counts.

Scoring context: Trust signals present: [observed value]

Implementation: [app/api/website-auditor/analyze/route.ts:420](#)

## 173. Trust Signal Types

**field:trustSignalTypes**

Field signal · aio · string[]

The observed list of trust signal types.

Why it matters: hasTrustSignals, trustSignalTypes, hasSocialProof, and hasTrustBadges evaluate conversion confidence signals — testimonials, trust badges, client logos, and review counts.

Implementation: [app/api/website-auditor/analyze/route.ts:421](#)

## 174. Has Urgency Elements

**field:hasUrgencyElements**

Field signal · Contextual / supporting evidence · boolean

Whether the urgency elements signal was detected.

Why it matters: hasUrgencyElements (limited-time offers, countdown timers) and hasValueProposition (clear benefit statements) are conversion accelerators that indicate commercial intent optimization.

Implementation: [app/api/website-auditor/analyze/route.ts:422](#)

## 175. Has Social Proof

**field:hasSocialProof**

Field signal · aio · boolean

Whether the social proof signal was detected.

Why it matters: hasTrustSignals, trustSignalTypes, hasSocialProof, and hasTrustBadges evaluate conversion confidence signals — testimonials, trust badges, client logos, and review counts.

Scoring context: Social proof elements detected — builds credibility and conversion confidence

Implementation: [app/api/website-auditor/analyze/route.ts:423](#)

## 176. Has Value Proposition

**field:hasValueProposition**

Field signal · aio · boolean

Whether the value proposition signal was detected.

Why it matters: hasUrgencyElements (limited-time offers, countdown timers) and hasValueProposition (clear benefit statements) are conversion accelerators that indicate commercial intent optimization.

Scoring context: Clear value proposition detected in heading elements

Implementation: [app/api/website-auditor/analyze/route.ts:424](#)

## 177. Has GA4 Snippet

**field:hasGA4Snippet**

Field signal · Contextual / supporting evidence · boolean

Whether the ga4 snippet signal was detected.

Why it matters: We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

Implementation: [app/api/website-auditor/analyze/route.ts:410](#)

## 178. Has GTM Container

**field:hasGTMContainer**

Field signal · performance · boolean

Whether the gtm container signal was detected.

Why it matters: We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

Implementation: [app/api/website-auditor/analyze/route.ts:411](#)

## 179. Ga4 Measurement Id

### field:ga4MeasurementId

Field signal · performance · string

The recorded ga4 measurement id value.

Why it matters: We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

Implementation: app/api/website-auditor/analyze/route.ts:412

## 180. Gtm Container Id

### field:gtmContainerId

Field signal · performance · string

Google Tag Manager container identifier found in page source. Detection does not confirm that tags fire correctly or consent is valid.

Implementation: app/api/website-auditor/analyze/route.ts:413

## 181. Has Event Tracking

### field:hasEventTracking

Field signal · performance · boolean

Whether the event tracking signal was detected.

Why it matters: We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

Implementation: app/api/website-auditor/analyze/route.ts:414

## 182. Analytics Setup Quality

### field:analyticsSetupQuality

Field signal · performance · string

The recorded analytics setup quality value.

Why it matters: We validate hasGA4Snippet, hasGTMContainer, ga4MeasurementId, hasEventTracking, and compute analyticsSetupQuality. Dual GA4+GTM setup without event tracking wastes data collection potential.

Scoring context: Comprehensive analytics: GA4 ([observed value])[observed value] with event tracking Good analytics setup: GA4[observed value][observed value] Basic analytics only — missing event tracking or tag management

Implementation: app/api/website-auditor/analyze/route.ts:415

## 183. Keyword Density Percent

### field:keywordDensityPercent

Field signal · seo · number

Numeric value for keyword density percent.

Why it matters: We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

Scoring context: Optimal keyword density: "[observed value]" at [observed value]% ([observed value] occurrences) Low keyword density ([observed value]%) for "[observed value]"

Implementation: app/api/website-auditor/analyze/route.ts:406

## 184. Keyword Occurrences

### field:keywordOccurrences

Field signal · seo · number

Numeric value for keyword occurrences.

Why it matters: We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

Scoring context: Primary keyword "[observed value]" not found in body content

Implementation: app/api/website-auditor/analyze/route.ts:407

## 185. Is Keyword Stuffed

### field:isKeywordStuffed

Field signal · seo · boolean

Whether the is keyword stuffed signal was detected.

Why it matters: We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

Scoring context: Keyword stuffing detected: "[observed value]" appears [observed value] times ([observed value]% density — exceeds 3%)

Implementation: app/api/website-auditor/analyze/route.ts:408

## 186. Internal Link Density Per1k

### field:internalLinkDensityPer1k

Field signal · seo · number

Numeric value for internal link density per1k.

Why it matters: We measure internalLinks, internalLinkRatio, internalLinkDensityPer1k (links per 1,000 words), and anchorTextDiversity. A ratio below 0.5 or density below 2 per 1k words signals poor internal linking.

Implementation: app/api/website-auditor/analyze/route.ts:404

## 187. Has Social Share Buttons

### field:hasSocialShareButtons

Field signal · seo · boolean

Whether the social share buttons signal was detected.

Why it matters: We calculate ogSharingCompleteness (0–100) combining OG + Twitter Card coverage. We also detect social share widgets (hasSocialShareButtons, socialShareWidgets) that amplify content distribution.

Scoring context: Social share buttons detected: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:400

## 188. Social Share Widgets

### field:socialShareWidgets

Field signal · seo · string[]

The observed list of social share widgets.

Why it matters: We calculate ogSharingCompleteness (0–100) combining OG + Twitter Card coverage. We also detect social share widgets (hasSocialShareButtons, socialShareWidgets) that amplify content

distribution.

Implementation: `app/api/website-auditor/analyze/route.ts:401`

## 189. Og Sharing Completeness

**field:ogSharingCompleteness**

Field signal · seo · number

Numeric value for og sharing completeness.

Why it matters: We calculate `ogSharingCompleteness` (0–100) combining OG + Twitter Card coverage. We also detect social share widgets (`hasSocialShareButtons`, `socialShareWidgets`) that amplify content distribution.

Scoring context: OG sharing completeness: 100% — all tags present for optimal social previews Low OG sharing completeness ([observed value]%) — social previews will be poor

Implementation: `app/api/website-auditor/analyze/route.ts:402`

## 190. Og Has Locale

**field:ogHasLocale**

Field signal · seo · boolean

Whether the og has locale signal was detected.

Why it matters: We audit all OG tags: `og:title`, `og:description`, `og:image`, `og:type`, `og:url`, `og:locale`. Each missing tag (`ogMissing`) reduces social sharing effectiveness. We also check `ogHasLocale`, `ogImageIsWebp`, `ogImageDimensionHint`, and whether og duplicates the title/description (`duplicateTitleAndOg`, `duplicateDescAndOg`).

Scoring context: Missing `og:locale` tag — social platforms may guess language/region

Implementation: `app/api/website-auditor/analyze/route.ts:391`

## 191. Og Locale Value

**field:ogLocaleValue**

Field signal · seo · string

Locale declared in `og:locale`, used by social previews; it does not by itself configure page language or `hreflang`.

Implementation: `app/api/website-auditor/analyze/route.ts:392`

## 192. Og Image Url

**field:ogImageUrl**

Field signal · seo · string

The recorded og image url value.

Why it matters: `ogImageUrl` quality, `articlePublishedTime`, and `articleModifiedTime` provide temporal signals for content freshness in social shares and news carousels.

Scoring context: OG image uses WebP format — optimal for quality/size balance OG image dimensions  $\geq 1200 \times 630$ px — optimal for all platforms OG image dimensions too small for social platforms

Implementation: `app/api/website-auditor/analyze/route.ts:393`

## 193. Og Image Is Webp

**field:ogImageIsWebp**

Field signal · seo · boolean

Whether the og image is webp signal was detected.

Why it matters: We audit all OG tags: `og:title`, `og:description`, `og:image`, `og:type`, `og:url`, `og:locale`. Each

missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Scoring context: OG image uses WebP format — optimal for quality/size balance

Implementation: `app/api/website-auditor/analyze/route.ts:394`

## 194. Article Published Time

**field:articlePublishedTime**

Field signal · seo · string

The recorded article published time value.

Why it matters: ogImageUrl quality, articlePublishedTime, and articleModifiedTime provide temporal signals for content freshness in social shares and news carousels.

Scoring context: article:published\_time present — content freshness signal for social platforms

Implementation: `app/api/website-auditor/analyze/route.ts:395`

## 195. Article Modified Time

**field:articleModifiedTime**

Field signal · seo · string

The recorded article modified time value.

Why it matters: ogImageUrl quality, articlePublishedTime, and articleModifiedTime provide temporal signals for content freshness in social shares and news carousels.

Scoring context: article:modified\_time present — update recency signal

Implementation: `app/api/website-auditor/analyze/route.ts:396`

## 196. Twitter Card Type

**field:twitterCardType**

Field signal · seo · string

The recorded twitter card type value.

Why it matters: Separate from OG, Twitter cards require twitter:card, twitter:title, twitter:description, twitter:image. We verify twitterCardType (summary\_large\_image is optimal) and flag twitterMissing tags.

Scoring context: Twitter card uses summary\_large\_image — maximum visual impact Twitter card type not specified

Implementation: `app/api/website-auditor/analyze/route.ts:397`

## 197. Og Image Dimension Hint

**field:ogImageDimensionHint**

Field signal · seo · string

The recorded og image dimension hint value.

Why it matters: We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Scoring context: OG image dimensions  $\geq 1200 \times 630$ px — optimal for all platforms OG image dimensions too small for social platforms

Implementation: `app/api/website-auditor/analyze/route.ts:398`

## 198. Title

### field:title

Field signal · Contextual / supporting evidence · string

The recorded title value. SEO core

Why it matters: The <title> element is the single most important on-page SEO signal. Google displays it in SERPs and uses it for ranking. Optimal length is 50–60 characters (Google 2025–2026 recommendation); shorter titles waste ranking potential, longer titles get truncated.

Implementation: app/api/website-auditor/analyze/route.ts:111

## 199. Title Length

### field:titleLength

Field signal · seo · number

Numeric value for title length.

Scoring context: Title tag is [observed value] characters — within optimal 50–60 range (Google 2025–2026) Missing title tag Title tag is short ([observed value] chars)

Implementation: app/api/website-auditor/analyze/route.ts:112

## 200. Meta Description

### field:metaDescription

Field signal · Contextual / supporting evidence · string

The first meta description value extracted from HTML, providing the text assessed for snippet quality and length.

Implementation: app/api/website-auditor/analyze/route.ts:113

## 201. Meta Desc Length

### field:metaDescLength

Field signal · seo · number

Numeric value for meta desc length.

Scoring context: Meta description is [observed value] characters — within optimal 140–160 range (2025–2026) Missing meta description Meta description is slightly short ([observed value] chars)

Implementation: app/api/website-auditor/analyze/route.ts:114

## 202. Meta Keywords

### field:metaKeywords

Field signal · Contextual / supporting evidence · string

The legacy meta keywords value, retained as a descriptive field rather than proof of ranking benefit.

Implementation: app/api/website-auditor/analyze/route.ts:115

## 203. H1 Count

### field:h1Count

Field signal · seo · number

Numeric value for h1 count.

Scoring context: Single H1 tag present: "[observed value][observed value]" No H1 heading found Title and H1 share no keywords — misaligned topic signals

Implementation: app/api/website-auditor/analyze/route.ts:116

## 204. H1 Text

### field:h1Text

Field signal · seo · string[]

Text of the page's H1 headings, used for topic and keyword comparisons.

Implementation: app/api/website-auditor/analyze/route.ts:117

## 205. H2 Count

### field:h2Count

Field signal · Contextual / supporting evidence · number

Numeric value for h2 count.

Why it matters: We parse the full heading hierarchy (h2Count, h3Count, headingCount) and detect heading gaps — skipping from H2 to H4, for example, breaks semantic structure and confuses crawlers.

Implementation: app/api/website-auditor/analyze/route.ts:118

## 206. H3 Count

### field:h3Count

Field signal · Contextual / supporting evidence · number

Numeric value for h3 count.

Why it matters: We parse the full heading hierarchy (h2Count, h3Count, headingCount) and detect heading gaps — skipping from H2 to H4, for example, breaks semantic structure and confuses crawlers.

Implementation: app/api/website-auditor/analyze/route.ts:119

## 207. Heading Count

### field:headingCount

Field signal · seo · number

Numeric value for heading count.

Why it matters: We parse the full heading hierarchy (h2Count, h3Count, headingCount) and detect heading gaps — skipping from H2 to H4, for example, breaks semantic structure and confuses crawlers.

Scoring context: Clean heading hierarchy with no skipped levels Very few headings for content length

Implementation: app/api/website-auditor/analyze/route.ts:120

## 208. Heading Hierarchy

### field:headingHierarchy

Field signal · Contextual / supporting evidence · string[]

Ordered heading levels in the HTML, used to explain the document outline and detect skipped levels.

Implementation: app/api/website-auditor/analyze/route.ts:121

## 209. Heading Gaps

### field:headingGaps

Field signal · seo, accessibility · string[]

The observed list of heading gaps.

Scoring context: Clean heading hierarchy with no skipped levels Heading hierarchy gaps: [observed value] Heading hierarchy has gaps — confusing for screen readers

Implementation: app/api/website-auditor/analyze/route.ts:122

## 210. Image Count

### field:imageCount

Field signal · performance, mobile, accessibility · number

Numeric value for image count. Images

Scoring context: [observed value]/[observed value] images use lazy loading No lazy loading on images No WebP or AVIF image formats found

Implementation: app/api/website-auditor/analyze/route.ts:150

## 211. Images Without Alt

### field:imagesWithoutAlt

Field signal · accessibility · number

Numeric value for images without alt.

Why it matters: Every image needs descriptive alt text. We count imagesWithoutAlt and imagesWithEmptyAlt separately — empty alt="" is valid only for decorative images. Missing alt text loses both SEO image ranking and accessibility.

Scoring context: All [observed value] images have alt attributes [observed value] of [observed value] images ([observed value]%) missing alt text

Implementation: app/api/website-auditor/analyze/route.ts:151

## 212. Images With Empty Alt

### field:imagesWithEmptyAlt

Field signal · Contextual / supporting evidence · number

Numeric value for images with empty alt.

Why it matters: Every image needs descriptive alt text. We count imagesWithoutAlt and imagesWithEmptyAlt separately — empty alt="" is valid only for decorative images. Missing alt text loses both SEO image ranking and accessibility.

Implementation: app/api/website-auditor/analyze/route.ts:152

## 213. Has Lazy Images

### field:hasLazyImages

Field signal · performance, mobile · boolean

Whether the lazy images signal was detected.

Why it matters: hasLazyImages, lazyImageCount, eagerAboveFold (should be 1–3), hasSrcset for responsive images, and hasWebpAvif for modern formats. imageFormats breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Scoring context: [observed value]/[observed value] images use lazy loading No lazy loading on images [observed value] images with lazy loading benefit mobile data users

Implementation: app/api/website-auditor/analyze/route.ts:153

## 214. Lazy Image Count

### field:lazyImageCount

Field signal · performance, mobile · number

Numeric value for lazy image count.

Why it matters: hasLazyImages, lazyImageCount, eagerAboveFold (should be 1–3), hasSrcset for responsive images, and hasWebpAvif for modern formats. imageFormats breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Implementation: [app/api/website-auditor/analyze/route.ts:154](#)

## 215. Eager Above Fold

**field:**`eagerAboveFold`

Field signal · Contextual / supporting evidence · number

Numeric value for eager above fold.

Why it matters: `hasLazyImages`, `lazyImageCount`, `eagerAboveFold` (should be 1–3), `hasSrcset` for responsive images, and `hasWebpAvif` for modern formats. `imageFormats` breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Implementation: [app/api/website-auditor/analyze/route.ts:155](#)

## 216. Has Srcset

**field:**`hasSrcset`

Field signal · performance, mobile · boolean

Whether the srcset signal was detected.

Why it matters: `hasLazyImages`, `lazyImageCount`, `eagerAboveFold` (should be 1–3), `hasSrcset` for responsive images, and `hasWebpAvif` for modern formats. `imageFormats` breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Scoring context: Responsive images with srcset detected Responsive images via srcset serve appropriate sizes per device

Implementation: [app/api/website-auditor/analyze/route.ts:156](#)

## 217. Has Webp Avif

**field:**`hasWebpAvif`

Field signal · performance · boolean

Whether the webp avif signal was detected.

Why it matters: `hasLazyImages`, `lazyImageCount`, `eagerAboveFold` (should be 1–3), `hasSrcset` for responsive images, and `hasWebpAvif` for modern formats. `imageFormats` breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Scoring context: Modern image formats (WebP/AVIF) detected

Implementation: [app/api/website-auditor/analyze/route.ts:157](#)

## 218. Image Formats

**field:**`imageFormats`

Field signal · Contextual / supporting evidence · Record<string, number>

The observed key/value inventory for image formats.

Why it matters: `hasLazyImages`, `lazyImageCount`, `eagerAboveFold` (should be 1–3), `hasSrcset` for responsive images, and `hasWebpAvif` for modern formats. `imageFormats` breakdown reveals JPEG/PNG legacy vs. WebP/AVIF modern usage.

Implementation: [app/api/website-auditor/analyze/route.ts:158](#)

## 219. Images With Width Height

**field:**`imagesWithWidthHeight`

Field signal · performance, accessibility · number

Numeric value for images with width height.

Why it matters: `clsEstimate` proxies visual stability from images without width/height attributes (`imagesWithWidthHeight`), font loading strategy, dynamic content injection, and ad placeholders. Google threshold:  $\leq 0.1$  good.

Scoring context: Most images have explicit width/height attributes (prevents layout shift) Only [observed value]/[observed value] images have width/height attributes [observed value] images missing explicit dimensions — causes layout shifts for screen reader users

Implementation: `app/api/website-auditor/analyze/route.ts:159`

## 220. Link Count

**field:linkCount**

Field signal · seo, performance · number

Numeric value for link count. Links

Scoring context: Excessive links on page ([observed value]) — search engines may devalue link equity High link count ([observed value]) — above recommended range [observed value] total links — within recommended range

Implementation: `app/api/website-auditor/analyze/route.ts:141`

## 221. Internal Links

**field:internalLinks**

Field signal · seo · number

Numeric value for internal links.

Why it matters: We measure `internalLinks`, `internalLinkRatio`, `internalLinkDensityPer1k` (links per 1,000 words), and `anchorTextDiversity`. A ratio below 0.5 or density below 2 per 1k words signals poor internal linking.

Scoring context: [observed value] internal links help establish site architecture Low anchor text diversity ([observed value]%) — many internal links use identical text

Implementation: `app/api/website-auditor/analyze/route.ts:142`

## 222. External Links

**field:externalLinks**

Field signal · seo, security · number

Numeric value for external links.

Why it matters: We count `externalLinks`, `externalLinksWithoutRel` (missing `noopener/noreferrer`), and analyze the `dofollowExternalLinks` vs. `nofollowExternalLinks` ratio (`externalLinkDofollowRatio`). Excessive `dofollow` outbound links dilute PageRank.

Scoring context: [observed value] external links provide reference signals All external links have proper rel attributes (`nofollow/noopener`) Optimal `dofollow` outbound links: [observed value] (ideal 2–5 per page for link authority signals)

Implementation: `app/api/website-auditor/analyze/route.ts:143`

## 223. Links With Title

**field:linksWithTitle**

Field signal · Contextual / supporting evidence · number

Number of links with a title attribute. A title attribute is not a substitute for descriptive visible link text.

Implementation: `app/api/website-auditor/analyze/route.ts:144`

## 224. Links Without Title

**field:linksWithoutTitle**

Field signal · Contextual / supporting evidence · number

Number of links without a title attribute. Missing title attributes are not automatically accessibility failures.

Implementation: `app/api/website-auditor/analyze/route.ts:145`

## 225. Nofollow Links

### field:nofollowLinks

Field signal · Contextual / supporting evidence · number

Number of links whose rel value contains nofollow. Appropriate use depends on the relationship to the destination.

Implementation: app/api/website-auditor/analyze/route.ts:146

## 226. Broken Anchors

### field:brokenAnchors

Field signal · seo · number

Numeric value for broken anchors.

Why it matters: brokenAnchors (href="#" or empty href) and emptyLinks waste crawl budget and create dead-end user experiences. We also detect internalBrokenLinkPatterns for systematic link rot.

Scoring context: [observed value] broken anchor links detected

Implementation: app/api/website-auditor/analyze/route.ts:147

## 227. Empty Links

### field:emptyLinks

Field signal · seo · number

Numeric value for empty links.

Why it matters: brokenAnchors (href="#" or empty href) and emptyLinks waste crawl budget and create dead-end user experiences. We also detect internalBrokenLinkPatterns for systematic link rot.

Scoring context: [observed value] empty/unlabeled links found

Implementation: app/api/website-auditor/analyze/route.ts:148

## 228. Word Count

### field:wordCount

Field signal · seo, aiReadiness, aio, geo, localSeo · number

Numeric value for word count. Content

Why it matters: wordCount, paragraphCount, and avgWordsPerParagraph measure content substance. Pages under 300 words are flagged as thinContentSignal. We also check titleH1Overlap — high overlap suggests lazy optimization.

Scoring context: Very few headings for content length Content length of [observed value] words is adequate Thin content ([observed value] words)

Implementation: app/api/website-auditor/analyze/route.ts:161

## 229. Paragraph Count

### field:paragraphCount

Field signal · Contextual / supporting evidence · number

Numeric value for paragraph count.

Why it matters: wordCount, paragraphCount, and avgWordsPerParagraph measure content substance. Pages under 300 words are flagged as thinContentSignal. We also check titleH1Overlap — high overlap suggests lazy optimization.

Implementation: app/api/website-auditor/analyze/route.ts:162

## 230. Avg Words Per Paragraph

### field:avgWordsPerParagraph

Field signal · aio, aeo · number

Numeric value for avg words per paragraph.

Why it matters: wordCount, paragraphCount, and avgWordsPerParagraph measure content substance. Pages under 300 words are flagged as thinContentSignal. We also check titleH1Overlap — high overlap suggests lazy optimization.

Scoring context: Good paragraph length for readability and AI parsing Paragraphs are too long for optimal AI consumption  
Short paragraphs are well-suited for answer extraction

Implementation: app/api/website-auditor/analyze/route.ts:163

## 231. Has Viewport

### field:hasViewport

Field signal · mobile · boolean

Whether the viewport signal was detected. Mobile

Why it matters: hasViewport is the most critical mobile signal. Without viewport meta, mobile browsers render at desktop width (typically 980px), making text unreadably small and buttons untappable.

Scoring context: Viewport meta tag present: [observed value] Viewport does not include width=device-width

Implementation: app/api/website-auditor/analyze/route.ts:165

## 232. Viewport Content

### field:viewportContent

Field signal · mobile · string

The recorded viewport content value.

Scoring context: Viewport does not include width=device-width

Implementation: app/api/website-auditor/analyze/route.ts:166

## 233. Doctype

### field:doctype

Field signal · mobile · boolean

Whether the doctype signal was detected.

Why it matters: A valid doctype declaration and hasCharset (UTF-8) ensure proper rendering across all browsers and correct character encoding for international content.

Scoring context: HTML5 doctype declared

Implementation: app/api/website-auditor/analyze/route.ts:167

## 234. Has Charset

### field:hasCharset

Field signal · mobile · boolean

Whether the charset signal was detected.

Why it matters: A valid doctype declaration and hasCharset (UTF-8) ensure proper rendering across all browsers and correct character encoding for international content.

Scoring context: Character encoding declared

Implementation: app/api/website-auditor/analyze/route.ts:168

## 235. Has Touch Icons

### field:hasTouchIcons

Field signal · mobile · boolean

Whether the touch icons signal was detected.

Scoring context: Apple touch icons present

Implementation: `app/api/website-auditor/analyze/route.ts:169`

## 236. Has Theme Color

### field:hasThemeColor

Field signal · mobile · boolean

Whether the theme color signal was detected.

Scoring context: Theme color meta tag set for mobile browsers

Implementation: `app/api/website-auditor/analyze/route.ts:170`

## 237. Has Manifest

### field:hasManifest

Field signal · mobile · boolean

Whether the manifest signal was detected.

Why it matters: hasManifest enables PWA features: add-to-homescreen, custom theme colors, splash screens, and app-like display modes.

Scoring context: Web app manifest detected — PWA-ready PWA install-ready: manifest + service worker + HTTPS all present Manifest present but no service worker — PWA install prompt will not fire

Implementation: `app/api/website-auditor/analyze/route.ts:171`

## 238. Has Canonical

### field:hasCanonical

Field signal · seo · boolean

Whether the canonical signal was detected.

Scoring context: Canonical URL is set and matches the page URL Missing canonical URL

Implementation: `app/api/website-auditor/analyze/route.ts:123`

## 239. Canonical Url

### field:canonicalUrl

Field signal · seo · string

The preferred URL declared by the page's canonical link. A different URL can be intentional duplicate consolidation.

Implementation: `app/api/website-auditor/analyze/route.ts:124`

## 240. Canonical Matches Url

### field:canonicalMatchesUrl

Field signal · seo · boolean

Whether the canonical matches url signal was detected.

Scoring context: Canonical URL is set and matches the page URL

Implementation: `app/api/website-auditor/analyze/route.ts:125`

## 241. Has Favicon

### field:hasFavicon

Field signal · seo · boolean

Whether the favicon signal was detected.

Why it matters: hasFavicon and hasAppleTouchIcon affect brand recognition in browser tabs, bookmarks, and mobile home screens. Missing favicons look unprofessional in SERPs.

Scoring context: Favicon present

Implementation: `app/api/website-auditor/analyze/route.ts:126`

## 242. Has Apple Touch Icon

### field:hasAppleTouchIcon

Field signal · Contextual / supporting evidence · boolean

Whether the apple touch icon signal was detected.

Why it matters: hasFavicon and hasAppleTouchIcon affect brand recognition in browser tabs, bookmarks, and mobile home screens. Missing favicons look unprofessional in SERPs.

Implementation: `app/api/website-auditor/analyze/route.ts:127`

## 243. Has Robots Meta

### field:hasRobotsMeta

Field signal · seo · boolean

Whether the robots meta signal was detected.

Why it matters: hasRobotsMeta and robotsContent describe indexing instructions. A canonical does not override noindex. Intentional exclusions are reviewed rather than automatically penalized; where directives conflict, the more restrictive instruction applies.

Scoring context: Page is set to noindex — search engines will not index this page

Implementation: `app/api/website-auditor/analyze/route.ts:128`

## 244. Robots Content

### field:robotsContent

Field signal · seo · string

The recorded robots content value.

Why it matters: hasRobotsMeta and robotsContent describe indexing instructions. A canonical does not override noindex. Intentional exclusions are reviewed rather than automatically penalized; where directives conflict, the more restrictive instruction applies.

Scoring context: Page is set to noindex — search engines will not index this page

Implementation: `app/api/website-auditor/analyze/route.ts:129`

## 245. Has Open Graph

### field:hasOpenGraph

Field signal · seo, aiReadiness · boolean

Whether the open graph signal was detected. OG / Twitter

Scoring context: Complete Open Graph tags (title, description, image, url, type) No Open Graph tags found Missing og:locale tag — social platforms may guess language/region

Implementation: `app/api/website-auditor/analyze/route.ts:134`

## 246. Og Tags

### field:ogTags

Field signal · Contextual / supporting evidence · Record<string, string>

Dictionary of detected Open Graph metadata values used to assess social-sharing completeness.

Implementation: app/api/website-auditor/analyze/route.ts:135

## 247. Og Missing

### field:ogMissing

Field signal · seo · string[]

The observed list of og missing.

Why it matters: We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Scoring context: Complete Open Graph tags (title, description, image, url, type) Missing OG tags: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:136

## 248. Has Twitter Card

### field:hasTwitterCard

Field signal · seo, aiReadiness · boolean

Whether the twitter card signal was detected.

Scoring context: Complete Twitter Card tags present No Twitter Card tags found Twitter card uses summary\_large\_image — maximum visual impact

Implementation: app/api/website-auditor/analyze/route.ts:137

## 249. Twitter Tags

### field:twitterTags

Field signal · Contextual / supporting evidence · Record<string, string>

Dictionary of detected Twitter/X card metadata values used to assess social-sharing completeness.

Implementation: app/api/website-auditor/analyze/route.ts:138

## 250. Twitter Missing

### field:twitterMissing

Field signal · seo · string[]

The observed list of twitter missing.

Why it matters: Separate from OG, Twitter cards require twitter:card, twitter:title, twitter:description, twitter:image. We verify twitterCardType (summary\_large\_image is optimal) and flag twitterMissing tags.

Scoring context: Complete Twitter Card tags present Missing Twitter tags: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:139

## 251. Has Schema Org

### field:hasSchemaOrg

Field signal · Contextual / supporting evidence · boolean

Whether the schema org signal was detected. Schema / AI

Why it matters: hasSchemaOrg and schemaTypes provide machine-readable context. Without structured

data, AI must infer meaning from unstructured HTML — a lossy process that reduces citation accuracy.

Implementation: `app/api/website-auditor/analyze/route.ts:213`

## 252. Schema Types

### field:schemaTypes

Field signal · aiReadiness, localSeo, schemaOrg · string[]

The observed list of schema types.

Why it matters: hasSchemaOrg and schemaTypes provide machine-readable context. Without structured data, AI must infer meaning from unstructured HTML — a lossy process that reduces citation accuracy.

Scoring context: Service area schema detected

Implementation: `app/api/website-auditor/analyze/route.ts:214`

## 253. Schema Count

### field:schemaCount

Field signal · aiReadiness, geo, schemaOrg · number

Numeric value for schema count.

Why it matters: schemaCount and schemaTypes diversity measure implementation breadth. More distinct, valid types provide richer machine-readable context.

Scoring context: Rich structured data: [observed value] schema blocks ([observed value]) [observed value] schema block(s): [observed value] [observed value] schema blocks help AI engines understand content context

Implementation: `app/api/website-auditor/analyze/route.ts:215`

## 254. Has Hreflang

### field:hasHreflang

Field signal · aiReadiness, geo · boolean

Whether the hreflang signal was detected.

Why it matters: hasHreflang, hreflangValues, hreflangMissingSelfRef, and hreflangMissingXDefault are critical for international SEO. Missing self-referencing tags or x-default causes wrong-language content in localized AI results.

Scoring context: Hreflang tags: [observed value] Hreflang set is missing a self-referencing tag — reduces geo-targeting accuracy Hreflang includes self-referencing tag

Implementation: `app/api/website-auditor/analyze/route.ts:131`

## 255. Hreflang Values

### field:hreflangValues

Field signal · aiReadiness · string[]

The observed list of hreflang values.

Why it matters: hasHreflang, hreflangValues, hreflangMissingSelfRef, and hreflangMissingXDefault are critical for international SEO. Missing self-referencing tags or x-default causes wrong-language content in localized AI results.

Implementation: `app/api/website-auditor/analyze/route.ts:132`

## 256. Html Lang

### field:htmlLang

Field signal · seo, accessibility · string

The recorded html lang value.

Why it matters: `hasLangAttr` and `htmlLang` are parsed by screen readers to select the correct speech synthesis voice. Without `lang`, every word may be mispronounced. `hasLangOnParts` detects partial language declarations for multilingual content.

Implementation: `app/api/website-auditor/analyze/route.ts:130`

## 257. Has Lang Attr

**field:hasLangAttr**

Field signal · seo, accessibility, wcag · boolean

Whether the `lang` attr signal was detected.

Why it matters: `hasLangAttr` and `htmlLang` are parsed by screen readers to select the correct speech synthesis voice. Without `lang`, every word may be mispronounced. `hasLangOnParts` detects partial language declarations for multilingual content.

Scoring context: HTML `lang` attribute set to "[observed value]" Language declared: [observed value] Page language declared — aids assistive technology

Implementation: `app/api/website-auditor/analyze/route.ts:207`

## 258. Css Files

**field:cssFiles**

Field signal · performance · number

Number of external stylesheet references in the HTML, not the number of requests actually loaded by a browser.

Implementation: `app/api/website-auditor/analyze/route.ts:174`

## 259. Js Files

**field:jsFiles**

Field signal · performance · number

Number of external script references in the HTML, not a measured executed-script count.

Implementation: `app/api/website-auditor/analyze/route.ts:175`

## 260. Inline Styles

**field:inlineStyles**

Field signal · performance · number

Numeric value for inline styles.

Why it matters: `htmlSizeKb` over 100KB indicates bloated markup. Excessive inline styles (`inlineStyles`) and inline scripts (`inlineScripts`) inflate document size and delay first render.

Scoring context: [observed value] inline `<style>` blocks

Implementation: `app/api/website-auditor/analyze/route.ts:176`

## 261. Inline Scripts

**field:inlineScripts**

Field signal · performance · number

Numeric value for inline scripts.

Why it matters: `htmlSizeKb` over 100KB indicates bloated markup. Excessive inline styles (`inlineStyles`) and inline scripts (`inlineScripts`) inflate document size and delay first render.

Scoring context: [observed value] inline scripts [observed value] inline scripts (framework hydration/data — standard for SSR apps)

Implementation: `app/api/website-auditor/analyze/route.ts:177`

## 262. Html Size Kb

### field:htmlSizeKb

Field signal · performance · number

Numeric value for html size kb. Performance

Why it matters: htmlSizeKb over 100KB indicates bloated markup. Excessive inline styles (inlineStyles) and inline scripts (inlineScripts) inflate document size and delay first render.

Scoring context: Lean HTML document: [observed value]KB HTML size is [observed value]KB — acceptable Large HTML document: [observed value]KB

Implementation: app/api/website-auditor/analyze/route.ts:173

## 263. Has Preconnect

### field:hasPreconnect

Field signal · performance · boolean

Whether the preconnect signal was detected.

Why it matters: hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

Scoring context: Preconnect hints for: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:178

## 264. Preconnect Domains

### field:preconnectDomains

Field signal · performance · string[]

The observed list of preconnect domains.

Why it matters: hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

Implementation: app/api/website-auditor/analyze/route.ts:179

## 265. Has Prefetch

### field:hasPrefetch

Field signal · Contextual / supporting evidence · boolean

Whether the prefetch signal was detected.

Why it matters: hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

Implementation: app/api/website-auditor/analyze/route.ts:180

## 266. Has Preload

### field:hasPreload

Field signal · performance · boolean

Whether the preload signal was detected.

Why it matters: hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

Scoring context: Preloaded resources: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:181`

## 267. Preload Types

### field:preloadTypes

Field signal · performance · string[]

The observed list of preload types.

Why it matters: `hasPreconnect`, `hasPrefetch`, `hasPreload`, and `totalResourceHints` measure proactive resource loading. `preconnectDomains` and `preloadTypes` (font, script, style) show implementation depth. `preloadFontCount` validates font preloading.

Implementation: `app/api/website-auditor/analyze/route.ts:182`

## 268. Has Font Display

### field:hasFontDisplay

Field signal · performance · boolean

Whether the font display signal was detected.

Why it matters: `hasFontDisplay` (font-display: swap/optional) prevents FOIT. `fontPreloadMissed` detects critical fonts not preloaded. `variableFontsUsed` rewards modern font technology. `fontFileCount` over 4 indicates excessive font requests.

Scoring context: font-display property detected — reduces invisible text during font loading

Implementation: `app/api/website-auditor/analyze/route.ts:183`

## 269. Has Async Defer

### field:hasAsyncDefer

Field signal · Contextual / supporting evidence · boolean

Whether script-loading hints `async` or `defer` appear. Individual script counts provide more detailed loading evidence.

Implementation: `app/api/website-auditor/analyze/route.ts:184`

## 270. Async Scripts

### field:asyncScripts

Field signal · performance · number

Numeric value for async scripts.

Why it matters: `totalJsBundleKb` measures total JS payload. We check `asyncScripts`, `deferScripts` vs. `renderBlockingScripts` ratio. `longTaskScriptHints` identify scripts likely to cause long tasks (>50ms).

Scoring context: [observed value] async and [observed value] deferred scripts

Implementation: `app/api/website-auditor/analyze/route.ts:185`

## 271. Defer Scripts

### field:deferScripts

Field signal · performance · number

Numeric value for defer scripts.

Why it matters: `totalJsBundleKb` measures total JS payload. We check `asyncScripts`, `deferScripts` vs. `renderBlockingScripts` ratio. `longTaskScriptHints` identify scripts likely to cause long tasks (>50ms).

Scoring context: [observed value] async and [observed value] deferred scripts

Implementation: `app/api/website-auditor/analyze/route.ts:186`

## 272. Render Blocking Scripts

### field:renderBlockingScripts

Field signal · performance · number

Numeric value for render blocking scripts.

Why it matters: totalJsBundleKb measures total JS payload. We check asyncScripts, deferScripts vs. renderBlockingScripts ratio. longTaskScriptHints identify scripts likely to cause long tasks (>50ms).

Scoring context: No render-blocking scripts detected [observed value] framework-managed script(s) — optimized by build pipeline [observed value] render-blocking script(s)

Implementation: app/api/website-auditor/analyze/route.ts:187

## 273. Form Count

### field:formCount

Field signal · security, accessibility, aio, wcag · number

Numeric value for form count. Accessibility

Scoring context: Rate limiting recommended for form endpoints All [observed value] forms have proper labels Good form usability score: [observed value]/100

Implementation: app/api/website-auditor/analyze/route.ts:193

## 274. Forms With Labels

### field:formsWithLabels

Field signal · Contextual / supporting evidence · number

Numeric value for forms with labels.

Why it matters: formsWithoutLabels vs. formsWithLabels ratio determines form accessibility. formErrorIdentification checks that error messages are associated with their respective fields.

Implementation: app/api/website-auditor/analyze/route.ts:194

## 275. Forms Without Labels

### field:formsWithoutLabels

Field signal · accessibility · number

Numeric value for forms without labels.

Why it matters: formsWithoutLabels vs. formsWithLabels ratio determines form accessibility. formErrorIdentification checks that error messages are associated with their respective fields.

Scoring context: All [observed value] forms have proper labels [observed value] form(s) missing proper labels

Implementation: app/api/website-auditor/analyze/route.ts:195

## 276. Iframe Count

### field:iframeCount

Field signal · accessibility · number

Numeric value for iframe count.

Why it matters: tablesWithoutHeaders (missing <th>) make data tables unnavigable by screen readers. tablesWithCaption rewards properly described tables. iframesWithTitle vs. iframeCount measures embedded content accessibility.

Scoring context: All iframes have title attributes [observed value] iframe(s) missing title

Implementation: app/api/website-auditor/analyze/route.ts:196

## 277. Iframes With Title

### field:iframesWithTitle

Field signal · accessibility · number

Numeric value for iframes with title.

Why it matters: tablesWithoutHeaders (missing <th>) make data tables unnavigable by screen readers. tablesWithCaption rewards properly described tables. iframesWithTitle vs. iframeCount measures embedded content accessibility.

Scoring context: All iframes have title attributes [observed value] iframe(s) missing title

Implementation: `app/api/website-auditor/analyze/route.ts:197`

## 278. Has Aria

### field:hasAria

Field signal · Contextual / supporting evidence · boolean

Whether the aria signal was detected.

Why it matters: hasAria, ariaCount, and ariaRoles provide accessibility metadata for custom interactive elements. ariaHiddenOnFocusable detects the critical error of hiding focusable elements from screen readers.

Implementation: `app/api/website-auditor/analyze/route.ts:198`

## 279. Aria Count

### field:ariaCount

Field signal · accessibility, wcag · number

Numeric value for aria count.

Why it matters: hasAria, ariaCount, and ariaRoles provide accessibility metadata for custom interactive elements. ariaHiddenOnFocusable detects the critical error of hiding focusable elements from screen readers.

Scoring context: Rich ARIA implementation: [observed value] elements with ARIA attributes [observed value] ARIA-attributed elements found All ARIA roles are valid

Implementation: `app/api/website-auditor/analyze/route.ts:199`

## 280. Aria Roles

### field:ariaRoles

Field signal · Contextual / supporting evidence · string[]

The observed list of aria roles.

Why it matters: hasAria, ariaCount, and ariaRoles provide accessibility metadata for custom interactive elements. ariaHiddenOnFocusable detects the critical error of hiding focusable elements from screen readers.

Implementation: `app/api/website-auditor/analyze/route.ts:200`

## 281. Has Skip Nav

### field:hasSkipNav

Field signal · accessibility · boolean

Whether the skip nav signal was detected.

Why it matters: hasSkipNav allows keyboard-only users to bypass navigation menus (often 20+ links) and jump directly to main content.

Scoring context: Skip navigation link present

Implementation: `app/api/website-auditor/analyze/route.ts:201`

## 282. Has Main Landmark

**field:hasMainLandmark**

Field signal · accessibility · boolean

Whether the main landmark signal was detected.

Why it matters: `hasMainLandmark`, `hasNavLandmark`, and `hasFooterLandmark` enable screen reader users to navigate by page regions using shortcut keys.

Implementation: `app/api/website-auditor/analyze/route.ts:202`

## 283. Has Nav Landmark

**field:hasNavLandmark**

Field signal · accessibility · boolean

Whether the nav landmark signal was detected.

Why it matters: `hasMainLandmark`, `hasNavLandmark`, and `hasFooterLandmark` enable screen reader users to navigate by page regions using shortcut keys.

Implementation: `app/api/website-auditor/analyze/route.ts:203`

## 284. Has Footer Landmark

**field:hasFooterLandmark**

Field signal · accessibility · boolean

Whether the footer landmark signal was detected.

Why it matters: `hasMainLandmark`, `hasNavLandmark`, and `hasFooterLandmark` enable screen reader users to navigate by page regions using shortcut keys.

Implementation: `app/api/website-auditor/analyze/route.ts:204`

## 285. Tabindex Count

**field:tabindexCount**

Field signal · Contextual / supporting evidence · number

Numeric value for tabindex count.

Why it matters: `tabindexCount` and `negativeTabindex` audit keyboard navigation order. Negative `tabindex` removes elements from tab order; excessive positive values create confusing navigation sequences.

Implementation: `app/api/website-auditor/analyze/route.ts:205`

## 286. Negative Tabindex

**field:negativeTabindex**

Field signal · wcag · number

Numeric value for negative tabindex.

Why it matters: `tabindexCount` and `negativeTabindex` audit keyboard navigation order. Negative `tabindex` removes elements from tab order; excessive positive values create confusing navigation sequences.

Scoring context: [observed value] elements with `tabindex="-1"` — may hide content from keyboard users

Implementation: `app/api/website-auditor/analyze/route.ts:206`

## 287. Has Focus Styles

### field:hasFocusStyles

Field signal · accessibility, wcag · boolean

Whether the focus styles signal was detected.

Why it matters: hasFocusStyles verifies visible focus indicators — the only way keyboard users can track their position on the page. Custom :focus-visible styles are preferred over browser defaults.

Scoring context: Focus styles detected for keyboard navigation Focus styles detected for keyboard navigation visibility

Implementation: app/api/website-auditor/analyze/route.ts:208

## 288. Button Count

### field:buttonCount

Field signal · accessibility · number

Numeric value for button count.

Scoring context: All [observed value] buttons have accessible labels [observed value] button(s) missing accessible labels

Implementation: app/api/website-auditor/analyze/route.ts:209

## 289. Buttons With Label

### field:buttonsWithLabel

Field signal · accessibility · number

Numeric value for buttons with label.

Scoring context: All [observed value] buttons have accessible labels [observed value] button(s) missing accessible labels

Implementation: app/api/website-auditor/analyze/route.ts:210

## 290. Color Contrast Hints

### field:colorContrastHints

Field signal · accessibility · string[]

The observed list of color contrast hints.

Why it matters: contrastIssueCount and colorContrastHints detect WCAG 1.4.3 violations. 4.5:1 contrast ratio is required for normal text, 3:1 for large text (18px+).

Scoring context: Potential contrast issues: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:211

## 291. Is Https

### field:isHttps

Field signal · mobile, security · boolean

Whether the is https signal was detected. Security

Why it matters: isHttps verifies TLS encryption. Without HTTPS, browsers display "Not Secure" warnings, forms transmit data in plaintext, and Google applies a ranking penalty.

Scoring context: PWA install-ready: manifest + service worker + HTTPS all present HTTPS enabled — encrypted connection HTTP → HTTPS [observed value] redirect detected — properly forces secure connections

Implementation: app/api/website-auditor/analyze/route.ts:189

## 292. Headers

### field:headers

Field signal · performance, security · Record<string, string>

The observed key/value inventory for headers.

Why it matters: The nosniff directive in headers prevents MIME-type sniffing attacks where browsers misinterpret file types, potentially executing malicious content.

Implementation: app/api/website-auditor/analyze/route.ts:190

## 293. Has Mixed Content

### field:hasMixedContent

Field signal · security · boolean

Whether the mixed content signal was detected.

Why it matters: hasMixedContent detects HTTP resources loaded on HTTPS pages. Browsers may block these resources, breaking functionality and displaying security warnings.

Scoring context: Mixed content detected (HTTP resources on HTTPS page)

Implementation: app/api/website-auditor/analyze/route.ts:191

## 294. Has Social Links

### field:hasSocialLinks

Field signal · aiReadiness · boolean

Whether the social links signal was detected. Social

Why it matters: hasSocialLinks and socialPlatforms help AI confirm your brand's entity identity in the Knowledge Graph, improving entity disambiguation accuracy.

Scoring context: Social presence signals: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:217

## 295. Social Platforms

### field:socialPlatforms

Field signal · aiReadiness · string[]

The observed list of social platforms.

Why it matters: hasSocialLinks and socialPlatforms help AI confirm your brand's entity identity in the Knowledge Graph, improving entity disambiguation accuracy.

Implementation: app/api/website-auditor/analyze/route.ts:218

## 296. Cta Count

### field:ctaCount

Field signal · aiReadiness · number

Numeric value for cta count. CTA

Scoring context: [observed value] call-to-action elements detected

Implementation: app/api/website-auditor/analyze/route.ts:220

## 297. Has Service Worker

### field:hasServiceWorker

Field signal · mobile · boolean

Whether the service worker signal was detected. Misc

Why it matters: hasServiceWorker enables offline capability, background sync, push notifications, and aggressive caching strategies for near-instant return visits.

Scoring context: Service worker detected — offline capability possible PWA install-ready: manifest + service worker + HTTPS all present Manifest present but no service worker — PWA install prompt will not fire

Implementation: `app/api/website-auditor/analyze/route.ts:222`

## 298. Has Open Search

### field:hasOpenSearch

Field signal · Contextual / supporting evidence · boolean

Whether an OpenSearch description link is present. This optional browser integration is not a prerequisite for search visibility.

Implementation: `app/api/website-auditor/analyze/route.ts:223`

## 299. Has Sitemap

### field:hasSitemap

Field signal · aiReadiness · boolean

Whether the sitemap signal was detected.

Scoring context: Sitemap reference detected

Implementation: `app/api/website-auditor/analyze/route.ts:224`

## 300. Meta Refresh

### field:metaRefresh

Field signal · seo · boolean

Whether the meta refresh signal was detected.

Why it matters: metaRefresh redirects are discouraged by Google — they prevent proper HTTP status code handling, confuse crawlers, and degrade user experience.

Scoring context: Meta refresh redirect detected — harmful for SEO

Implementation: `app/api/website-auditor/analyze/route.ts:225`

## 301. Deprecated Tags

### field:deprecatedTags

Field signal · seo, accessibility · string[]

The observed list of deprecated tags.

Why it matters: deprecatedTags like `<font>`, `<center>`, `<marquee>` signal unmaintained code and may cause rendering inconsistencies across modern browsers.

Scoring context: Deprecated HTML tags found: [observed value] Deprecated HTML tags impact accessibility

Implementation: `app/api/website-auditor/analyze/route.ts:226`

## 302. Has Google Analytics

### field:hasGoogleAnalytics

Field signal · Contextual / supporting evidence · boolean

Whether a Google Analytics source signature is detected; not verification of data collection or consent compliance.

Implementation: `app/api/website-auditor/analyze/route.ts:227`

## 303. Has Tag Manager

### field:hasTagManager

Field signal · Contextual / supporting evidence · boolean

Whether a tag-manager source signature is detected; not verification of the container configuration.

Implementation: `app/api/website-auditor/analyze/route.ts:228`

## 304. Has NAP

### field:hasNAP

Field signal · localSeo · boolean

Whether the nap signal was detected. Local SEO signals

Why it matters: hasNAP and napDetails consistency is the #1 local ranking factor. NAP must match your Google Business Profile exactly across all web presences.

Scoring context: NAP information detected: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:230`

## 305. Nap Details

### field:napDetails

Field signal · localSeo · string

The recorded nap details value.

Why it matters: hasNAP and napDetails consistency is the #1 local ranking factor. NAP must match your Google Business Profile exactly across all web presences.

Implementation: `app/api/website-auditor/analyze/route.ts:231`

## 306. Has Local Business Schema

### field:hasLocalBusinessSchema

Field signal · localSeo · boolean

Whether the local business schema signal was detected.

Why it matters: hasLocalBusinessSchema and localBusinessTypes provide Google with structured business data: name, address, phone, hours, geo coordinates, price range, and payment methods.

Scoring context: LocalBusiness schema: [observed value] LocalBusiness schema present but no opening hours

Implementation: `app/api/website-auditor/analyze/route.ts:232`

## 307. Local Business Types

### field:localBusinessTypes

Field signal · localSeo · string[]

The observed list of local business types.

Why it matters: hasLocalBusinessSchema and localBusinessTypes provide Google with structured business data: name, address, phone, hours, geo coordinates, price range, and payment methods.

Implementation: `app/api/website-auditor/analyze/route.ts:233`

## 308. Has Google Maps Embed

**field:hasGoogleMapsEmbed**

Field signal · localSeo · boolean

Whether the google maps embed signal was detected.

Why it matters: hasGoogleMapsEmbed provides visual location confirmation and helps Google associate your site with a specific geographic point for local pack ranking.

Scoring context: Google Maps embed present — provides visual location confirmation

Implementation: `app/api/website-auditor/analyze/route.ts:234`

## 309. Has Address Microdata

**field:hasAddressMicrodata**

Field signal · localSeo · boolean

Whether the address microdata signal was detected.

Why it matters: hasAddressMicrodata (PostalAddress schema) makes your address machine-readable for accurate parsing by search engines and mapping services.

Scoring context: Address microdata markup detected

Implementation: `app/api/website-auditor/analyze/route.ts:235`

## 310. Phone Numbers

**field:phoneNumbers**

Field signal · localSeo · string[]

The observed list of phone numbers.

Why it matters: phoneNumbers with clickable tel: links are essential for mobile users and signal local business legitimacy. Multiple numbers may indicate multi-location businesses.

Scoring context: Phone number(s) visible: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:236`

## 311. Email Addresses

**field:emailAddresses**

Field signal · localSeo · string[]

The observed list of email addresses.

Why it matters: emailAddresses and additional contact methods (contact forms, chat widgets) provide alternative communication channels that improve local engagement signals.

Scoring context: Email address found: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:237`

## 312. Has Geo Meta

**field:hasGeoMeta**

Field signal · localSeo · boolean

Whether the geo meta signal was detected.

Why it matters: hasGeoMeta (geo.region, geo.placename, geo.position) meta tags explicitly declare your geographic targeting for regional search results.

Scoring context: Geo meta tags present for location targeting

Implementation: `app/api/website-auditor/analyze/route.ts:238`

### 313. Faq Count

**field:faqCount**

Field signal · aiReadiness, aio, aeo · number

Numeric value for faq count. AIO / GEO / AEO signals

Why it matters: faqCount, hasQAPattern, and definitionLists detect question-answer content — the most extractable format for AI citation and knowledge graph population.

Scoring context: FAQ/Q&A content patterns detected — highly valuable for AI citation Rich Q&A content ([observed value] FAQ/accordion elements) [observed value] FAQ/Q&A elements detected

Implementation: `app/api/website-auditor/analyze/route.ts:240`

### 314. Has QA Pattern

**field:hasQAPattern**

Field signal · aiReadiness, geo, aeo · boolean

Whether the qa pattern signal was detected.

Why it matters: faqCount, hasQAPattern, and definitionLists detect question-answer content — the most extractable format for AI citation and knowledge graph population.

Scoring context: FAQ/Q&A content patterns detected — highly valuable for AI citation Direct question-answer patterns found — good for Google SGE and AI citations Question-answer heading patterns support featured snippet capture

Implementation: `app/api/website-auditor/analyze/route.ts:241`

### 315. Definition Lists

**field:definitionLists**

Field signal · geo · number

Numeric value for definition lists.

Why it matters: faqCount, hasQAPattern, and definitionLists detect question-answer content — the most extractable format for AI citation and knowledge graph population.

Scoring context: [observed value] definition list(s) — excellent for AI glossary extraction

Implementation: `app/api/website-auditor/analyze/route.ts:242`

### 316. Table Count

**field:tableCount**

Field signal · aio, geo · number

Numeric value for table count.

Why it matters: tableCount measures structured tabular data. Generative AI frequently cites tables for comparison queries ("X vs Y") because they provide pre-structured, extractable information.

Scoring context: Structured content: [observed value] lists, [observed value] tables — easily parsed by AI [observed value] comparison/data table(s) — highly extractable by AI

Implementation: `app/api/website-auditor/analyze/route.ts:243`

### 317. List Count

**field:listCount**

Field signal · aio, geo, aeo · number

Numeric value for list count.

Why it matters: listCount and orderedListCount detect the second most-extracted content format by

generative engines after tables. Numbered steps and bullet points are AI's preferred citation structure.

Scoring context: Structured content: [observed value] lists, [observed value] tables — easily parsed by AI [observed value] lists provide scannable, AI-friendly content [observed value] lists detected

Implementation: `app/api/website-auditor/analyze/route.ts:244`

## 318. Ordered List Count

**field:orderedListCount**

Field signal · geo · number

Numeric value for ordered list count.

Why it matters: listCount and orderedListCount detect the second most-extracted content format by generative engines after tables. Numbered steps and bullet points are AI's preferred citation structure.

Scoring context: [observed value] ordered lists provide step-by-step structure

Implementation: `app/api/website-auditor/analyze/route.ts:245`

## 319. Has How To Pattern

**field:hasHowToPattern**

Field signal · geo, aeo · boolean

Whether the how to pattern signal was detected.

Why it matters: hasHowToSchema enables rich step-by-step results. hasHowToPattern detects instructional content structure even without formal schema markup.

Scoring context: How-to instructional patterns detected — valued by AI answer engines How-to content exists but lacks HowTo schema

Implementation: `app/api/website-auditor/analyze/route.ts:246`

## 320. Content Readability Hints

**field:contentReadabilityHints**

Field signal · geo · string[]

The observed list of content readability hints.

Why it matters: fleschReadingEase measures text complexity (60–70 is ideal for web). passiveVoiceRatio above 20% reduces engagement. contentReadabilityHints provide specific improvement suggestions.

Scoring context: hint

Implementation: `app/api/website-auditor/analyze/route.ts:247`

## 321. Entity Mentions

**field:entityMentions**

Field signal · aiReadiness, aio, geo · string[]

The observed list of entity mentions.

Why it matters: entitySalienceScore measures how prominently key entities appear. relatedEntityMentions and entityMentions help search engines build topical authority graphs.

Scoring context: [observed value] strong entity mentions (bold/emphasized text) Strong entity emphasis: [observed value] key terms highlighted [observed value] emphasized entities

Implementation: `app/api/website-auditor/analyze/route.ts:248`

## 322. Has Speakable Schema

### field:hasSpeakableSchema

Field signal · aio, aeo · boolean

Whether the speakable schema signal was detected.

Why it matters: hasSpeakableSchema tells voice assistants which page sections are suitable for text-to-speech, optimizing for the growing voice search channel.

Scoring context: Speakable schema detected — content optimized for voice assistants Speakable schema supports voice search optimization

Implementation: `app/api/website-auditor/analyze/route.ts:249`

## 323. Has Video Object

### field:hasVideoObject

Field signal · aeo · boolean

Whether the video object signal was detected.

Why it matters: hasVideoObject schema enables video rich results that appear in ~25% of featured snippet positions, capturing visual-first searchers.

Scoring context: Video content detected — supports multimedia answer results

Implementation: `app/api/website-auditor/analyze/route.ts:250`

## 324. Has Breadcrumb Nav

### field:hasBreadcrumbNav

Field signal · aiReadiness, aeo · boolean

Whether the breadcrumb nav signal was detected.

Why it matters: hasBreadcrumbSchema and hasBreadcrumbNav enable breadcrumb rich results showing site hierarchy in SERPs, improving click-through rates by 20–30%.

Scoring context: Breadcrumb navigation present — aids AI in understanding site hierarchy Breadcrumb navigation with schema aids answer context

Implementation: `app/api/website-auditor/analyze/route.ts:251`

## 325. Contrast Issue Count

### field:contrastIssueCount

Field signal · wcag · number

Numeric value for contrast issue count. WCAG deep signals

Why it matters: contrastIssueCount and colorContrastHints detect WCAG 1.4.3 violations. 4.5:1 contrast ratio is required for normal text, 3:1 for large text (18px+).

Scoring context: [observed value] potential color contrast issue(s)

Implementation: `app/api/website-auditor/analyze/route.ts:253`

## 326. Has Reduced Motion

### field:hasReducedMotion

Field signal · wcag · boolean

Whether the reduced motion signal was detected.

Why it matters: hasReducedMotion checks for @media (prefers-reduced-motion). reducedMotionEnforced verifies that animations are actually disabled, not just detected. Users with vestibular disorders experience nausea from animations (WCAG 2.3.3).

Scoring context: prefers-reduced-motion support detected — respects user motion preferences prefers-reduced-motion detected but enforcement unclear

Implementation: `app/api/website-auditor/analyze/route.ts:254`

## 327. Has High Contrast Mode

**field:hasHighContrastMode**

Field signal · wcag · boolean

Whether the high contrast mode signal was detected.

Why it matters: `hasHighContrastMode` checks for `@media (forced-colors)` / `@media (-ms-high-contrast)` support. Users with low vision depend on forced-colors mode to make content readable.

Scoring context: High contrast / forced-colors mode supported

Implementation: `app/api/website-auditor/analyze/route.ts:255`

## 328. Link Distinguishable

**field:linkDistinguishable**

Field signal · wcag · boolean

Whether the link distinguishable signal was detected.

Why it matters: `linkDistinguishable` verifies links are identifiable by more than just color (WCAG 1.4.1). Underline, font-weight, or border-bottom must supplement color changes.

Scoring context: Links are visually distinguishable (underline or decoration detected)

Implementation: `app/api/website-auditor/analyze/route.ts:256`

## 329. Has Error Suggestions

**field:hasErrorSuggestions**

Field signal · wcag · boolean

Whether the error suggestions signal was detected.

Why it matters: `formErrorIdentification` and `hasErrorSuggestions` check that form validation errors are clearly described and associated with the correct field (WCAG 3.3.1, 3.3.3).

Scoring context: Form error/validation feedback detected

Implementation: `app/api/website-auditor/analyze/route.ts:257`

## 330. Time Based Media

**field:timeBasedMedia**

Field signal · wcag · number

Numeric value for time based media.

Why it matters: `autoplayMedia` violates WCAG 1.4.2. Auto-playing audio/video is disorienting for cognitive disabilities and interrupts screen reader output. `timeBasedMedia` counts all time-based media elements.

Scoring context: [observed value] media element(s) without autoplay

Implementation: `app/api/website-auditor/analyze/route.ts:258`

## 331. Autoplay Media

**field:autoplayMedia**

Field signal · wcag · number

Numeric value for autoplay media.

Why it matters: `autoplayMedia` violates WCAG 1.4.2. Auto-playing audio/video is disorienting for cognitive disabilities and interrupts screen reader output. `timeBasedMedia` counts all time-based media elements.

Scoring context: [observed value] autoplay media element(s) detected

Implementation: app/api/website-auditor/analyze/route.ts:259

## 332. Has Text Resize

**field:hasTextResize**

Field signal · wcag · boolean

Whether the text resize signal was detected.

Why it matters: hasTextResize checks for relative font units. Pixel font sizes don't scale when users increase browser zoom to 200% (WCAG 1.4.4 requirement).

Scoring context: Relative units (rem/em/clamp) detected — supports text resizing

Implementation: app/api/website-auditor/analyze/route.ts:260

## 333. Semantic Elements

**field:semanticElements**

Field signal · aiReadiness, aio, wcag · string[]

The observed list of semantic elements.

Why it matters: semanticElementCount vs. nonSemanticDivCount ratio reveals structural clarity. semanticElements (article, section, aside, figure, main, nav) provide meaning AI can parse without heuristics.

Scoring context: Strong semantic markup: [observed value] Some semantic elements: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:261

## 334. Semantic Element Count

**field:semanticElementCount**

Field signal · aio, wcag · number

Numeric value for semantic element count.

Why it matters: semanticElementCount vs. nonSemanticDivCount ratio reveals structural clarity. semanticElements (article, section, aside, figure, main, nav) provide meaning AI can parse without heuristics.

Implementation: app/api/website-auditor/analyze/route.ts:262

## 335. Non Semantic Div Count

**field:nonSemanticDivCount**

Field signal · aio, wcag · number

Numeric value for non semantic div count.

Why it matters: semanticElementCount vs. nonSemanticDivCount ratio reveals structural clarity. semanticElements (article, section, aside, figure, main, nav) provide meaning AI can parse without heuristics.

Implementation: app/api/website-auditor/analyze/route.ts:263

## 336. Schema Validity Hints

**field:schemaValidityHints**

Field signal · schemaOrg · string[]

The observed list of schema validity hints. Schema deep analysis

Why it matters: schemaValidityHints detect JSON-LD parse errors, missing required fields, and type mismatches. Invalid schema is silently ignored by search engines. hasDeprecatedSchemaProperties flags

obsolete properties.

Scoring context: No schema validity issues detected

Implementation: `app/api/website-auditor/analyze/route.ts:265`

### 337. Schema Properties

**field:schemaProperties**

Field signal · schemaOrg · Record<string, string[]>

Properties collected for detected structured-data types, used to assess completeness and explain omissions.

Implementation: `app/api/website-auditor/analyze/route.ts:266`

### 338. Has Person Schema

**field:hasPersonSchema**

Field signal · aio, schemaOrg · boolean

Whether the person schema signal was detected.

Why it matters: `hasPersonSchema`, `hasArticleSchema`, `hasReviewSchema`, and `hasServiceSchema` provide machine-readable E-E-A-T signals that AI models use to assess content authority.

Scoring context: Person schema strengthens E-E-A-T and Knowledge Graph

Implementation: `app/api/website-auditor/analyze/route.ts:267`

### 339. Has Product Schema

**field:hasProductSchema**

Field signal · schemaOrg · boolean

Whether the product schema signal was detected.

Scoring context: Product schema → rich product results with pricing

Implementation: `app/api/website-auditor/analyze/route.ts:268`

### 340. Has FAQ Schema

**field:hasFAQSchema**

Field signal · aeo, schemaOrg · boolean

Whether the faq schema signal was detected.

Why it matters: `hasFAQSchema` is the most direct path to expandable FAQ rich results in Google. Combined with `faqCount`, we measure both schema implementation and content availability.

Scoring context: FAQPage schema markup present — eligible for rich FAQ results FAQPage schema → expandable FAQ rich results

Implementation: `app/api/website-auditor/analyze/route.ts:269`

### 341. Has How To Schema

**field:hasHowToSchema**

Field signal · aeo, schemaOrg · boolean

Whether the how to schema signal was detected.

Why it matters: `hasHowToSchema` enables rich step-by-step results. `hasHowToPattern` detects instructional content structure even without formal schema markup.

Scoring context: HowTo schema markup present — eligible for how-to rich results HowTo schema → step-by-step rich results

Implementation: `app/api/website-auditor/analyze/route.ts:270`

## 342. Has Breadcrumb Schema

### field:hasBreadcrumbSchema

Field signal · aeo, schemaOrg · boolean

Whether the breadcrumb schema signal was detected.

Why it matters: hasBreadcrumbSchema and hasBreadcrumbNav enable breadcrumb rich results showing site hierarchy in SERPs, improving click-through rates by 20–30%.

Scoring context: Breadcrumb navigation with schema aids answer context BreadcrumbList schema → breadcrumb rich results

Implementation: `app/api/website-auditor/analyze/route.ts:271`

## 343. Has Event Schema

### field:hasEventSchema

Field signal · schemaOrg · boolean

Whether the event schema signal was detected.

Why it matters: hasPersonSchema, hasHowToSchema, hasServiceSchema, hasEventSchema, hasReviewSchema extend rich result eligibility beyond core types.

Scoring context: Event schema → event rich results with dates/location

Implementation: `app/api/website-auditor/analyze/route.ts:272`

## 344. Has Article Schema

### field:hasArticleSchema

Field signal · seo, aio, schemaOrg · boolean

Whether the article schema signal was detected.

Why it matters: hasPersonSchema, hasArticleSchema, hasReviewSchema, and hasServiceSchema provide machine-readable E-E-A-T signals that AI models use to assess content authority.

Scoring context: article:published\_time present — content freshness signal for social platforms article:modified\_time present — update recency signal Article/BlogPosting schema → article rich results + Google Discover

Implementation: `app/api/website-auditor/analyze/route.ts:273`

## 345. Has Service Schema

### field:hasServiceSchema

Field signal · aio, schemaOrg · boolean

Whether the service schema signal was detected.

Why it matters: hasPersonSchema, hasArticleSchema, hasReviewSchema, and hasServiceSchema provide machine-readable E-E-A-T signals that AI models use to assess content authority.

Scoring context: Service schema describes your offerings

Implementation: `app/api/website-auditor/analyze/route.ts:274`

## 346. Has Review Schema

### field:hasReviewSchema

Field signal · aio, localSeo, schemaOrg · boolean

Whether the review schema signal was detected.

Why it matters: hasPersonSchema, hasArticleSchema, hasReviewSchema, and hasServiceSchema provide machine-readable E-E-A-T signals that AI models use to assess content authority.

Scoring context: Review schema with [observed value] reviews ([observed value] avg rating) Review/Rating schema

detected Review/Rating schema → star ratings in search results

Implementation: [app/api/website-auditor/analyze/route.ts:275](#)

## 347. Schema Depth

**field:schemaDepth**

Field signal · schemaOrg · string

The recorded schema depth value.

Why it matters: nestedSchemaDepth and schemaDepth measure nesting sophistication. Deeper nesting (author within Article, offers within Product, review within LocalBusiness) enables richer Knowledge Graph connections.

Scoring context: Comprehensive schema implementation Moderate schema coverage Only basic schema implementation

Implementation: [app/api/website-auditor/analyze/route.ts:276](#)

## 348. Is Modern Framework

**field:isModernFramework**

Field signal · mobile, security, accessibility, aiReadiness, schemaOrg, wcag · boolean

Whether the is modern framework signal was detected.

Why it matters: isModernFramework, spaDetected, and jsFrameworkDetected identify React, Next.js, Vue, Angular, etc. SPAs require special SSR/SSG consideration for SEO and initial load performance.

Scoring context: Estimated page weight ~[observed value]KB — heavy for mobile data plans Page weight ~[observed value]KB — acceptable for framework SSR apps with code splitting CSP contains [observed value] unsafe-inline directive(s) — weakens XSS protection

Implementation: [app/api/website-auditor/analyze/route.ts:278](#)

## 349. Spa Detected

**field:spaDetected**

Field signal · seo · boolean

Whether the spa detected signal was detected.

Why it matters: isModernFramework, spaDetected, and jsFrameworkDetected identify React, Next.js, Vue, Angular, etc. SPAs require special SSR/SSG consideration for SEO and initial load performance.

Scoring context: SPA framework detected ([observed value]) with thin initial HTML content — search engines may not index all content SPA framework detected ([observed value]) with adequate SSR content

Implementation: [app/api/website-auditor/analyze/route.ts:279](#)

## 350. Js Framework Detected

**field:jsFrameworkDetected**

Field signal · seo · string

The recorded js framework detected value.

Why it matters: isModernFramework, spaDetected, and jsFrameworkDetected identify React, Next.js, Vue, Angular, etc. SPAs require special SSR/SSG consideration for SEO and initial load performance.

Implementation: [app/api/website-auditor/analyze/route.ts:280](#)

## 351. Internal Link Ratio

**field:internalLinkRatio**

Field signal · seo · number

Numeric value for internal link ratio.

Why it matters: We measure `internalLinks`, `internalLinkRatio`, `internalLinkDensityPer1k` (links per 1,000 words), and `anchorTextDiversity`. A ratio below 0.5 or density below 2 per 1k words signals poor internal linking.

Scoring context: Low internal link ratio ([observed value]%) — most links point externally Healthy internal link ratio: [observed value]% of links are internal

Implementation: `app/api/website-auditor/analyze/route.ts:281`

## 352. Anchor Text Diversity

**field:anchorTextDiversity**

Field signal · seo · number

Numeric value for anchor text diversity.

Why it matters: We measure `internalLinks`, `internalLinkRatio`, `internalLinkDensityPer1k` (links per 1,000 words), and `anchorTextDiversity`. A ratio below 0.5 or density below 2 per 1k words signals poor internal linking.

Scoring context: Low anchor text diversity ([observed value]%) — many internal links use identical text Good anchor text diversity: [observed value]% unique anchor texts

Implementation: `app/api/website-auditor/analyze/route.ts:282`

## 353. Meta Robots Conflicts

**field:metaRobotsConflicts**

Field signal · seo · string[]

The observed list of meta robots conflicts.

Scoring context: Review robots configuration: [observed value]. Noindex with a canonical or a site-level sitemap reference can be intentional; this alone does not prove a defect.

Implementation: `app/api/website-auditor/analyze/route.ts:283`

## 354. Multiple Canonicals

**field:multipleCanonicals**

Field signal · seo · boolean

Whether the multiple canonicals signal was detected.

Scoring context: Multiple canonical tags found — search engines may ignore all of them

Implementation: `app/api/website-auditor/analyze/route.ts:284`

## 355. Thin Content Signal

**field:thinContentSignal**

Field signal · Contextual / supporting evidence · boolean

Whether the thin content signal signal was detected.

Why it matters: `wordCount`, `paragraphCount`, and `avgWordsPerParagraph` measure content substance. Pages under 300 words are flagged as `thinContentSignal`. We also check `titleH1Overlap` — high overlap suggests lazy optimization.

Implementation: `app/api/website-auditor/analyze/route.ts:285`

## 356. Title H1 Overlap

**field:titleH1Overlap**

Field signal · seo · number

Numeric value for title h1 overlap.

Why it matters: `wordCount`, `paragraphCount`, and `avgWordsPerParagraph` measure content substance.

Pages under 300 words are flagged as `thinContentSignal`. We also check `titleH1Overlap` — high overlap suggests lazy optimization.

Scoring context: Good keyword alignment between title and H1 Title and H1 share no keywords — misaligned topic signals

Implementation: `app/api/website-auditor/analyze/route.ts:286`

## 357. Ttfb Ms

**field:**`ttfbMs`

Field signal · Contextual / supporting evidence · number

Numeric value for ttfb ms.

Why it matters: `ttfbMs` measures time to first byte. Under 200ms is excellent; over 600ms indicates server-side bottlenecks. `httpVersion` (HTTP/2 or HTTP/3 enables multiplexing).

Implementation: `app/api/website-auditor/analyze/route.ts:287`

## 358. Http Version

**field:**`httpVersion`

Field signal · performance · string

The recorded http version value.

Why it matters: `ttfbMs` measures time to first byte. Under 200ms is excellent; over 600ms indicates server-side bottlenecks. `httpVersion` (HTTP/2 or HTTP/3 enables multiplexing).

Scoring context: HTTP/3 (QUIC) detected — fastest connection protocol HTTP/2 multiplexing enabled

Implementation: `app/api/website-auditor/analyze/route.ts:288`

## 359. Cdn Detected

**field:**`cdnDetected`

Field signal · performance · boolean

Whether the cdn detected signal was detected.

Why it matters: `cdnDetected` and `cdnProvider` indicate edge caching. `compressionType` (br > gzip > none) directly affects transfer size. Brotli compression reduces payloads 15–20% more than gzip.

Scoring context: CDN detected: [observed value] — reduces latency for global users

Implementation: `app/api/website-auditor/analyze/route.ts:289`

## 360. Cdn Provider

**field:**`cdnProvider`

Field signal · performance · string

The recorded cdn provider value.

Why it matters: `cdnDetected` and `cdnProvider` indicate edge caching. `compressionType` (br > gzip > none) directly affects transfer size. Brotli compression reduces payloads 15–20% more than gzip.

Implementation: `app/api/website-auditor/analyze/route.ts:290`

## 361. Compression Type

**field:**`compressionType`

Field signal · performance · string

The recorded compression type value.

Why it matters: `cdnDetected` and `cdnProvider` indicate edge caching. `compressionType` (br > gzip > none) directly affects transfer size. Brotli compression reduces payloads 15–20% more than gzip.

Scoring context: Brotli compression enabled — best-in-class compression Gzip compression enabled No response compression detected

Implementation: `app/api/website-auditor/analyze/route.ts:291`

## 362. Third Party Script Count

**field:**`thirdPartyScriptCount`

Field signal · performance, security · number

Numeric value for third party script count.

Why it matters: `thirdPartyScriptCount` and `thirdPartyDomains` measure external dependency load. Each third-party domain adds DNS lookup, connection, and TLS handshake overhead.

Scoring context: [observed value] third-party scripts from [observed value] domains — significant performance impact [observed value] third-party scripts detected [observed value] third-party script(s) — manageable count

Implementation: `app/api/website-auditor/analyze/route.ts:292`

## 363. Third Party Domains

**field:**`thirdPartyDomains`

Field signal · performance · string[]

The observed list of third party domains.

Why it matters: `thirdPartyScriptCount` and `thirdPartyDomains` measure external dependency load. Each third-party domain adds DNS lookup, connection, and TLS handshake overhead.

Implementation: `app/api/website-auditor/analyze/route.ts:293`

## 364. Critical Css Detected

**field:**`criticalCssDetected`

Field signal · Contextual / supporting evidence · boolean

Whether the critical css detected signal was detected.

Why it matters: `totalCssBundleKb` measures all CSS payload. `renderBlockingCssCount` identifies files blocking first paint. `unusedCssHint` detects dead CSS. `criticalCssDetected` rewards above-fold CSS inlining.

Implementation: `app/api/website-auditor/analyze/route.ts:294`

## 365. Font File Count

**field:**`fontFileCount`

Field signal · performance · number

Numeric value for font file count.

Why it matters: `hasFontDisplay` (font-display: swap/optional) prevents FOIT. `fontPreloadMissed` detects critical fonts not preloaded. `variableFontsUsed` rewards modern font technology. `fontFileCount` over 4 indicates excessive font requests.

Scoring context: [observed value] font files loaded — excessive font weight

Implementation: `app/api/website-auditor/analyze/route.ts:295`

## 366. Total Resource Hints

**field:**`totalResourceHints`

Field signal · performance · number

Numeric value for total resource hints.

Why it matters: `hasPreconnect`, `hasPrefetch`, `hasPreload`, and `totalResourceHints` measure proactive resource loading. `preconnectDomains` and `preloadTypes` (font, script, style) show implementation depth. `preloadFontCount` validates font preloading.

Scoring context: [observed value] resource hints (preconnect/prefetch/preload) optimize loading No resource hints found

Implementation: app/api/website-auditor/analyze/route.ts:296

## 367. Preload Font Count

**field:preloadFontCount**

Field signal · performance · number

Numeric value for preload font count.

Why it matters: hasPreconnect, hasPrefetch, hasPreload, and totalResourceHints measure proactive resource loading. preconnectDomains and preloadTypes (font, script, style) show implementation depth. preloadFontCount validates font preloading.

Scoring context: [observed value] font(s) preloaded for faster text rendering

Implementation: app/api/website-auditor/analyze/route.ts:297

## 368. Viewport Disables Zoom

**field:viewportDisablesZoom**

Field signal · mobile · boolean

Whether the viewport disables zoom signal was detected.

Why it matters: viewportDisablesZoom (maximum-scale=1, user-scalable=no) prevents users from zooming, violating WCAG 1.4.4. Google penalizes zoom-restricted viewports in mobile-first indexing.

Scoring context: Viewport disables user zoom (maximum-scale=1 or user-scalable=no)

Implementation: app/api/website-auditor/analyze/route.ts:298

## 369. Small Touch Targets

**field:smallTouchTargets**

Field signal · mobile · number

Numeric value for small touch targets.

Why it matters: smallTouchTargets counts interactive elements smaller than 44×44px (Apple HIG) / 48×48px (Material Design). Undersized targets cause accidental clicks and "fat finger" frustration.

Scoring context: [observed value] potentially undersized touch targets detected [observed value] small touch target(s) may be difficult to tap on mobile

Implementation: app/api/website-auditor/analyze/route.ts:299

## 370. Has Fixed Width Elements

**field:hasFixedWidthElements**

Field signal · mobile · boolean

Whether the fixed width elements signal was detected.

Why it matters: hasFixedWidthElements detects elements with fixed pixel widths over 800px that cause horizontal scrolling on mobile — a severe usability failure.

Scoring context: Fixed-width elements detected (>800px) — may cause horizontal scrolling on mobile

Implementation: app/api/website-auditor/analyze/route.ts:300

## 371. Has Popup Or Modal

**field:hasPopupOrModal**

Field signal · mobile · boolean

Whether the popup or modal signal was detected.

Why it matters: hasPopupOrModal triggers Google's intrusive interstitial penalty when popups cover more

than 50% of mobile viewport content.

Scoring context: Popup/modal/interstitial detected — Google penalizes intrusive interstitials on mobile

Implementation: `app/api/website-auditor/analyze/route.ts:301`

## 372. Has Hamburger Menu

**field:hasHamburgerMenu**

Field signal · mobile · boolean

Whether the hamburger menu signal was detected.

Why it matters: hasHamburgerMenu confirms mobile navigation pattern implementation, though we don't penalize for alternative patterns like tab bars.

Scoring context: Mobile-responsive hamburger menu detected

Implementation: `app/api/website-auditor/analyze/route.ts:302`

## 373. Hsts Preload

**field:hstsPreload**

Field signal · security · boolean

Whether the hsts preload signal was detected.

Why it matters: HSTS forces HTTPS-only connections. We check hstsMaxAge ( $\geq 31536000$  recommended) and hstsPreload (inclusion in browser preload lists for zero-trust-on-first-use protection).

Scoring context: HSTS with preload and adequate max-age — eligible for browser preload list HSTS header present but missing preload directive

Implementation: `app/api/website-auditor/analyze/route.ts:303`

## 374. Hsts Max Age

**field:hstsMaxAge**

Field signal · security · number

Numeric value for hsts max age.

Why it matters: HSTS forces HTTPS-only connections. We check hstsMaxAge ( $\geq 31536000$  recommended) and hstsPreload (inclusion in browser preload lists for zero-trust-on-first-use protection).

Scoring context: HSTS with preload and adequate max-age — eligible for browser preload list HSTS max-age is only [observed value] days — should be at least 1 year

Implementation: `app/api/website-auditor/analyze/route.ts:304`

## 375. Cookie Security Issues

**field:cookieSecurityIssues**

Field signal · security · string[]

The observed list of cookie security issues.

Why it matters: cookieSecurityIssues identifies cookies without Secure (sent over HTTP), HttpOnly (accessible to JavaScript), and SameSite (vulnerable to CSRF) attributes.

Scoring context: Cookie security issues: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:305`

## 376. Form Actions Insecure

### field:formActionsInsecure

Field signal · security · number

Numeric value for form actions insecure.

Why it matters: formActionsInsecure counts forms submitting to HTTP endpoints, transmitting user data in plaintext — a PCI-DSS and GDPR violation.

Scoring context: [observed value] form(s) submit to insecure HTTP endpoints

Implementation: `app/api/website-auditor/analyze/route.ts:306`

## 377. Has Cors Headers

### field:hasCorsHeaders

Field signal · Contextual / supporting evidence · boolean

Whether the cors headers signal was detected.

Why it matters: hasCorsHeaders and cross-origin isolation headers protect against Spectre side-channel attacks by isolating your page's browsing context from cross-origin resources.

Implementation: `app/api/website-auditor/analyze/route.ts:307`

## 378. Has Privacy Policy

### field:hasPrivacyPolicy

Field signal · security · boolean

Whether the privacy policy signal was detected.

Why it matters: hasPrivacyPolicy and hasCookieConsent are GDPR/CCPA legal requirements. Non-compliance can result in fines up to 4% of annual global revenue.

Scoring context: Privacy policy link detected

Implementation: `app/api/website-auditor/analyze/route.ts:308`

## 379. Has Cookie Consent

### field:hasCookieConsent

Field signal · security · boolean

Whether the cookie consent signal was detected.

Why it matters: hasPrivacyPolicy and hasCookieConsent are GDPR/CCPA legal requirements. Non-compliance can result in fines up to 4% of annual global revenue.

Scoring context: Cookie consent mechanism detected

Implementation: `app/api/website-auditor/analyze/route.ts:309`

## 380. Has Subresource Integrity

### field:hasSubresourceIntegrity

Field signal · security · boolean

Whether the subresource integrity signal was detected.

Why it matters: hasSubresourceIntegrity and sriCount verify that external scripts include integrity hashes, preventing supply-chain attacks where CDN-hosted scripts are modified.

Scoring context: Subresource Integrity (SRI) on [observed value] resource(s) — prevents CDN tampering

Implementation: `app/api/website-auditor/analyze/route.ts:310`

## 381. Sri Count

### field:sriCount

Field signal · security · number

Numeric value for sri count.

Why it matters: hasSubresourceIntegrity and sriCount verify that external scripts include integrity hashes, preventing supply-chain attacks where CDN-hosted scripts are modified.

Implementation: `app/api/website-auditor/analyze/route.ts:311`

## 382. Tables Without Headers

### field:tablesWithoutHeaders

Field signal · accessibility · number

Numeric value for tables without headers.

Why it matters: tablesWithoutHeaders (missing `<th>`) make data tables unnavigable by screen readers. tablesWithCaption rewards properly described tables. iframesWithTitle vs. iframeCount measures embedded content accessibility.

Scoring context: [observed value] table(s) missing `<th>` header cells — screen readers cannot identify column/row context

Implementation: `app/api/website-auditor/analyze/route.ts:312`

## 383. Tables With Caption

### field:tablesWithCaption

Field signal · accessibility · number

Numeric value for tables with caption.

Why it matters: tablesWithoutHeaders (missing `<th>`) make data tables unnavigable by screen readers. tablesWithCaption rewards properly described tables. iframesWithTitle vs. iframeCount measures embedded content accessibility.

Scoring context: [observed value] table(s) have captions/labels

Implementation: `app/api/website-auditor/analyze/route.ts:313`

## 384. Has Lang On Parts

### field:hasLangOnParts

Field signal · accessibility · boolean

Whether the lang on parts signal was detected.

Why it matters: hasLangAttr and htmlLang are parsed by screen readers to select the correct speech synthesis voice. Without lang, every word may be mispronounced. hasLangOnParts detects partial language declarations for multilingual content.

Scoring context: Language-specific content sections marked with lang attribute (WCAG 3.1.2)

Implementation: `app/api/website-auditor/analyze/route.ts:314`

## 385. Videos Without Captions

### field:videosWithoutCaptions

Field signal · accessibility · number

Numeric value for videos without captions.

Why it matters: videosWithoutCaptions excludes 466 million people worldwide with hearing loss and misses indexable text content for SEO.

Scoring context: [observed value] video(s) missing captions/subtitles

Implementation: app/api/website-auditor/analyze/route.ts:315

## 386. Has Captcha

**field:hasCaptcha**

Field signal · accessibility · boolean

Whether the captcha signal was detected.

Why it matters: hasCaptcha without captchaHasAlternative (audio or logic-based) completely blocks blind users from completing forms.

Scoring context: CAPTCHA detected without accessible alternative CAPTCHA with accessible alternative detected

Implementation: app/api/website-auditor/analyze/route.ts:316

## 387. Captcha Has Alternative

**field:captchaHasAlternative**

Field signal · accessibility · boolean

Whether the captcha has alternative signal was detected.

Why it matters: hasCaptcha without captchaHasAlternative (audio or logic-based) completely blocks blind users from completing forms.

Scoring context: CAPTCHA detected without accessible alternative CAPTCHA with accessible alternative detected

Implementation: app/api/website-auditor/analyze/route.ts:317

## 388. Empty Button Count

**field:emptyButtonCount**

Field signal · accessibility · number

Numeric value for empty button count.

Why it matters: emptyButtonCount counts buttons without text content or aria-label. These are announced as just "button" with no context, making navigation impossible.

Scoring context: [observed value] button(s) with no accessible label

Implementation: app/api/website-auditor/analyze/route.ts:318

## 389. Aria Hidden On Focusable

**field:ariaHiddenOnFocusable**

Field signal · accessibility · number

Numeric value for aria hidden on focusable.

Why it matters: hasAria, ariaCount, and ariaRoles provide accessibility metadata for custom interactive elements. ariaHiddenOnFocusable detects the critical error of hiding focusable elements from screen readers.

Scoring context: [observed value] focusable element(s) inside aria-hidden containers

Implementation: app/api/website-auditor/analyze/route.ts:319

## 390. Duplicate Ids

**field:duplicateIds**

Field signal · accessibility · number

Numeric value for duplicate ids.

Why it matters: duplicateIds break ARIA references (aria-labelledby, aria-describedby) and form label

associations, causing assistive technology failures.

Scoring context: [observed value] duplicate ID(s) — breaks ARIA references and label associations

Implementation: `app/api/website-auditor/analyze/route.ts:320`

## 391. Ai Crawler Blocked

### field:aiCrawlerBlocked

Field signal · aiReadiness · string[]

The observed list of ai crawler blocked.

Why it matters: We check 12+ AI crawlers (GPTBot, ClaudeBot, PerplexityBot, Google-Extended, Amazonbot, Bytespider, etc.) across both meta tags (aiCrawlerBlocked) and robots.txt (robotsTxtAiCrawlerRules). additionalAiCrawlersAllowed and additionalAiCrawlersBlocked provide granular per-crawler governance.

Scoring context: AI crawlers blocked via meta/headers: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:321`

## 392. Has Lms Txt

### field:hasLmsTxt

Field signal · Contextual / supporting evidence · boolean

Whether an optional lms.txt file was found. Absence alone does not prevent Google indexing or AI-feature eligibility.

Implementation: `app/api/website-auditor/analyze/route.ts:322`

## 393. Date Modified

### field:dateModified

Field signal · Contextual / supporting evidence · string

The recorded date modified value.

Why it matters: dateModified, datePublished, hasFreshnessSignals, and contentFreshnessSignal ("fresh"/"aging"/"stale") measure how current your content appears to AI models.

Implementation: `app/api/website-auditor/analyze/route.ts:323`

## 394. Date Published

### field:datePublished

Field signal · Contextual / supporting evidence · string

The recorded date published value.

Why it matters: dateModified, datePublished, hasFreshnessSignals, and contentFreshnessSignal ("fresh"/"aging"/"stale") measure how current your content appears to AI models.

Implementation: `app/api/website-auditor/analyze/route.ts:324`

## 395. Has Freshness Signals

### field:hasFreshnessSignals

Field signal · aiReadiness · boolean

Whether the freshness signals signal was detected.

Why it matters: dateModified, datePublished, hasFreshnessSignals, and contentFreshnessSignal ("fresh"/"aging"/"stale") measure how current your content appears to AI models.

Scoring context: Content freshness signals present (dateModified/datePublished/time elements)

Implementation: `app/api/website-auditor/analyze/route.ts:325`

## 396. Html To Text Ratio

### field:htmlToTextRatio

Field signal · aiReadiness · number

Numeric value for html to text ratio.

Why it matters: htmlToTextRatio below 10% indicates markup-heavy, content-light pages. A 20–70% ratio indicates content-rich pages that AI models can meaningfully process.

Scoring context: Good HTML-to-text ratio ([observed value]%) — AI crawlers can extract content efficiently Very low HTML-to-text ratio ([observed value]%) — mostly markup, little visible content

Implementation: `app/api/website-auditor/analyze/route.ts:326`

## 397. Js Content Ratio

### field:jsContentRatio

Field signal · aiReadiness · number

Numeric value for js content ratio.

Why it matters: jsContentRatio measures how much content requires JavaScript to render. AI crawlers generally do not execute JS, so high ratios mean AI sees an empty page.

Scoring context: High JS content ratio ([observed value]%) — most content may require JavaScript execution JS content ratio [observed value]% — expected for SSR framework apps that serve pre-rendered HTML with hydration scripts

Implementation: `app/api/website-auditor/analyze/route.ts:327`

## 398. Citation Count

### field:citationCount

Field signal · aio · number

Numeric value for citation count.

Why it matters: citationCount (5+ external citations), quoteCount (blockquote elements), and originalDataSignals demonstrate research depth that AI models prefer to cite.

Scoring context: [observed value] external citations — strong reference density for AI model training [observed value] external citation(s)

Implementation: `app/api/website-auditor/analyze/route.ts:328`

## 399. Statistic Count

### field:statisticCount

Field signal · aio, geo · number

Numeric value for statistic count.

Why it matters: statisticCount measures concrete numbers and percentages in content. Data-rich content reads as authoritative analysis rather than opinion, increasing AI citation probability.

Scoring context: [observed value] statistics/data points — excellent for AI knowledge extraction [observed value] data points/statistics — content has original research signals No statistics or data points in substantial content

Implementation: `app/api/website-auditor/analyze/route.ts:329`

## 400. Quote Count

### field:quoteCount

Field signal · aio, geo · number

Numeric value for quote count.

Why it matters: citationCount (5+ external citations), quoteCount (blockquote elements), and originalDataSignals demonstrate research depth that AI models prefer to cite.

Scoring context: [observed value] blockquotes/quotes enhance authority signals [observed value] quotation elements enhance credibility for GEO

Implementation: `app/api/website-auditor/analyze/route.ts:330`

## 401. Has Author Info

**field:hasAuthorInfo**

Field signal · aio · boolean

Whether the author info signal was detected.

Why it matters: We count `eatSignalCount` across: `hasAboutPage`, `hasContactPage`, `hasTestimonialsPage`, `hasAuthorBox`, `hasTrustBadges`, `hasAuthorInfo`, and `hasExpertiseSignals`. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Scoring context: Author attribution present but missing expertise signals

Implementation: `app/api/website-auditor/analyze/route.ts:331`

## 402. Has Expertise Signals

**field:hasExpertiseSignals**

Field signal · aio · boolean

Whether the expertise signals signal was detected.

Why it matters: We count `eatSignalCount` across: `hasAboutPage`, `hasContactPage`, `hasTestimonialsPage`, `hasAuthorBox`, `hasTrustBadges`, `hasAuthorInfo`, and `hasExpertiseSignals`. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Scoring context: Author expertise signals detected (bio, credentials, Person schema)

Implementation: `app/api/website-auditor/analyze/route.ts:332`

## 403. Original Data Signals

**field:originalDataSignals**

Field signal · geo · number

Numeric value for original data signals.

Why it matters: `citationCount` (5+ external citations), `quoteCount` (blockquote elements), and `originalDataSignals` demonstrate research depth that AI models prefer to cite.

Scoring context: [observed value] original data elements (charts, figures, data tables)

Implementation: `app/api/website-auditor/analyze/route.ts:333`

## 404. Content Freshness Signal

**field:contentFreshnessSignal**

Field signal · geo · string

The recorded content freshness signal value.

Why it matters: `dateModified`, `datePublished`, `hasFreshnessSignals`, and `contentFreshnessSignal` ("fresh"/"aging"/"stale") measure how current your content appears to AI models.

Scoring context: Content is fresh (updated within 30 days) — strong recency signal Content updated within 90 days Content appears stale (over 1 year since last update)

Implementation: `app/api/website-auditor/analyze/route.ts:334`

## 405. Unique Insight Patterns

### field:uniqueInsightPatterns

Field signal · geo · number

Numeric value for unique insight patterns.

Why it matters: hasAuthorInfo, hasExpertiseSignals, and hasAuthorBox provide visible accountability. uniqueInsightPatterns detect phrases like "our research found" signaling first-hand expertise.

Scoring context: [observed value] unique insight patterns detected (original research/analysis signals)

Implementation: app/api/website-auditor/analyze/route.ts:335

## 406. Concise Answer Blocks

### field:conciseAnswerBlocks

Field signal · aeo · number

Numeric value for concise answer blocks.

Why it matters: Position-zero snippets capture ~35% of all clicks. conciseAnswerBlocks (40–60 word paragraphs after question headings) are the required format for snippet extraction.

Scoring context: [observed value] concise answer-length paragraphs (10–50 words) — ideal for snippet extraction Few concise answer paragraphs for snippet extraction

Implementation: app/api/website-auditor/analyze/route.ts:336

## 407. Direct Answer Patterns

### field:directAnswerPatterns

Field signal · aeo · number

Numeric value for direct answer patterns.

Why it matters: directAnswerPatterns detect definitional statements ("X is defined as...", "X refers to...") that are the #1 pattern extracted for knowledge panel answers.

Scoring context: [observed value] direct definition/answer patterns detected No direct answer patterns ("X is defined as...", "X refers to...")

Implementation: app/api/website-auditor/analyze/route.ts:337

## 408. Voice Ready Content Length

### field:voiceReadyContentLength

Field signal · aeo · boolean

Whether the voice ready content length signal was detected.

Why it matters: voiceReadyContentLength checks that paragraphs are under 30 words — the optimal length for voice assistant readback without losing listener attention.

Scoring context: Content length and paragraph structure are voice-search optimized

Implementation: app/api/website-auditor/analyze/route.ts:338

## 409. Has Opening Hours

### field:hasOpeningHours

Field signal · localSeo · boolean

Whether the opening hours signal was detected.

Why it matters: hasOpeningHours is a top local ranking factor. Business hours appear prominently in local pack results and Google Knowledge Panels.

Scoring context: Business hours/opening hours detected

Implementation: `app/api/website-auditor/analyze/route.ts:339`

## 410. Review Count From Schema

**field:reviewCountFromSchema**

Field signal · localSeo · number

Numeric value for review count from schema.

Why it matters: reviewCountFromSchema and averageRating display star ratings in SERPs. Reviews are the #2 local ranking factor after NAP consistency.

Scoring context: Review schema with [observed value] reviews ([observed value] avg rating)

Implementation: `app/api/website-auditor/analyze/route.ts:340`

## 411. Average Rating

**field:averageRating**

Field signal · localSeo · number

Numeric value for average rating.

Why it matters: reviewCountFromSchema and averageRating display star ratings in SERPs. Reviews are the #2 local ranking factor after NAP consistency.

Implementation: `app/api/website-auditor/analyze/route.ts:341`

## 412. Has Multiple Locations

**field:hasMultipleLocations**

Field signal · localSeo · boolean

Whether the multiple locations signal was detected.

Why it matters: hasMultipleLocations detects multi-location business patterns that may need separate location pages for optimal local pack coverage.

Scoring context: Multiple location signals detected — consider individual location pages

Implementation: `app/api/website-auditor/analyze/route.ts:342`

## 413. Has Same As

**field:hasSameAs**

Field signal · schemaOrg · boolean

Whether the same as signal was detected.

Why it matters: hasSameAs and sameAsLinks count connections to Wikipedia, Wikidata, LinkedIn, and social profiles that help search engines disambiguate your brand entity in the Knowledge Graph.

Scoring context: Entity linking via sameAs: [observed value] external profiles linked — strengthens Knowledge Graph [observed value] sameAs link(s) for entity matching

Implementation: `app/api/website-auditor/analyze/route.ts:343`

## 414. Same As Links

**field:sameAsLinks**

Field signal · schemaOrg · string[]

The observed list of same as links.

Why it matters: hasSameAs and sameAsLinks count connections to Wikipedia, Wikidata, LinkedIn, and social profiles that help search engines disambiguate your brand entity in the Knowledge Graph.

Scoring context: Entity linking via sameAs: [observed value] external profiles linked — strengthens Knowledge Graph

Implementation: `app/api/website-auditor/analyze/route.ts:344`

## 415. Schema Property Completeness

### field:schemaPropertyCompleteness

Field signal · schemaOrg · Record<string, number>

The observed key/value inventory for schema property completeness.

Why it matters: schemaPropertyCompleteness scores each schema type's property coverage (0–100%). An Organization with only a name is far less useful than one with address, phone, logo, sameAs, and foundingDate.

Implementation: app/api/website-auditor/analyze/route.ts:345

## 416. Has Deprecated Schema Properties

### field:hasDeprecatedSchemaProperties

Field signal · schemaOrg · boolean

Whether the deprecated schema properties signal was detected.

Why it matters: schemaValidityHints detect JSON-LD parse errors, missing required fields, and type mismatches. Invalid schema is silently ignored by search engines. hasDeprecatedSchemaProperties flags obsolete properties.

Scoring context: Deprecated schema properties detected

Implementation: app/api/website-auditor/analyze/route.ts:346

## 417. Rich Results Eligible

### field:richResultsEligible

Field signal · schemaOrg · string[]

The observed list of rich results eligible.

Why it matters: richResultsEligible and additionalRichResults enumerate which rich results your schema qualifies for: FAQ dropdowns, star ratings, how-to steps, product cards, event listings.

Scoring context: Rich results eligible: [observed value] Rich results potential: [observed value]

Implementation: app/api/website-auditor/analyze/route.ts:347

## 418. Nested Schema Depth

### field:nestedSchemaDepth

Field signal · schemaOrg · number

Numeric value for nested schema depth.

Why it matters: nestedSchemaDepth and schemaDepth measure nesting sophistication. Deeper nesting (author within Article, offers within Product, review within LocalBusiness) enables richer Knowledge Graph connections.

Scoring context: Schema nesting depth: [observed value] levels — rich entity relationships

Implementation: app/api/website-auditor/analyze/route.ts:348

## 419. Aria Role Validity

### field:ariaRoleValidity

Field signal · wcag · string[]

The observed list of aria role validity.

Why it matters: ariaRoleValidity audits all ARIA roles for correctness. Invalid roles (role="modal" instead of role="dialog") are ignored by assistive technology, breaking custom widget accessibility.

Scoring context: Invalid ARIA roles: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:349`

## 420. Cognitive Load Score

**field:cognitiveLoadScore**

Field signal · wcag · number

Numeric value for cognitive load score.

Why it matters: `cognitiveLoadScore` evaluates auto-playing carousels, excessive animations, information density, and simultaneous dynamic updates that increase cognitive burden for users with ADHD, autism, and cognitive disabilities.

Scoring context: High cognitive load signals (auto-carousels, animations, notification badges, complex layouts) Moderate cognitive load from interactive patterns Moderate cognitive load — acceptable for interactive modern web apps with rich UI patterns

Implementation: `app/api/website-auditor/analyze/route.ts:350`

## 421. Heading Level Skips

**field:headingLevelSkips**

Field signal · wcag · number

Numeric value for heading level skips.

Why it matters: `headingLevelSkips` (e.g., H2 → H4 skipping H3) breaks screen reader navigation and content hierarchy understanding.

Scoring context: [observed value] heading level skip(s) — confuses screen reader navigation

Implementation: `app/api/website-auditor/analyze/route.ts:351`

## 422. Form Error Identification

**field:formErrorIdentification**

Field signal · wcag · boolean

Whether the form error identification signal was detected.

Why it matters: `formsWithoutLabels` vs. `formsWithLabels` ratio determines form accessibility. `formErrorIdentification` checks that error messages are associated with their respective fields.

Scoring context: Form error identification mechanisms present (WCAG 3.3.1)

Implementation: `app/api/website-auditor/analyze/route.ts:352`

## 423. Timing Adjustable

**field:timingAdjustable**

Field signal · wcag · boolean

Whether the timing adjustable signal was detected.

Why it matters: `timingAdjustable` verifies that session timeouts and auto-advancing content can be extended or paused (WCAG 2.2.1). Users with motor or cognitive disabilities need more time.

Scoring context: Timed elements detected without option to extend

Implementation: `app/api/website-auditor/analyze/route.ts:353`

## 424. Has Service Area Schema

**field:hasServiceAreaSchema**

Field signal · localSeo · boolean

Whether the service area schema signal was detected.

Why it matters: `hasServiceAreaSchema` defines your service radius beyond your physical address, critical for

service-area businesses (plumbers, electricians, delivery).

Scoring context: Service area defined in schema

Implementation: `app/api/website-auditor/analyze/route.ts:354`

## 425. Robots Txt Exists

### field:robotsTxtExists

Field signal · aiReadiness · boolean

Whether the robots.txt exists signal was detected. Robots.txt deep analysis (2026)

Why it matters: robotsTxtExists is foundational. We parse robotsTxtSitemapRefs (sitemap declarations), robotsTxtBlocksAssets (CSS/JS blocking hurts rendering), and robotsTxtBlocksAll (Disallow: / blocks everything).

Scoring context: robots.txt file found AI crawlers blocked in robots.txt: [observed value] AI crawlers explicitly allowed in robots.txt: [observed value]

Implementation: `app/api/website-auditor/analyze/route.ts:356`

## 426. Robots Txt Ai Crawler Rules

### field:robotsTxtAiCrawlerRules

Field signal · aiReadiness · Record<string, string>

The observed key/value inventory for robots.txt ai crawler rules.

Why it matters: We check 12+ AI crawlers (GPTBot, ClaudeBot, PerplexityBot, Google-Extended, Amazonbot, Bytespider, etc.) across both meta tags (aiCrawlerBlocked) and robots.txt (robotsTxtAiCrawlerRules). additionalAiCrawlersAllowed and additionalAiCrawlersBlocked provide granular per-crawler governance.

Implementation: `app/api/website-auditor/analyze/route.ts:357`

## 427. Robots Txt Sitemap Refs

### field:robotsTxtSitemapRefs

Field signal · aiReadiness · string[]

The observed list of robots.txt sitemap refs.

Why it matters: robotsTxtExists is foundational. We parse robotsTxtSitemapRefs (sitemap declarations), robotsTxtBlocksAssets (CSS/JS blocking hurts rendering), and robotsTxtBlocksAll (Disallow: / blocks everything).

Scoring context: robots.txt references [observed value] sitemap(s) — aids AI crawler discoverability

Implementation: `app/api/website-auditor/analyze/route.ts:358`

## 428. Robots Txt Blocks Assets

### field:robotsTxtBlocksAssets

Field signal · aiReadiness · boolean

Whether the robots.txt blocks assets signal was detected.

Why it matters: robotsTxtExists is foundational. We parse robotsTxtSitemapRefs (sitemap declarations), robotsTxtBlocksAssets (CSS/JS blocking hurts rendering), and robotsTxtBlocksAll (Disallow: / blocks everything).

Scoring context: robots.txt blocks CSS/JS/image assets — search engines and AI cannot render your page

Implementation: `app/api/website-auditor/analyze/route.ts:359`

## 429. Robots Txt Blocks All

### field:robotsTxtBlocksAll

Field signal · aiReadiness · boolean

Whether the robots txt blocks all signal was detected.

Why it matters: robotsTxtExists is foundational. We parse robotsTxtSitemapRefs (sitemap declarations), robotsTxtBlocksAssets (CSS/JS blocking hurts rendering), and robotsTxtBlocksAll (Disallow: / blocks everything).

Scoring context: robots.txt blocks all crawlers with "Disallow: /" for User-agent: \*

Implementation: app/api/website-auditor/analyze/route.ts:360

## 430. Dofollow External Links

### field:dofollowExternalLinks

Field signal · seo · number

Numeric value for dofollow external links. Dofollow link optimization

Why it matters: We count externalLinks, externalLinksWithoutRel (missing noopener/noreferrer), and analyze the dofollowExternalLinks vs. nofollowExternalLinks ratio (externalLinkDofollowRatio). Excessive dofollow outbound links dilute PageRank.

Scoring context: Optimal dofollow outbound links: [observed value] (ideal 2-5 per page for link authority signals) All [observed value] external links are nofollow — no outbound link authority signals Only 1 dofollow external link — consider adding a few more to authoritative sources

Implementation: app/api/website-auditor/analyze/route.ts:362

## 431. Nofollow External Links

### field:nofollowExternalLinks

Field signal · Contextual / supporting evidence · number

Numeric value for nofollow external links.

Why it matters: We count externalLinks, externalLinksWithoutRel (missing noopener/noreferrer), and analyze the dofollowExternalLinks vs. nofollowExternalLinks ratio (externalLinkDofollowRatio). Excessive dofollow outbound links dilute PageRank.

Implementation: app/api/website-auditor/analyze/route.ts:363

## 432. External Link Dofollow Ratio

### field:externalLinkDofollowRatio

Field signal · Contextual / supporting evidence · number

Numeric value for external link dofollow ratio.

Why it matters: We count externalLinks, externalLinksWithoutRel (missing noopener/noreferrer), and analyze the dofollowExternalLinks vs. nofollowExternalLinks ratio (externalLinkDofollowRatio). Excessive dofollow outbound links dilute PageRank.

Implementation: app/api/website-auditor/analyze/route.ts:364

## 433. H1 Contains Keyword

### field:h1ContainsKeyword

Field signal · seo · boolean

Whether the h1 contains keyword signal was detected. On-page keyword signals

Why it matters: Exactly one H1 per page is best practice. Multiple H1s dilute topical focus; a missing H1 removes the primary heading signal. We also check whether the H1 contains your primary keyword

(h1ContainsKeyword).

Scoring context: Primary keyword "[observed value]" found in H1 — strong on-page signal

Implementation: `app/api/website-auditor/analyze/route.ts:366`

## 434. First Para Contains Keyword

**field:firstParaContainsKeyword**

Field signal · seo · boolean

Whether the first para contains keyword signal was detected.

Why it matters: We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

Scoring context: Primary keyword appears in first paragraph — excellent content signal

Implementation: `app/api/website-auditor/analyze/route.ts:367`

## 435. Keyword In Url

**field:keywordInUrl**

Field signal · seo · boolean

Whether the keyword in url signal was detected.

Why it matters: URLs over 75 characters are harder to share and may be truncated in SERPs. We measure urlLength and check keywordInUrl for topical relevance.

Scoring context: Primary keyword present in URL — good URL optimization Primary keyword not in URL — acceptable for homepage/root URLs

Implementation: `app/api/website-auditor/analyze/route.ts:368`

## 436. Primary Keyword

**field:primaryKeyword**

Field signal · seo · string

The recorded primary keyword value.

Why it matters: We identify the primaryKeyword, measure keywordDensityPercent, keywordOccurrences, and detect isKeywordStuffed (>3% density). We also verify h1ContainsKeyword and firstParaContainsKeyword for topical reinforcement.

Scoring context: Primary keyword "[observed value]" found in H1 — strong on-page signal Primary keyword "[observed value]" not found in H1 Primary keyword appears in first paragraph — excellent content signal

Implementation: `app/api/website-auditor/analyze/route.ts:369`

## 437. Eat Signal Count

**field:eatSignalCount**

Field signal · seo · number

Numeric value for eat signal count. E-E-A-T signals

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Scoring context: Strong E-E-A-T signals detected ([observed value] indicators) Moderate E-E-A-T signals ([observed value] indicators)

Implementation: `app/api/website-auditor/analyze/route.ts:371`

## 438. Has About Page

### field:hasAboutPage

Field signal · seo · boolean

Whether the about page signal was detected.

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Implementation: [app/api/website-auditor/analyze/route.ts:372](#)

## 439. Has Contact Page

### field:hasContactPage

Field signal · seo · boolean

Whether the contact page signal was detected.

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Implementation: [app/api/website-auditor/analyze/route.ts:373](#)

## 440. Has Testimonials Page

### field:hasTestimonialsPage

Field signal · Contextual / supporting evidence · boolean

Whether the testimonials page signal was detected.

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Implementation: [app/api/website-auditor/analyze/route.ts:374](#)

## 441. Has Author Box

### field:hasAuthorBox

Field signal · Contextual / supporting evidence · boolean

Whether the author box signal was detected.

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Implementation: [app/api/website-auditor/analyze/route.ts:375](#)

## 442. Has Trust Badges

### field:hasTrustBadges

Field signal · Contextual / supporting evidence · boolean

Whether the trust badges signal was detected.

Why it matters: We count eatSignalCount across: hasAboutPage, hasContactPage, hasTestimonialsPage, hasAuthorBox, hasTrustBadges, hasAuthorInfo, and hasExpertiseSignals. E-E-A-T (Experience, Expertise, Authoritativeness, Trustworthiness) is Google's quality rater framework.

Implementation: [app/api/website-auditor/analyze/route.ts:376](#)

## 443. Flesch Reading Ease

### field:fleschReadingEase

Field signal · seo · number

Numeric value for flesch reading ease. Readability

Why it matters: fleschReadingEase measures text complexity (60–70 is ideal for web). passiveVoiceRatio above 20% reduces engagement. contentReadabilityHints provide specific improvement suggestions.

Scoring context: Good readability score: [observed value] Flesch Reading Ease (accessible to general audience) Moderate readability ([observed value] Flesch) — content may be difficult for some readers Low readability score ([observed value] Flesch) — content is hard to read

Implementation: app/api/website-auditor/analyze/route.ts:378

## 444. Missing High Impact Schemas

### field:missingHighImpactSchemas

Field signal · schemaOrg · string[]

The observed list of missing high impact schemas. Schema.org tiered analysis

Why it matters: missingHighImpactSchemas identifies absent Tier 1 types: Organization, WebSite, Article, Product, FAQPage, BreadcrumbList, LocalBusiness. schemaTier maps each detected type to its impact tier.

Scoring context: Missing high-impact schema types: [observed value] [observed value] high-impact schema types missing

Implementation: app/api/website-auditor/analyze/route.ts:380

## 445. Schema Tier

### field:schemaTier

Field signal · Contextual / supporting evidence · Record<string, string>

The observed key/value inventory for schema tier.

Why it matters: missingHighImpactSchemas identifies absent Tier 1 types: Organization, WebSite, Article, Product, FAQPage, BreadcrumbList, LocalBusiness. schemaTier maps each detected type to its impact tier.

Implementation: app/api/website-auditor/analyze/route.ts:381

## 446. Json Ld Only

### field:jsonLdOnly

Field signal · schemaOrg · boolean

Whether the json ld only signal was detected.

Why it matters: jsonLdOnly is preferred by Google. hasMicrodataOrRdfa is legacy — JSON-LD is easier to maintain, doesn't interfere with HTML structure, and supports server-side rendering.

Scoring context: All structured data uses JSON-LD format — Google's recommended format

Implementation: app/api/website-auditor/analyze/route.ts:382

## 447. Has Microdata Or Rdfa

### field:hasMicrodataOrRdfa

Field signal · schemaOrg · boolean

Whether the microdata or rdfa signal was detected.

Why it matters: jsonLdOnly is preferred by Google. hasMicrodataOrRdfa is legacy — JSON-LD is easier to maintain, doesn't interfere with HTML structure, and supports server-side rendering.

Scoring context: Some microdata attributes detected alongside JSON-LD — common for address/local business markup in modern frameworks Microdata or RDFa detected alongside JSON-LD

Implementation: [app/api/website-auditor/analyze/route.ts:383](#)

## 448. Total Css Bundle Kb

**field:totalCssBundleKb**

Field signal · performance · number

Numeric value for total css bundle kb. CSS/JS validation

Why it matters: totalCssBundleKb measures all CSS payload. renderBlockingCssCount identifies files blocking first paint. unusedCssHint detects dead CSS. criticalCssDetected rewards above-fold CSS inlining.

Scoring context: Estimated CSS bundle ~[observed value]KB — above optimal

Implementation: [app/api/website-auditor/analyze/route.ts:385](#)

## 449. Total Js Bundle Kb

**field:totalJsBundleKb**

Field signal · performance · number

Numeric value for total js bundle kb.

Why it matters: inpEstimateMs proxies input responsiveness from JavaScript bundle size (totalJsBundleKb), long task script hints (longTaskScriptHints), third-party script count, and main-thread blocking indicators. Google threshold:  $\leq 200\text{ms}$  good.

Scoring context: Estimated JS bundle ~[observed value]KB — heavy payload Large JS bundle (~[observed value]KB) even for framework app

Implementation: [app/api/website-auditor/analyze/route.ts:386](#)

## 450. Render Blocking Css Count

**field:renderBlockingCssCount**

Field signal · performance · number

Numeric value for render blocking css count.

Why it matters: totalCssBundleKb measures all CSS payload. renderBlockingCssCount identifies files blocking first paint. unusedCssHint detects dead CSS. criticalCssDetected rewards above-fold CSS inlining.

Scoring context: [observed value] render-blocking CSS files — delays first paint [observed value] render-blocking CSS file(s)

Implementation: [app/api/website-auditor/analyze/route.ts:387](#)

## 451. Unused Css Hint

**field:unusedCssHint**

Field signal · performance · boolean

Whether the unused css hint signal was detected.

Why it matters: totalCssBundleKb measures all CSS payload. renderBlockingCssCount identifies files blocking first paint. unusedCssHint detects dead CSS. criticalCssDetected rewards above-fold CSS inlining.

Scoring context: Potentially unused CSS detected (large stylesheet count relative to page complexity)

Implementation: [app/api/website-auditor/analyze/route.ts:388](#)

## 452. Long Task Script Hints

**field:longTaskScriptHints**

Field signal · performance · string[]

The observed list of long task script hints.

Why it matters: inpEstimateMs proxies input responsiveness from JavaScript bundle size (totalJsBundleKb),

long task script hints (longTaskScriptHints), third-party script count, and main-thread blocking indicators.  
Google threshold:  $\leq 200\text{ms}$  good.

Scoring context: Potential long-task scripts: [observed value] [observed value] framework hydration script(s) — standard for SSR apps

Implementation: `app/api/website-auditor/analyze/route.ts:389`

## 453. Url

### field:url

Field signal · Contextual / supporting evidence · string

The recorded url value.

Why it matters: We audit all OG tags: og:title, og:description, og:image, og:type, og:url, og:locale. Each missing tag (ogMissing) reduces social sharing effectiveness. We also check ogHasLocale, ogImageIsWebp, ogImageDimensionHint, and whether og duplicates the title/description (duplicateTitleAndOg, duplicateDescAndOg).

Implementation: `app/api/website-auditor/analyze/route.ts:82`

## 454. Status Code

### field:statusCode

Field signal · Contextual / supporting evidence · number

HTTP status returned by the audited page after fetching; a 200 response alone does not prove useful content or indexability.

Implementation: `app/api/website-auditor/analyze/route.ts:83`

## 455. Response Time Ms

### field:responseTimeMs

Field signal · performance · number

Numeric value for response time ms.

Scoring context: Excellent server response time: [observed value]ms Acceptable response time: [observed value]ms Slow server response: [observed value]ms

Implementation: `app/api/website-auditor/analyze/route.ts:84`

## 456. Html

### field:html

Field signal · performance · string

The recorded html value.

Why it matters: Flags raw-HTML binding sinks (React dangerouslySetInnerHTML, Vue v-html), production GraphQL introspection (light probe), and Markdown rendering without a sanitizer. Recommendation references context-aware output encoding and DOMPurify-style sanitization.

Implementation: `app/api/website-auditor/analyze/route.ts:85`

## 457. Redirect Chain

### field:redirectChain

Field signal · Contextual / supporting evidence · string[]

Recorded URL sequence followed while fetching the page, used to inspect redirect hops and destination consistency.

Implementation: `app/api/website-auditor/analyze/route.ts:88`

## 458. Robots Txt

### field:robotsTxt

Field signal · Contextual / supporting evidence · string · optional input

Fetches robots.txt source used to examine crawler rules. A crawl prohibition is different from a noindex instruction.

Implementation: app/api/website-auditor/analyze/route.ts:89

## 459. Llms Txt

### field:llmsTxt

Field signal · Contextual / supporting evidence · string · optional input

Fetches optional llms.txt source supplied to the AI-readiness heuristics.

Implementation: app/api/website-auditor/analyze/route.ts:90

## 460. Llms Full Txt

### field:llmsFullTxt

Field signal · Contextual / supporting evidence · string · optional input

Fetches optional llms-full.txt source, when available, for extended content-discovery heuristics.

Implementation: app/api/website-auditor/analyze/route.ts:91

## 461. Http To Https Redirect

### field:httpToHttpsRedirect

Field signal · security · boolean

Whether the http to https redirect signal was detected.

Scoring context: HTTP → HTTPS [observed value] redirect detected — properly forces secure connections No HTTP → HTTPS redirect configured

Implementation: app/api/website-auditor/analyze/route.ts:92

## 462. Redirect Status Code

### field:redirectStatusCode

Field signal · security · number · optional input

Status of the HTTP-to-HTTPS redirect probe, when a response was available.

Implementation: app/api/website-auditor/analyze/route.ts:93

## 463. Screenshot Desktop

### field:screenshotDesktop

Field signal · Contextual / supporting evidence · string · optional input

Optional desktop screenshot reference carried by the audit. It is contextual output, not a separate score or accessibility test.

Implementation: app/api/website-auditor/analyze/route.ts:94

## 464. Screenshot Mobile

### field:screenshotMobile

Field signal · Contextual / supporting evidence · string · optional input

Optional mobile screenshot reference carried by the audit. It is contextual output, not real-device verification.

Implementation: app/api/website-auditor/analyze/route.ts:95

## 465. Security Txt

### field:securityTxt

Field signal · Contextual / supporting evidence · string · optional input

Fetches security.txt disclosure-policy content used to look for a vulnerability-reporting contact.

Implementation: app/api/website-auditor/analyze/route.ts:97

## 466. Error Probe Status

### field:errorProbeStatus

Field signal · Contextual / supporting evidence · number · optional input

HTTP status from the error-response probe, interpreted together with its response body.

Implementation: app/api/website-auditor/analyze/route.ts:99

## 467. Error Probe Body

### field:errorProbeBody

Field signal · Contextual / supporting evidence · string · optional input

Returned error-probe content inspected for exposed stack traces or sensitive diagnostic details.

Implementation: app/api/website-auditor/analyze/route.ts:100

## 468. Exposed Paths

### field:exposedPaths

Field signal · Contextual / supporting evidence · Record<string, boolean> · optional input

Map of probed sensitive paths and whether their responses matched exposure heuristics. Manual confirmation remains necessary.

Implementation: app/api/website-auditor/analyze/route.ts:102

## 469. Allow Methods

### field:allowMethods

Field signal · Contextual / supporting evidence · string · optional input

HTTP Allow response value used to inspect advertised methods; advertised support does not prove unauthorized write access.

Implementation: app/api/website-auditor/analyze/route.ts:103

## 470. Www Authenticate

### field:wwwAuthenticate

Field signal · Contextual / supporting evidence · string · optional input

Received authentication-challenge header used to assess HTTP authentication and transport context.

Implementation: app/api/website-auditor/analyze/route.ts:104

## 471. V5 Probes

### field:v5Probes

Field signal · Contextual / supporting evidence · V5ProbeData · optional input

Container of optional active-probe results for the extension checks: privileged/debug paths, source maps, GraphQL introspection, dependency files, SBOM and unknown-path handling. Nested probe values are not counted again as top-level fields.

Implementation: app/api/website-auditor/analyze/route.ts:106

## 472. Admin access

### v5:admin-access

Extension check · security

A01 Broken Access Control: privileged path(s) reachable without authentication ([observed value]). Enforce server-side, deny-by-default authorization on every admin route.

Conditional deductions: issue: 14 points

Implementation: lib/auditor-v5-owasp.ts:178

## 473. Idor links

### v5:idor-links

Extension check · security

A01 Broken Access Control: [observed value] links expose sequential/direct object identifiers (IDOR surface). Use unguessable references (UUID/ULID) and verify object-level ownership on every request (ASVS 4.2).

Conditional deductions: rec: 4 points

Implementation: lib/auditor-v5-owasp.ts:188

## 474. Ssrp reference

### v5:ssrf-reference

Extension check · security

A01 (SSRF): cloud instance-metadata endpoint referenced in page/script. Server-side fetches must allowlist destinations and block link-local/metadata ranges to prevent SSRF credential theft.

Conditional deductions: issue: 8 points

Implementation: lib/auditor-v5-owasp.ts:192

## 475. Debug endpoint

### v5:debug-endpoint

Extension check · security

A02 Security Misconfiguration: debug/diagnostic endpoint publicly reachable ([observed value]). Disable phpinfo/actuator/profiler and framework debug mode in production.

Conditional deductions: issue: 12 points

Implementation: lib/auditor-v5-owasp.ts:197

## 476. Source map

### v5:source-map

Extension check · security

A02 Security Misconfiguration: a JavaScript source map (\*.js.map) is publicly served, revealing original source and structure. Strip or gate source maps in production builds.

Conditional deductions: issue: 5 points

Implementation: lib/auditor-v5-owasp.ts:200

## 477. Dependency manifest

### v5:dependency-manifest

Extension check · security

A03 Software Supply Chain: dependency manifest/lockfile publicly readable ([observed value]), disclosing exact dependency versions attackers can map to known CVEs. Block these paths at the edge.

Conditional deductions: issue: 6 points

Implementation: lib/auditor-v5-owasp.ts:205

## 478. Sri coverage

### v5:sri-coverage

Extension check · security

A03 Software Supply Chain: only [observed value]% of [observed value] cross-origin scripts use Subresource Integrity. Pin every third-party script with integrity+crossorigin and adopt SLSA provenance / a published SBOM for build integrity. Alternative outcome: Subresource Integrity covers [observed value]% of cross-origin scripts — strong supply-chain hardening.

Conditional deductions: rec: 4 points; good: 0 points

Implementation: lib/auditor-v5-owasp.ts:222

## 479. Sbom

### v5:sbom

Extension check · security

A03: a published SBOM (CycloneDX/SPDX) was found — excellent supply-chain transparency.

Conditional deductions: good: 0 points

Implementation: lib/auditor-v5-owasp.ts:228

## 480. Weak hash

### v5:weak-hash

Extension check · security

A04 Cryptographic Failures: weak hash (MD5/SHA-1) referenced in client script. Never use broken hashes for integrity/identity; use SHA-256+ server-side and never hash secrets in the browser.

Conditional deductions: issue: 4 points

Implementation: lib/auditor-v5-owasp.ts:233

## 481. Cleartext pii

### v5:cleartext-pii

Extension check · security

A04 Cryptographic Failures: [observed value] sensitive field(s) (email/phone/PII) submit over cleartext HTTP. Serve and submit every form over TLS and set HSTS.

Conditional deductions: issue: 6 points

Implementation: lib/auditor-v5-owasp.ts:248

## 482. Raw html binding

### v5:raw-html-binding

Extension check · security

A05 Injection: [observed value] raw-HTML binding sink(s) detected (dangerouslySetInnerHTML / v-html / [innerHTML]). Sanitize with a trusted library (DOMPurify) and adopt Trusted Types to close DOM-XSS vectors.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:266

## 483. GraphQL introspection

### v5:graphql-introspection

Extension check · security

A05 Injection: GraphQL introspection is enabled in production, exposing the full schema and easing injection/abuse mapping. Disable introspection and enforce query depth/complexity limits.

Conditional deductions: issue: 6 points

Implementation: lib/auditor-v5-owasp.ts:269

## 484. Markdown sanitizer

### v5:markdown-sanitizer

Extension check · security

A05 Injection: a Markdown renderer appears to run without an accompanying sanitizer. Always post-sanitize rendered HTML (DOMPurify) to prevent stored/DOM XSS.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:272

## 485. Bot challenge

### v5:bot-challenge

Extension check · security

A06 Insecure Design: authentication/high-value form present with no visible bot/abuse challenge (CAPTCHA/Turnstile). Add anti-automation, rate limiting and account-lockout as a threat-modeled control.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:283

## 486. Upload constraints

### v5:upload-constraints

Extension check · security

A06 Insecure Design: [observed value] file-upload input(s) declare no accept/type constraint. Enforce server-side type, size and content validation and store uploads off the web root.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:290

## 487. Modern auth

### v5:modern-auth

Extension check · security

A07 Authentication Failures: no phishing-resistant factor detected (WebAuthn/passkeys/TOTP MFA). Offer passkeys or TOTP and enforce ASVS L2 credential and session controls.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:297

## 488. Username autocomplete

### v5:username-autocomplete

Extension check · security

A07 Authentication Failures: username/identifier field lacks an explicit autocomplete token. Set autocomplete="username" (and "current-password") so password managers and passkeys work reliably.

Conditional deductions: rec: 1 points

Implementation: lib/auditor-v5-owasp.ts:306

## 489. Cookie prefix

### v5:cookie-prefix

Extension check · security

A07 Authentication Failures: cookies do not use the \_\_Host-/\_Secure- prefix. Prefix session cookies with \_\_Host- (with Secure, Path=/, no Domain) and add the Partitioned (CHIPS) attribute for cross-site isolation.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:310

## 490. Remote script

### v5:remote-script

Extension check · security

A08 Integrity Failures: dynamic remote script injection detected. Load third-party code with static tags carrying SRI, or gate it behind a strict CSP with Trusted Types to prevent tampered-update execution.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:316

## 491. Serialized state

### v5:serialized-state

Extension check · security

A08 Integrity Failures: opaque serialized blob(s) passed in URL parameters. Sign/verify (or avoid) client-supplied serialized state and never deserialize untrusted data server-side.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:324

## 492. Monitoring

### v5:monitoring

Extension check · security

A09: a client-side error/monitoring integration (e.g. Sentry/Datadog) is present — supports security logging & alerting. Alternative outcome: A09 Logging & Alerting Failures: no client-side error/security monitoring detected. Add centralized logging with tamper-evident storage and real-time alerting on auth failures and anomalies.

Conditional deductions: good: 0 points; rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:330

## 493. Soft 404

### v5:soft-404

Extension check · security

A10 Exceptional Conditions: an unknown path returned HTTP 200 (soft-404 / fail-open). Return correct 4xx/5xx status codes and fail closed so errors cannot bypass access control or poison caches/indexes.

Conditional deductions: issue: 4 points

Implementation: lib/auditor-v5-owasp.ts:337

## 494. Breadcrumb markup

### v5:breadcrumb-markup

Extension check · seo

SEO: breadcrumb navigation is present in the UI but no BreadcrumbList structured data was found. Add BreadcrumbList JSON-LD so Google can render breadcrumb rich results.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:348

## 495. Author linkage

### v5:author-linkage

Extension check · seo

SEO (E-E-A-T): no author linkage or sameAs identity markup detected. Add a verifiable author byline with rel="author" and sameAs links to strengthen Experience/Expertise signals.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:354

## 496. Indexnow

### v5:indexnow

Extension check · seo

SEO: no IndexNow signal detected. Adopt the IndexNow protocol (Bing/Yandex/Seznam) to push instant crawl notifications when content changes.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:359

## 497. Speculation rules

### v5:speculation-rules

Extension check · performance

Performance: no Speculation Rules API detected. Add <script type="speculationrules"> to prerender/prefetch likely next navigations for near-instant page transitions.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:369

## 498. Image priority

### v5:image-priority

Extension check · performance

Performance (LCP): no image declares fetchpriority="high". Mark the LCP hero image with fetchpriority="high" so the browser prioritizes it during initial load.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:374

## 499. Async decoding

### v5:async-decoding

Extension check · performance

Performance: only [observed value]/[observed value] images set decoding="async". Add decoding="async" to non-critical images to keep image decode off the main thread.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:381

## 500. Modulepreload

### v5:modulepreload

Extension check · performance

Performance: ES modules are used without modulepreload. Add <link rel="modulepreload"> for critical modules to remove waterfall latency on module graphs.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:385

## 501. Apple web app

### v5:apple-web-app

Extension check · mobile

Mobile/PWA: incomplete Apple web-app meta tags (missing [observed value]). Add apple-mobile-web-app-capable, -status-bar-style and -title for a polished iOS home-screen install.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:398

## 502. Safe area

### v5:safe-area

Extension check · mobile

Mobile/PWA: viewport meta lacks viewport-fit=cover. Add it (with safe-area-inset padding) so content renders edge-to-edge on notched/dynamic-island devices.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:402

## 503. Text spacing

### v5:text-spacing

Extension check · accessibility

Accessibility (WCAG 2.2 1.4.12): [observed value] element(s) lock text spacing with !important, blocking user spacing overrides. Avoid !important on line-height/letter-spacing/word-spacing.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:418

## 504. Forced colors

### v5:forced-colors

Extension check · accessibility

Accessibility: no forced-colors / prefers-contrast media handling detected. Test and support Windows High Contrast / forced-colors mode so essential UI remains visible.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:422

## 505. Consistent help

### v5:consistent-help

Extension check · accessibility

Accessibility (WCAG 2.2 3.2.6): no consistent help mechanism (contact/help/support link) detected. Provide help access in a consistent location across pages.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:427

## 506. Descriptive alt

### v5:descriptive-alt

Extension check · aiReadiness

AI Readiness (multimodal): only [observed value]% of images have descriptive alt text ( $\geq 15$  chars). Rich, standalone alt text lets multimodal models understand and cite your imagery.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:444

## 507. Entity consistency

### v5:entity-consistency

Extension check · aio

AIO: primary entity name is inconsistent across title, H1 and schema "name". Align the brand/entity term across all three so AI systems resolve a single, unambiguous entity. Alternative outcome: AIO: no schema "name" property to anchor your primary entity. Declare a consistent Organization/Person/Product name in JSON-LD matching your title and H1.

Conditional deductions: rec: 3 points; rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:465

## 508. Question headings

### v5:question-headings

Extension check · geo

GEO: only [observed value]/[observed value] sub-headings are question-phrased. Convert key sections into natural-language questions so generative engines can extract and cite direct answers.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:480

## 509. Structured comparisons

### v5:structured-comparisons

Extension check · geo

GEO: no comparison tables or step-by-step structured blocks found. Add comparison tables and ordered how-to steps — formats generative engines favor for structured, citable answers.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:486

## 510. Concise answer

### v5:concise-answer

Extension check · aeo

AEO: no 40–60 word concise answer directly follows a question heading. Lead each question section with a self-contained ~40–60 word answer to win featured snippets and voice answers.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:503

## 511. Faq schema

### v5:faq-schema

Extension check · schemaOrg

Schema.org (maximize): [observed value] question/answer blocks detected but no FAQPage schema. Add FAQPage with Question/acceptedAnswer for each pair to unlock FAQ rich results and AI citations.

Conditional deductions: rec: 4 points

Implementation: lib/auditor-v5-owasp.ts:523

## 512. Howto schema

### v5:howto-schema

Extension check · schemaOrg

Schema.org (maximize): step-by-step content detected but no HowTo schema. Add HowTo with HowToStep items (name, text, image) for step-based rich results.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:528

## 513. Article schema

### v5:article-schema

Extension check · schemaOrg

Schema.org (maximize): long-form article content detected but no Article/BlogPosting schema. Add Article with headline, author, datePublished, dateModified, image and publisher for maximal eligibility.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:535

## 514. Article properties

### v5:article-properties

Extension check · schemaOrg

Schema.org (maximize): Article schema present but missing high-value properties ([observed value]). Populate them to maximize rich-result eligibility.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:540

## 515. Product schema

### v5:product-schema

Extension check · schemaOrg

Schema.org (maximize): commerce signals detected but no Product schema. Add Product with offers (price, priceCurrency, availability), aggregateRating and review for product rich results.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:547

## 516. Product properties

### v5:product-properties

Extension check · schemaOrg

Schema.org (maximize): Product schema present but missing [observed value]. Add these to qualify for price/rating rich results.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:551

## 517. Local schema

### v5:local-schema

Extension check · schemaOrg

Schema.org (maximize): local-business signals (address, hours, phone) detected but no LocalBusiness schema. Add LocalBusiness with address, geo, openingHoursSpecification and telephone for local rich results.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:558

## 518. Connected graph

### v5:connected-graph

Extension check · schemaOrg

Schema.org: a connected @graph with [observed value] entity types is present — strong structured-data maturity.

Conditional deductions: good: 0 points

Implementation: lib/auditor-v5-owasp.ts:563

## 519. Local keyword

### v5:local-keyword

Extension check · localSeo

Local SEO: local business signals present but no explicit city/region in the title, H1 or opening paragraph. Add "City, State" to your title/H1 and intro to reinforce local relevance.

Conditional deductions: rec: 3 points

Implementation: lib/auditor-v5-owasp.ts:581

## 520. Phone schema

### v5:phone-schema

Extension check · localSeo

Local SEO (NAP): the visible phone number does not match schema telephone. Keep Name/Address/Phone identical across visible content, schema and directories for local ranking consistency. Alternative outcome: Local SEO (NAP): a phone number is shown but not declared in structured data. Add telephone (and address) to LocalBusiness schema so NAP is machine-verifiable.

Conditional deductions: rec: 3 points; rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:595

## 521. Title tooltips

### v5:title-tooltips

Extension check · wcag

WCAG 2.2 (1.4.13 Content on Hover/Focus): [observed value] interactive elements rely on native title tooltips, which are not dismissable, hoverable or persistent. Replace with accessible tooltip components.

Conditional deductions: rec: 2 points

Implementation: lib/auditor-v5-owasp.ts:611

## 522. Canonical absolute

### **coverage:canonical-absolute**

Coverage check · seo

Canonical must be an absolute HTTP(S) URL.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:14

## 523. Canonical fragment

### **coverage:canonical-fragment**

Coverage check · seo

Canonical must not identify a fragment.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:15

## 524. Canonical credentials

### **coverage:canonical-credentials**

Coverage check · security

Canonical must not expose URL credentials.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:16

## 525. Canonical head

### **coverage:canonical-head**

Coverage check · seo

Canonical annotations belong in the document head.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:17

## 526. Pagination canonical

### **coverage:pagination-canonical**

Coverage check · seo

Distinct paginated content needs its own canonical; review whether this URL is a duplicate filter.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:19

## 527. Pagination noindex

### **coverage:pagination-noindex**

Coverage check · seo

Review noindex on genuine pagination; preserve exclusions for filtered duplicates.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:20

## 528. Header meta index conflict

### **coverage:header-meta-index-conflict**

Coverage check · seo

Conflicting index directives: the more restrictive directive applies.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:21

## 529. Snippet eligibility

### **coverage:snippet-eligibility**

Coverage check · aiReadiness

Noindex/nosnippet/max-snippet:0 limits eligibility for Google AI supporting links; intentional restrictions are not errors.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:22

## 530. Main snippet exclusion

### **coverage:main-snippet-exclusion**

Coverage check · aio

Review whether all main content is excluded from search snippets.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:24

## 531. Citation placeholder links

### **coverage:citation-placeholder-links**

Coverage check · geo

Content links must not contain unexpanded template placeholders.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:25

## 532. Answer snippet exclusion

### **coverage:answer-snippet-exclusion**

Coverage check · aeo

Review snippet exclusions on marked-up answers; do not add answer markup to unrelated pages.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:27

## 533. High priority lazy image

### **coverage:high-priority-lazy-image**

Coverage check · performance

High-priority images should not be lazy-loaded; actual LCP requires a browser measurement.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:28

## 534. Responsive sizes width descriptors

### **coverage:responsive-sizes-width-descriptors**

Coverage check · mobile

Width-descriptor srcsets without sizes default to viewport width; verify download sizing.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:29

## 535. Aria labelledby targets

### **coverage:aria-labelledby-targets**

Coverage check · accessibility

Every aria-labelledby reference must resolve to an existing element.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:31

## 536. Aria describedby targets

### **coverage:aria-describedby-targets**

Coverage check · wcag

Every aria-describedby reference must resolve to an existing element.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:32

## 537. Breadcrumb sequence

### **coverage:breadcrumb-sequence**

Coverage check · schemaOrg

Breadcrumb positions must form a consecutive sequence beginning at 1.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:36

## 538. Geo coordinate ranges

### **coverage:geo-coordinate-ranges**

Coverage check · localSeo

Published geographic coordinates must be numeric and within valid ranges.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:38

## 539. Publication date order

### **coverage:publication-date-order**

Coverage check · geo

Article dates must parse and modification must not precede publication.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:40

## 540. Url template links

### **coverage:url-template-links**

Coverage check · seo

Search templates belong in metadata, not literal crawlable links.

Effect: fail –2 points; pass, review and not applicable 0 points.

Implementation: lib/auditor-coverage.ts:41

## Part III — Current conditional deduction reference

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These rules are extracted directly from the base scoring functions. Conditions use the implementation's field names: p is parsed page evidence; s is fetched site evidence. NOT indicates an else branch. Multiple applicable rules may contribute, subject to clamping and the substance gate. This rule count is not added to the field/check headline: doing so would double count the same evidence.

# SEO — base rules

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## Deduct 20 points

Missing title tag

When: NOT (p.titleLength >= 50 && p.titleLength <= 60) AND (p.titleLength === 0)

lib/auditor-engine.ts:509

## Deduct 5 points

Title tag is short ([observed value] chars)

When: NOT (p.titleLength >= 50 && p.titleLength <= 60) AND NOT (p.titleLength === 0) AND (p.titleLength < 50 && p.titleLength >= 30)

lib/auditor-engine.ts:511

## Deduct 10 points

Title tag is very short ([observed value] chars)

When: NOT (p.titleLength >= 50 && p.titleLength <= 60) AND NOT (p.titleLength === 0) AND NOT (p.titleLength < 50 && p.titleLength >= 30) AND (p.titleLength < 30)

lib/auditor-engine.ts:513

## Deduct 5 points

Title tag is too long ([observed value] chars — may be truncated in SERPs)

When: NOT (p.titleLength >= 50 && p.titleLength <= 60) AND NOT (p.titleLength === 0) AND NOT (p.titleLength < 50 && p.titleLength >= 30) AND NOT (p.titleLength < 30)

lib/auditor-engine.ts:515

## Deduct 8 points

Title tag contains a duplicated brand suffix (e.g., "My Page | Brand | Brand") — wastes title space and looks unprofessional in SERPs

When: (p.titleBrandSuffixDuplicated)

lib/auditor-engine.ts:520

## Deduct 4 points

Cloudflare Email Protection detected ([observed value] obfuscated links) — these appear as /cdn-cgi/l/email-protection and return 404 to crawlers

When: (p.cfEmailObfuscationDetected)

lib/auditor-engine.ts:532

## Deduct 6 points

[observed value] suspicious internal link pattern(s) detected: [observed value]

When: (p.internalBrokenLinkPatterns.length > 0)

lib/auditor-engine.ts:538

## Deduct 15 points

Missing meta description

When: NOT (p.metaDescLength >= 140 && p.metaDescLength <= 160) AND (p.metaDescLength === 0)

lib/auditor-engine.ts:546

### **Deduct 3 points**

Meta description is slightly short ([observed value] chars)

When: NOT (p.metaDescLength >= 140 && p.metaDescLength <= 160) AND NOT (p.metaDescLength === 0) AND (p.metaDescLength >= 120 && p.metaDescLength < 140)

lib/auditor-engine.ts:548

### **Deduct 7 points**

Meta description is short ([observed value] chars)

When: NOT (p.metaDescLength >= 140 && p.metaDescLength <= 160) AND NOT (p.metaDescLength === 0) AND NOT (p.metaDescLength >= 120 && p.metaDescLength < 140) AND (p.metaDescLength < 120)

lib/auditor-engine.ts:550

### **Deduct 4 points**

Meta description may be truncated ([observed value] chars)

When: NOT (p.metaDescLength >= 140 && p.metaDescLength <= 160) AND NOT (p.metaDescLength === 0) AND NOT (p.metaDescLength >= 120 && p.metaDescLength < 140) AND NOT (p.metaDescLength < 120)

lib/auditor-engine.ts:552

### **Deduct 15 points**

No H1 heading found

When: NOT (p.h1Count === 1) AND (p.h1Count === 0)

lib/auditor-engine.ts:559

### **Deduct 8 points**

Multiple H1 tags found ([observed value])

When: NOT (p.h1Count === 1) AND NOT (p.h1Count === 0)

lib/auditor-engine.ts:561

### **Deduct 5 points**

Heading hierarchy gaps: [observed value]

When: NOT (p.headingGaps.length === 0 && p.headingCount > 2) AND (p.headingGaps.length > 0)

lib/auditor-engine.ts:568

### **Deduct 5 points**

Very few headings for content length

When: (p.headingCount < 3 && p.wordCount > 300)

lib/auditor-engine.ts:571

### **Deduct 8 points**

Missing canonical URL

When: NOT (p.hasCanonical && p.canonicalMatchesUrl) AND (!p.hasCanonical)

lib/auditor-engine.ts:578

### **Deduct 8 points**

No Open Graph tags found

When: NOT (p.hasOpenGraph && p.ogMissing.length === 0) AND (!p.hasOpenGraph)

lib/auditor-engine.ts:587

### **Deduct 4 points**

Missing OG tags: [observed value]

When: NOT (p.hasOpenGraph && p.ogMissing.length === 0) AND NOT (!p.hasOpenGraph) AND (p.ogMissing.length > 0)

lib/auditor-engine.ts:589

### **Deduct 5 points**

No Twitter Card tags found

When: NOT (p.hasTwitterCard && p.twitterMissing.length === 0) AND (!p.hasTwitterCard)

lib/auditor-engine.ts:596

### **Deduct 3 points**

Missing Twitter tags: [observed value]

When: NOT (p.hasTwitterCard && p.twitterMissing.length === 0) AND NOT (!p.hasTwitterCard) AND (p.twitterMissing.length > 0)

lib/auditor-engine.ts:598

### **Deduct 5 points**

Missing lang attribute on <html>

When: NOT (p.hasLangAttr)

lib/auditor-engine.ts:603

### **Deduct 3 points**

Missing favicon

When: NOT (p.hasFavicon)

lib/auditor-engine.ts:607

### **Deduct 4 points**

[observed value] empty/unlabeled links found

When: (p.emptyLinks > 3)

lib/auditor-engine.ts:612

### **Deduct 3 points**

[observed value] broken anchor links detected

When: (p.brokenAnchors > 0)

lib/auditor-engine.ts:613

### **Deduct 8 points**

Thin content ([observed value] words)

When: NOT (p.wordCount >= 300 && p.wordCount <= 3000) AND (p.wordCount < 300)

lib/auditor-engine.ts:617

### **Deduct 4 points**

Deprecated HTML tags found: [observed value]

When: (p.deprecatedTags.length > 0)

lib/auditor-engine.ts:620

### **Deduct 10 points**

Page is set to noindex — search engines will not index this page

When: (p.hasRobotsMeta && p.robotsContent.includes('noindex'))

lib/auditor-engine.ts:623

### **Deduct 5 points**

Meta refresh redirect detected — harmful for SEO

When: (p.metaRefresh)

lib/auditor-engine.ts:626

### **Deduct 8 points**

Excessive links on page ([observed value]) — search engines may devalue link equity

When: (p.linkCount > 300)

lib/auditor-engine.ts:631

### **Deduct 4 points**

High link count ([observed value]) — above recommended range

When: NOT (p.linkCount > 300) AND (p.linkCount > 200)

lib/auditor-engine.ts:632

### **Deduct 5 points**

URL is very long ([observed value] chars) — may be truncated in SERPs and harder to share

When: (p.urlLength > 100)

lib/auditor-engine.ts:636

### **Deduct 3 points**

URL is longer than recommended ([observed value] chars)

When: NOT (p.urlLength > 100) AND (p.urlLength > 75)

lib/auditor-engine.ts:637

### **Deduct 6 points**

[observed value] external links missing rel="nofollow noopener noreferrer" — potential link equity leakage

When: (p.externalLinksWithoutRel > 10)

lib/auditor-engine.ts:641

### **Deduct 3 points**

[observed value] external links missing recommended rel attributes

When: NOT (p.externalLinksWithoutRel > 10) AND (p.externalLinksWithoutRel > 3)

lib/auditor-engine.ts:642

### **Deduct 5 points**

Hreflang tags found on a non-canonical page — search engines may ignore them

When: (p.hreflangOnNonCanonical)

lib/auditor-engine.ts:646

### **Deduct 6 points**

Long redirect chain ([observed value] hops) — slows crawling and dilutes PageRank

When: (p.redirectChainLength > 3)

lib/auditor-engine.ts:649

### **Deduct 3 points**

Redirect chain with [observed value] hops

When: NOT (p.redirectChainLength > 3) AND (p.redirectChainLength > 1)

lib/auditor-engine.ts:650

### **Deduct 3 points**

Title and description are identical to Open Graph tags — missed optimization opportunity

When: (p.duplicateTitleAndOg && p.duplicateDescAndOg)

lib/auditor-engine.ts:654

### **Deduct 6 points**

SPA framework detected ([observed value]) with thin initial HTML content — search engines may not index all content

When: (p.spaDetected && p.wordCount < 200)

lib/auditor-engine.ts:659

### **Deduct 5 points**

Low internal link ratio ([observed value]%) — most links point externally

When: (p.internalLinkRatio < 20 && p.linkCount > 10)

lib/auditor-engine.ts:663

### **Deduct 4 points**

Low anchor text diversity ([observed value]%) — many internal links use identical text

When: (p.anchorTextDiversity < 30 && p.internalLinks > 10)

lib/auditor-engine.ts:667

### **Deduct 6 points**

Multiple canonical tags found — search engines may ignore all of them

When: (p.multipleCanonicals)

lib/auditor-engine.ts:674

### **Deduct 3 points**

Title and H1 share no keywords — misaligned topic signals

When: NOT (p.titleH1Overlap > 0.5 && p.titleH1Overlap < 1) AND (p.titleH1Overlap === 0 && p.h1Count > 0 && p.titleLength > 0)

lib/auditor-engine.ts:678

### **Deduct 5 points**

All [observed value] external links are nofollow — no outbound link authority signals

When: (p.externalLinks > 0) AND NOT (p.dofollowExternalLinks >= 2 && p.dofollowExternalLinks <= 5) AND (p.dofollowExternalLinks === 0 && p.externalLinks > 3)

lib/auditor-engine.ts:685

## Deduct 2 points

Only 1 dofollow external link — consider adding a few more to authoritative sources

When: (p.externalLinks > 0) AND NOT (p.dofollowExternalLinks >= 2 && p.dofollowExternalLinks <= 5) AND NOT (p.dofollowExternalLinks === 0 && p.externalLinks > 3) AND (p.dofollowExternalLinks === 1)

lib/auditor-engine.ts:688

## Deduct 5 points

High dofollow external link count ([observed value]) — excessive link equity leakage

When: (p.externalLinks > 0) AND NOT (p.dofollowExternalLinks >= 2 && p.dofollowExternalLinks <= 5) AND NOT (p.dofollowExternalLinks === 0 && p.externalLinks > 3) AND NOT (p.dofollowExternalLinks === 1) AND (p.dofollowExternalLinks > 10)

lib/auditor-engine.ts:691

## Deduct 2 points

[observed value] dofollow external links — slightly above optimal range

When: (p.externalLinks > 0) AND NOT (p.dofollowExternalLinks >= 2 && p.dofollowExternalLinks <= 5) AND NOT (p.dofollowExternalLinks === 0 && p.externalLinks > 3) AND NOT (p.dofollowExternalLinks === 1) AND NOT (p.dofollowExternalLinks > 10) AND (p.dofollowExternalLinks > 5)

lib/auditor-engine.ts:694

## Deduct 4 points

Primary keyword "[observed value]" not found in H1

When: (p.primaryKeyword && p.h1Count > 0) AND NOT (p.h1ContainsKeyword)

lib/auditor-engine.ts:702

## Deduct 3 points

Primary keyword missing from first paragraph

When: (p.primaryKeyword && p.wordCount > 100) AND NOT (p.firstParaContainsKeyword)

lib/auditor-engine.ts:708

## Deduct 5 points

Weak E-E-A-T signals ([observed value] indicators)

When: NOT (p.eatSignalCount >= 5) AND NOT (p.eatSignalCount >= 3)

lib/auditor-engine.ts:718

## Deduct 2 points

Conditional deduction; see the exact trigger.

When: (!p.hasAboutPage)

lib/auditor-engine.ts:720

## Deduct 2 points

Conditional deduction; see the exact trigger.

When: (!p.hasContactPage)

lib/auditor-engine.ts:721

## Deduct 2 points

Moderate readability ([observed value] Flesch) — content may be difficult for some readers

When: (p.fleschReadingEase > 0 && p.wordCount > 100) AND NOT (p.fleschReadingEase >= 60) AND (p.fleschReadingEase >= 40)

lib/auditor-engine.ts:726

### **Deduct 4 points**

Low readability score ([observed value] Flesch) — content is hard to read

When: (p.fleschReadingEase > 0 && p.wordCount > 100) AND NOT (p.fleschReadingEase >= 60) AND NOT (p.fleschReadingEase >= 40)

lib/auditor-engine.ts:727

### **Deduct 2 points**

Missing og:locale tag — social platforms may guess language/region

When: (p.hasOpenGraph) AND (!p.ogHasLocale)

lib/auditor-engine.ts:732

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: (p.hasOpenGraph) AND (p.ogImageUrl) AND NOT (p.ogImageIsWebp)

lib/auditor-engine.ts:736

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: (p.hasOpenGraph) AND (p.ogImageUrl) AND NOT (p.ogImageDimensionHint === 'optimal') AND (p.ogImageDimensionHint === 'acceptable')

lib/auditor-engine.ts:738

### **Deduct 3 points**

OG image dimensions too small for social platforms

When: (p.hasOpenGraph) AND (p.ogImageUrl) AND NOT (p.ogImageDimensionHint === 'optimal') AND NOT (p.ogImageDimensionHint === 'acceptable') AND (p.ogImageDimensionHint === 'too\_small')

lib/auditor-engine.ts:739

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: (p.hasOpenGraph) AND (p.hasArticleSchema || p.wordCount > 500) AND NOT (p.articlePublishedTime)

lib/auditor-engine.ts:743

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: (p.hasOpenGraph) AND (p.hasArticleSchema || p.wordCount > 500) AND NOT (p.articleModifiedTime)

lib/auditor-engine.ts:745

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: (p.hasTwitterCard) AND NOT (p.twitterCardType === 'summary\_large\_image') AND (p.twitterCardType === 'summary')

lib/auditor-engine.ts:750

### **Deduct 2 points**

Twitter card type not specified

When: (p.hasTwitterCard) AND NOT (p.twitterCardType === 'summary\_large\_image') AND NOT (p.twitterCardType === 'summary') AND (!p.twitterCardType)

lib/auditor-engine.ts:751

### **Deduct 3 points**

Low internal link density ([observed value]/1k words) — below optimal 2–5 range

When: (p.wordCount >= 300) AND NOT (density >= 2 && density <= 5) AND (density < 2 && density > 0)

lib/auditor-engine.ts:758

### **Deduct 5 points**

No internal links in content body

When: (p.wordCount >= 300) AND NOT (density >= 2 && density <= 5) AND NOT (density < 2 && density > 0) AND (density === 0)

lib/auditor-engine.ts:759

### **Deduct 3 points**

Very high internal link density ([observed value]/1k words) — may appear spammy

When: (p.wordCount >= 300) AND NOT (density >= 2 && density <= 5) AND NOT (density < 2 && density > 0) AND NOT (density === 0) AND (density > 50)

lib/auditor-engine.ts:760

### **Deduct 8 points**

Keyword stuffing detected: "[observed value]" appears [observed value] times ([observed value]% density — exceeds 3%)

When: (p.primaryKeyword && p.wordCount >= 100) AND (p.isKeywordStuffed)

lib/auditor-engine.ts:767

### **Deduct 2 points**

Low keyword density ([observed value]%) for "[observed value]"

When: (p.primaryKeyword && p.wordCount >= 100) AND NOT (p.isKeywordStuffed) AND NOT (p.keywordDensityPercent >= 0.5 && p.keywordDensityPercent <= 2.5) AND (p.keywordDensityPercent > 0 && p.keywordDensityPercent < 0.5)

lib/auditor-engine.ts:769

### **Deduct 3 points**

Primary keyword "[observed value]" not found in body content

When: (p.primaryKeyword && p.wordCount >= 100) AND NOT (p.isKeywordStuffed) AND NOT (p.keywordDensityPercent >= 0.5 && p.keywordDensityPercent <= 2.5) AND NOT (p.keywordDensityPercent > 0 && p.keywordDensityPercent < 0.5) AND (p.keywordOccurrences === 0)

lib/auditor-engine.ts:770

### **Deduct 2 points**

Moderate passive voice ([observed value]%)

When: (p.wordCount >= 200 && p.passiveVoiceRatio > 0) AND NOT (p.passiveVoiceRatio <= 15) AND (p.passiveVoiceRatio <= 30)

lib/auditor-engine.ts:777

### **Deduct 4 points**

High passive voice ratio ([observed value]%) — harder for AI/voice extraction

When: (p.wordCount >= 200 && p.passiveVoiceRatio > 0) AND NOT (p.passiveVoiceRatio <= 15) AND NOT (p.passiveVoiceRatio <= 30)

lib/auditor-engine.ts:778

### **Deduct 3 points**

Long content without Table of Contents

When: NOT (p.hasTableOfContents && p.wordCount >= 800) AND (!p.hasTableOfContents && p.wordCount >= 1500)

lib/auditor-engine.ts:782

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.zeroClickOptimized) AND (p.wordCount >= 500)

lib/auditor-engine.ts:785

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.entitySaliencyScore >= 50) AND NOT (p.entitySaliencyScore >= 20) AND (p.wordCount >= 500)

lib/auditor-engine.ts:789

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.bingeworthySignals >= 3) AND (p.bingeworthySignals === 0 && p.wordCount >= 500)

lib/auditor-engine.ts:792

### **Deduct 3 points**

No social sharing buttons/widgets detected

When: NOT (p.hasSocialShareButtons)

lib/auditor-engine.ts:796

### **Deduct 1 points**

Conditional deduction; see the exact trigger.

When: NOT (p.ogSharingCompleteness >= 100) AND (p.ogSharingCompleteness >= 67)

lib/auditor-engine.ts:798

### **Deduct 3 points**

Low OG sharing completeness ([observed value]%) — social previews will be poor

When: NOT (p.ogSharingCompleteness >= 100) AND NOT (p.ogSharingCompleteness >= 67) AND (p.ogSharingCompleteness < 67)

lib/auditor-engine.ts:799

### **Deduct 6 points**

Multiple <title> tags detected ([observed value]) — search engines may use an unintended title

When: (p.multipleTitleTags)

lib/auditor-engine.ts:802

### **Deduct 6 points**

Multiple meta descriptions detected ([observed value]) — engines may ignore them or pick the wrong one

When: (p.multipleMetaDescriptions)

lib/auditor-engine.ts:803

### **Deduct 3 points**

[observed value] internal link(s) use rel="nofollow" — this wastes internal link equity

When: (p.nofollowInternalLinks > 0)

lib/auditor-engine.ts:805

### **Deduct 4 points**

Conflicting character-encoding declarations detected — can cause garbled text and indexing issues

When: (p.conflictingCharacterEncoding)

lib/auditor-engine.ts:806

### **Deduct 8 points**

Legacy frames/framesets detected ([observed value]) — content inside frames is poorly indexed

When: (p.hasFrames)

lib/auditor-engine.ts:808

### **Deduct 5 points**

[observed value] image(s) have a missing or empty src — broken images hurt UX and image search

When: (p.brokenImages > 0)

lib/auditor-engine.ts:809

### **Deduct 2 points**

Inline CSS validation hints: [observed value]

When: (p.cssValidationHints.length > 0)

lib/auditor-engine.ts:810

## Performance — base rules

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### Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (s.responseTimeMs < 500) AND (s.responseTimeMs < 1000)

lib/auditor-engine.ts:825

### Deduct 12 points

Slow server response: [observed value]ms

When: NOT (s.responseTimeMs < 500) AND NOT (s.responseTimeMs < 1000) AND (s.responseTimeMs < 2000)

lib/auditor-engine.ts:826

### Deduct 20 points

Very slow server response: [observed value]ms

When: NOT (s.responseTimeMs < 500) AND NOT (s.responseTimeMs < 1000) AND NOT (s.responseTimeMs < 2000)

lib/auditor-engine.ts:827

### Deduct 5 points

Large HTML document: [observed value]KB

When: NOT (p.htmlSizeKb < 100) AND NOT (p.htmlSizeKb < 300) AND (p.htmlSizeKb < 500)

lib/auditor-engine.ts:835

### Deduct 15 points

Very large HTML: [observed value]KB

When: NOT (p.htmlSizeKb < 100) AND NOT (p.htmlSizeKb < 300) AND NOT (p.htmlSizeKb < 500) AND NOT (isModernFramework && p.htmlSizeKb < 1500)

lib/auditor-engine.ts:837

### Deduct 5 points

[observed value] render-blocking script(s)

When: NOT (p.renderBlockingScripts === 0) AND NOT (p.renderBlockingScripts <= 3 && isModernFramework) AND (p.renderBlockingScripts <= 2)

lib/auditor-engine.ts:842

### Deduct 12 points

[observed value] render-blocking scripts slow down initial paint

When: NOT (p.renderBlockingScripts === 0) AND NOT (p.renderBlockingScripts <= 3 && isModernFramework) AND NOT (p.renderBlockingScripts <= 2)

lib/auditor-engine.ts:843

### Deduct 8 points

No lazy loading on images

When: NOT (p.imageCount > 0 && p.hasLazyImages) AND (p.imageCount > 5 && !p.hasLazyImages)

lib/auditor-engine.ts:847

### **Deduct 6 points**

No WebP or AVIF image formats found

When: NOT (p.hasWebpAvif) AND (p.imageCount > 0)

lib/auditor-engine.ts:851

### **Deduct 5 points**

No responsive image srcset found

When: NOT (p.hasSrcset) AND (p.imageCount > 3)

lib/auditor-engine.ts:855

### **Deduct 5 points**

Only [observed value]/[observed value] images have width/height attributes

When: NOT (p.imageCount > 0 && p.imagesWithWidthHeight >= p.imageCount \* 0.8) AND (p.imageCount > 3 && p.imagesWithWidthHeight < p.imageCount \* 0.5)

lib/auditor-engine.ts:859

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (p.hasPreconnect)

lib/auditor-engine.ts:863

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (p.hasPreload)

lib/auditor-engine.ts:866

### **Deduct 3 points**

No font-display property found

When: NOT (p.hasFontDisplay)

lib/auditor-engine.ts:870

### **Deduct 5 points**

No effective Cache-Control header

When: NOT (cc && (cc.includes('max-age') || cc.includes('s-maxage')))

lib/auditor-engine.ts:878

### **Deduct 3 points**

[observed value] inline <style> blocks

When: (p.inlineStyles > 5)

lib/auditor-engine.ts:881

### **Deduct 3 points**

[observed value] inline scripts

When: (p.inlineScripts > 10 && !isModernFramework)

lib/auditor-engine.ts:882

### **Deduct 8 points**

Large CSS payload (~[observed value]KB across [observed value] files) — slows rendering

When: (p.totalCssKb > 500)

lib/auditor-engine.ts:888

### **Deduct 3 points**

Moderate CSS payload (~[observed value]KB)

When: NOT (p.totalCssKb > 500) AND (p.totalCssKb > 200)

lib/auditor-engine.ts:889

### **Deduct 10 points**

Heavy JavaScript payload (~[observed value]KB across [observed value] files)

When: (p.totalJsKb > 1000 && !isModernFramework)

lib/auditor-engine.ts:893

### **Deduct 5 points**

Moderate JavaScript payload (~[observed value]KB)

When: NOT (p.totalJsKb > 1000 && !isModernFramework) AND (p.totalJsKb > 500 && !isModernFramework)

lib/auditor-engine.ts:894

### **Deduct 5 points**

Large JS bundle (~[observed value]KB) even for framework app

When: NOT (p.totalJsKb > 1000 && !isModernFramework) AND NOT (p.totalJsKb > 500 && !isModernFramework) AND (p.totalJsKb > 2000 && isModernFramework)

lib/auditor-engine.ts:895

### **Deduct 4 points**

Redirect chain ([observed value] hops) adds latency to page load

When: (p.redirectChainLength > 2)

lib/auditor-engine.ts:899

### **Deduct 4 points**

[observed value] links increase DOM size and parsing time

When: (p.linkCount > 200)

lib/auditor-engine.ts:902

### **Deduct 4 points**

HTTP/1.1 detected — no multiplexing

When: NOT (p.httpVersion === 'HTTP/3') AND NOT (p.httpVersion === 'HTTP/2') AND (!isModernFramework)

lib/auditor-engine.ts:909

### **Deduct 5 points**

No CDN detected

When: NOT (p.cdnDetected)

lib/auditor-engine.ts:914

### **Deduct 6 points**

No response compression detected

When: NOT (p.compressionType === 'br') AND NOT (p.compressionType === 'gzip') AND (p.compressionType === 'none')

lib/auditor-engine.ts:919

### **Deduct 6 points**

[observed value] third-party scripts from [observed value] domains — significant performance impact

When: (p.thirdPartyScriptCount > 10)

lib/auditor-engine.ts:922

### **Deduct 3 points**

[observed value] third-party scripts detected

When: NOT (p.thirdPartyScriptCount > 10) AND (p.thirdPartyScriptCount > 5)

lib/auditor-engine.ts:923

### **Deduct 4 points**

No resource hints found

When: NOT (p.totalResourceHints >= 5) AND (p.totalResourceHints === 0)

lib/auditor-engine.ts:928

### **Deduct 4 points**

[observed value] font files loaded — excessive font weight

When: (p.fontFileCount > 4)

lib/auditor-engine.ts:931

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.preloadFontCount > 0) AND (p.fontFileCount > 0)

lib/auditor-engine.ts:933

### **Deduct 5 points**

[observed value] render-blocking CSS files — delays first paint

When: (p.renderBlockingCssCount > 3)

lib/auditor-engine.ts:937

### **Deduct 2 points**

[observed value] render-blocking CSS file(s)

When: NOT (p.renderBlockingCssCount > 3) AND (p.renderBlockingCssCount > 1 && !isModernFramework)

lib/auditor-engine.ts:938

### **Deduct 4 points**

Estimated CSS bundle ~[observed value]KB — above optimal

When: (p.totalCssBundleKb > 300)

lib/auditor-engine.ts:941

### **Deduct 5 points**

Estimated JS bundle ~[observed value]KB — heavy payload

When: (p.totalJsBundleKb > 1500 && !isModernFramework)

lib/auditor-engine.ts:944

### **Deduct 3 points**

Large JS bundle (~[observed value]KB) even for framework app

When: NOT (p.totalJsBundleKb > 1500 && !isModernFramework) AND (p.totalJsBundleKb > 3000 && isModernFramework)

lib/auditor-engine.ts:945

### **Deduct 2 points**

Potentially unused CSS detected (large stylesheet count relative to page complexity)

When: (p.unusedCssHint)

lib/auditor-engine.ts:948

### **Deduct Math.min(p.longTaskScriptHints.length \* 2, 6) points**

Potential long-task scripts: [observed value]

When: (p.longTaskScriptHints.length > 0 && !isModernFramework)

lib/auditor-engine.ts:952

### **Deduct 5 points**

Estimated LCP: ~[observed value]ms — needs improvement (goal: <2.5s)

When: (p.lcpEstimateMs > 0) AND NOT (p.lcpEstimateMs <= 2500) AND (p.lcpEstimateMs <= 4000)

lib/auditor-engine.ts:963

### **Deduct 10 points**

Poor estimated LCP: ~[observed value]ms — exceeds 4s threshold

When: (p.lcpEstimateMs > 0) AND NOT (p.lcpEstimateMs <= 2500) AND NOT (p.lcpEstimateMs <= 4000)

lib/auditor-engine.ts:964

### **Deduct 8 points**

High estimated CLS: [observed value] — exceeds Google's 0.25 threshold

When: (p.clsEstimate > 0.25)

lib/auditor-engine.ts:967

### **Deduct 4 points**

Moderate estimated CLS: [observed value] — above 0.1 "good" threshold

When: NOT (p.clsEstimate > 0.25) AND (p.clsEstimate > 0.1)

lib/auditor-engine.ts:968

### **Deduct 4 points**

Estimated INP: ~[observed value]ms — needs improvement (goal: <200ms)

When: (p.inpEstimateMs > 0) AND NOT (p.inpEstimateMs <= 200) AND (p.inpEstimateMs <= 500 && !isModernFramework)

lib/auditor-engine.ts:973

## Deduct 2 points

Estimated INP: ~[observed value]ms — slightly above threshold for framework app

When: (p.inpEstimateMs > 0) AND NOT (p.inpEstimateMs <= 200) AND NOT (p.inpEstimateMs <= 500 && !isModernFramework) AND NOT (p.inpEstimateMs <= 300) AND (p.inpEstimateMs <= 500)

lib/auditor-engine.ts:975

## Deduct 8 points

Poor estimated INP: ~[observed value]ms

When: (p.inpEstimateMs > 0) AND NOT (p.inpEstimateMs <= 200) AND NOT (p.inpEstimateMs <= 500 && !isModernFramework) AND NOT (p.inpEstimateMs <= 300) AND NOT (p.inpEstimateMs <= 500)

lib/auditor-engine.ts:976

## Deduct 3 points

Web fonts loaded without preload — causes FOIT/FOUT flash

When: (p.fontPreloadMissed)

lib/auditor-engine.ts:979

## Deduct 5 points

Basic analytics only — missing event tracking or tag management

When: NOT (p.analyticsSetupQuality === 'comprehensive') AND NOT (p.analyticsSetupQuality === 'good') AND (p.analyticsSetupQuality === 'basic')

lib/auditor-engine.ts:987

## Deduct 6 points

No analytics tracking detected — flying blind on user behavior

When: NOT (p.analyticsSetupQuality === 'comprehensive') AND NOT (p.analyticsSetupQuality === 'good') AND NOT (p.analyticsSetupQuality === 'basic') AND NOT (p.analyticsSetupQuality === 'alternative')

lib/auditor-engine.ts:989

## Deduct 5 points

Excessive DOM size ([observed value] elements) — increases memory use and slows rendering

When: (p.domElementCount > 1500)

lib/auditor-engine.ts:992

## Deduct 3 points

Inline CSS does not appear minified

When: (!p.cssMinified)

lib/auditor-engine.ts:994

## Deduct 3 points

Inline JavaScript does not appear minified

When: (!p.jsMinified)

lib/auditor-engine.ts:995

## Deduct 5 points

document.write() used [observed value] time(s) — blocks the parser and delays rendering

When: (p.documentWriteCount > 0)

lib/auditor-engine.ts:996

### **Deduct 4 points**

No efficient cache policy (Cache-Control max-age) on the main document

When: NOT (p.hasEfficientCachePolicy)

lib/auditor-engine.ts:998

### **Deduct 3 points**

[observed value] animated GIF(s) detected — GIFs are far larger than modern video formats

When: (p.animatedGifCount > 0)

lib/auditor-engine.ts:999

### **Deduct 4 points**

[observed value] image(s) lack explicit width/height — a common cause of layout shift (CLS)

When: (p.imagesWithoutDimensions > 0)

lib/auditor-engine.ts:1000

## Security — base rules

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### Deduct 25 points

Site does not use HTTPS

When: NOT (p.isHttps)

lib/auditor-engine.ts:1109

### Deduct 5 points

No HTTP → HTTPS redirect configured

When: NOT (p.isHttps) AND (!s.httpToHttpsRedirect)

lib/auditor-engine.ts:1111

### Deduct 10 points

Mixed content detected (HTTP resources on HTTPS page)

When: (p.hasMixedContent)

lib/auditor-engine.ts:1115

### Deduct 10 points

Missing Strict-Transport-Security header

When: NOT (hdrs['strict-transport-security'])

lib/auditor-engine.ts:1120

### Deduct 10 points

Missing Content-Security-Policy header

When: NOT (hdrs['content-security-policy'])

lib/auditor-engine.ts:1124

### Deduct 5 points

Missing X-Content-Type-Options header

When: NOT (hdrs['x-content-type-options'])

lib/auditor-engine.ts:1128

### Deduct 5 points

Missing X-Frame-Options header

When: NOT (hdrs['x-frame-options'])

lib/auditor-engine.ts:1132

### Deduct 5 points

Missing Referrer-Policy header

When: NOT (hdrs['referrer-policy'])

lib/auditor-engine.ts:1136

### Deduct 5 points

Missing Permissions-Policy header

When: NOT (hdrs['permissions-policy'])

lib/auditor-engine.ts:1140

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (hdrs['cross-origin-opener-policy'])

lib/auditor-engine.ts:1143

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (hdrs['cross-origin-resource-policy'])

lib/auditor-engine.ts:1144

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (hdrs['cross-origin-embedder-policy'])

lib/auditor-engine.ts:1145

### **Deduct 3 points**

Server header exposes technology: [observed value]

When: NOT (!server || server === 'not exposed') AND NOT (isCdnServer)

lib/auditor-engine.ts:1155

### **Deduct 3 points**

X-Powered-By header exposes: [observed value]

When: NOT (!poweredBy || poweredBy === 'not exposed') AND NOT (isFrameworkPowered)

lib/auditor-engine.ts:1158

### **Deduct 5 points**

[observed value] external links missing rel="noopener noreferrer" — security risk

When: (p.externalLinksWithoutRel > 5)

lib/auditor-engine.ts:1161

### **Deduct 2 points**

[observed value] external link(s) without noopener/noreferrer

When: NOT (p.externalLinksWithoutRel > 5) AND (p.externalLinksWithoutRel > 0)

lib/auditor-engine.ts:1162

### **Deduct 3 points**

HSTS header present but missing preload directive

When: NOT (p.hstsPreload && p.hstsMaxAge >= 31536000) AND (hdrs['strict-transport-security'] && !p.hstsPreload)

lib/auditor-engine.ts:1169

### **Deduct 3 points**

HSTS max-age is only [observed value] days — should be at least 1 year

When: (p.hstsMaxAge > 0 && p.hstsMaxAge < 31536000)

lib/auditor-engine.ts:1170

### **Deduct Math.min(8, uniqueIssueTypes.length \* 3) points**

Cookie security issues: [observed value]

When: (p.cookieSecurityIssues.length > 0)

lib/auditor-engine.ts:1175

### **Deduct 8 points**

[observed value] form(s) submit to insecure HTTP endpoints

When: (p.formActionsInsecure > 0)

lib/auditor-engine.ts:1181

### **Deduct 3 points**

No privacy policy detected

When: NOT (p.hasPrivacyPolicy)

lib/auditor-engine.ts:1185

### **Deduct 3 points**

No cookie consent banner detected

When: NOT (p.hasCookieConsent)

lib/auditor-engine.ts:1188

### **Deduct 3 points**

No Subresource Integrity (SRI) on external scripts

When: NOT (p.hasSubresourceIntegrity) AND (p.thirdPartyScriptCount > 0)

lib/auditor-engine.ts:1192

### **Deduct 6 points**

Weak CSP implementation (strictness score: [observed value]/100)

When: (p.cspStrictnessScore > 0) AND NOT (p.cspStrictnessScore >= 70) AND NOT (p.cspStrictnessScore >= 40)

lib/auditor-engine.ts:1198

### **Deduct Math.min(5, p.cspUnsafeInlineCount \* 2) points**

CSP contains [observed value] unsafe-inline directive(s) — weakens XSS protection

When: (p.cspStrictnessScore > 0) AND (p.cspUnsafeInlineCount > 0 && !p.isModernFramework)

lib/auditor-engine.ts:1199

### **Deduct Math.min(8, p.outdatedLibraryHints.length \* 3) points**

Outdated libraries detected: [observed value]

When: (p.outdatedLibraryHints.length > 0)

lib/auditor-engine.ts:1211

### **Deduct 8 points**

Server-side software version disclosed: [observed value] — enables version-based vulnerability (CVE) lookups

When: (p.frameworkVersionExposed)

lib/auditor-engine.ts:1227

### Deduct 3 points

Server technology disclosed via response headers/markup: [observed value]

When: (p.serverTechExposed.length > 0) AND (versionless.length > 0 && !p.frameworkVersionExposed)

lib/auditor-engine.ts:1237

### Deduct 2 points

security.txt found but has issues: [observed value]

When: NOT (p.securityTxtExists && p.securityTxtValid && p.securityTxtIssues.length === 0) AND (p.securityTxtExists && p.securityTxtIssues.length > 0)

lib/auditor-engine.ts:1251

### Deduct 3 points

security.txt file is missing — no standardized channel for reporting vulnerabilities

When: NOT (p.securityTxtExists && p.securityTxtValid && p.securityTxtIssues.length === 0) AND NOT (p.securityTxtExists && p.securityTxtIssues.length > 0)

lib/auditor-engine.ts:1255

### Deduct 8 points

Requesting a non-existent path returned HTTP [observed value] (Internal Server Error) instead of a clean 404 — unhandled exception

When: (p.serverErrorDetected)

lib/auditor-engine.ts:1262

### Deduct Math.min(15, p.errorLeakagePatterns.length \* 6) points

Error output leaks sensitive internal details: [observed value]

When: (p.errorLeakagePatterns.length > 0)

lib/auditor-engine.ts:1269

### Deduct Math.min(12, p.debugInfoLeakage.length \* 5) points

Debug/verbose diagnostics exposed: [observed value]

When: (p.debugInfoLeakage.length > 0)

lib/auditor-engine.ts:1278

### Deduct 15 points

A password/login field submits over an insecure (HTTP) form action — credentials transmitted in clear text

When: (p.passwordFieldInsecureForm)

lib/auditor-engine.ts:1301

### Deduct 10 points

HTTP Basic Authentication offered over an unencrypted channel (WWW-Authenticate over HTTP) — credentials are base64-encoded, not encrypted

When: (p.basicAuthOverHttp)

lib/auditor-engine.ts:1306

### Deduct 4 points

[observed value] insecure ws:// WebSocket endpoint(s) referenced — data exchanged unencrypted

When: (p.insecureWebSocketCount > 0)

lib/auditor-engine.ts:1311

### **Deduct 2 points**

Legacy X-XSS-Protection header present — deprecated and can introduce vulnerabilities in older browsers

When: (p.xssProtectionLegacy)

lib/auditor-engine.ts:1318

### **Deduct 3 points**

Content-Security-Policy is delivered only via a <meta> tag — cannot use report-uri/frame-ancestors and is bypassable

When: (p.cspViaMetaOnly)

lib/auditor-engine.ts:1323

### **Deduct Math.min(6, p.cspMissingDirectives.length \* 2) points**

CSP is missing key hardening directive(s): [observed value]

When: (p.cspMissingDirectives.length > 0 && (hdrs['content-security-policy'] || p.cspViaMetaOnly))

lib/auditor-engine.ts:1328

### **Deduct 4 points**

A sensitive page (login/account/checkout) lacks Cache-Control: no-store — confidential data may be cached by browsers/proxies

When: (p.missingCacheControlOnSensitive)

lib/auditor-engine.ts:1337

### **Deduct 6 points**

A session identifier appears to be passed in the URL — session IDs in URLs leak via referrer headers, logs, and browser history

When: (p.sessionIdInUrl)

lib/auditor-engine.ts:1344

### **Deduct 2 points**

A password field does not disable autocomplete on a shared/sensitive context — may persist credentials on shared devices

When: (p.autocompleteOnPasswordField)

lib/auditor-engine.ts:1349

### **Deduct Math.min(6, p.stateChangingFormsWithoutCsrf \* 3) points**

[observed value] state-changing POST form(s) show no visible anti-CSRF token (heuristic — SameSite cookies may still protect them)

When: (p.stateChangingFormsWithoutCsrf > 0)

lib/auditor-engine.ts:1356

### **Deduct Math.min(6, p.dangerousJsSinks.length \* 2) points**

Dangerous client-side sink(s) detected in inline scripts: [observed value] — potential DOM-based XSS vectors

When: (p.dangerousJsSinks.length > 0)

lib/auditor-engine.ts:1363

### **Deduct 2 points**

[observed value] inline event handlers (onclick=, onload=, ...) — inline handlers require CSP unsafe-inline and widen the XSS surface

When: (p.inlineEventHandlerCount > 10)

lib/auditor-engine.ts:1368

### **Deduct 2 points**

[observed value] javascript: URL(s) found — a legacy XSS/injection vector

When: (p.javascriptUrlCount > 0)

lib/auditor-engine.ts:1373

### **Deduct 3 points**

Possible open-redirect parameter(s) in links: [observed value] — can be abused for phishing (CWE-601)

When: (p.openRedirectParams.length > 0)

lib/auditor-engine.ts:1378

### **Deduct Math.min(8, p.untrustedCrossDomainScripts.length \* 4) points**

[observed value] script(s) loaded from higher-risk / abandoned third-party origins (e.g. [observed value]) — supply-chain risk

When: (p.untrustedCrossDomainScripts.length > 0)

lib/auditor-engine.ts:1389

### **Deduct Math.min(40, p.exposedSecrets.length \* 20) points**

Possible secret/API key pattern(s) exposed in page source: [observed value] — CRITICAL if these are live credentials (CWE-798)

When: (p.exposedSecrets.length > 0)

lib/auditor-engine.ts:1394

### **Deduct Math.min(30, p.exposedSensitivePaths.length \* 15) points**

Sensitive path(s) publicly accessible: [observed value] — may expose source control, environment secrets or internals

When: (p.exposedSensitivePaths.length > 0)

lib/auditor-engine.ts:1405

### **Deduct 8 points**

Directory listing appears enabled — file/folder structure is browsable by anyone

When: (p.directoryListingDetected)

lib/auditor-engine.ts:1412

### **Deduct Math.min(8, highRisk.length \* 4) points**

Potentially dangerous HTTP method(s) advertised: [observed value] — TRACE/TRACK enable XST and PUT/DELETE may allow unauthorized changes

When: (p.dangerousHttpMethods.length > 0) AND (highRisk.length > 0)

lib/auditor-engine.ts:1419

### **Deduct 2 points**

robots.txt discloses sensitive-looking path(s): [observed value] — Disallow entries can act as a map for attackers

When: (p.robotsSensitivePaths.length > 0)

lib/auditor-engine.ts:1427

### **Deduct Math.min(4, p.htmlCommentLeaks.length \* 2) points**

HTML comments leak potentially sensitive hints: [observed value]

When: (p.htmlCommentLeaks.length > 0)

lib/auditor-engine.ts:1432

### **Deduct 4 points**

A private/internal IP address (RFC 1918) is disclosed in the page source — reveals internal network topology

When: (p.privateIpDisclosure && p.privateIpDisclosure.length > 0)

lib/auditor-engine.ts:1437

### **Deduct 10 points**

CORS reflects the request Origin while allowing credentials — effectively allows any site to make authenticated cross-origin requests

When: (p.corsReflectedWithCredentials)

lib/auditor-engine.ts:1444

### **Deduct 5 points**

Access-Control-Allow-Origin: \* — the API is readable by any website

When: NOT (p.corsReflectedWithCredentials) AND (p.corsWildcard)

lib/auditor-engine.ts:1448

### **Deduct Math.min(4, p.iframeSandboxMissing \* 2) points**

[observed value] untrusted <iframe>(s) without a sandbox attribute — embedded content runs with full privileges

When: (p.iframeSandboxMissing > 0)

lib/auditor-engine.ts:1454

# AI Readiness — base rules

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# AIO (AI Optimization) — base rules

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## Deduct 8 points

Content may be too thin for AI optimization ([observed value] words)

When: NOT (p.wordCount >= 1500) AND NOT (p.wordCount >= 600) AND (p.wordCount >= 300)

lib/auditor-engine.ts:1737

## Deduct 15 points

Very thin content ([observed value] words)

When: NOT (p.wordCount >= 1500) AND NOT (p.wordCount >= 600) AND NOT (p.wordCount >= 300)

lib/auditor-engine.ts:1738

## Deduct 10 points

No structured Q&A content

When: NOT (p.faqCount > 3) AND NOT (p.faqCount > 0)

lib/auditor-engine.ts:1743

## Deduct 8 points

Weak entity markup — few terms emphasized

When: NOT (p.entityMentions.length >= 10) AND NOT (p.entityMentions.length >= 3)

lib/auditor-engine.ts:1748

## Deduct 8 points

Low semantic markup ratio — [observed value] divs vs [observed value] semantic elements

When: NOT (semanticRatio > 8)

lib/auditor-engine.ts:1754

## Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (p.listCount >= 3 || p.tableCount >= 1)

lib/auditor-engine.ts:1758

## Deduct 8 points

Weak E-E-A-T schema signals

When: NOT (eeatSchemas >= 2)

lib/auditor-engine.ts:1763

## Deduct 5 points

Paragraphs are too long for optimal AI consumption

When: NOT (p.avgWordsPerParagraph > 0 && p.avgWordsPerParagraph <= 30) AND (p.avgWordsPerParagraph > 40)

lib/auditor-engine.ts:1767

## Deduct 3 points

Conditional deduction; see the exact trigger.

When: NOT (p.hasSpeakableSchema)

lib/auditor-engine.ts:1771

### **Deduct 5 points**

No external citations/references — reduces credibility for AI models

When: NOT (p.citationCount >= 5) AND NOT (p.citationCount >= 1)

lib/auditor-engine.ts:1778

### **Deduct 4 points**

Conditional deduction; see the exact trigger.

When: NOT (p.statisticCount >= 5) AND (p.statisticCount === 0)

lib/auditor-engine.ts:1782

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.quoteCount >= 2)

lib/auditor-engine.ts:1786

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (p.hasExpertiseSignals) AND (p.hasAuthorInfo)

lib/auditor-engine.ts:1790

### **Deduct 6 points**

No author or expertise signals

When: NOT (p.hasExpertiseSignals) AND NOT (p.hasAuthorInfo)

lib/auditor-engine.ts:1791

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.clearCtaCount >= 3) AND (p.clearCtaCount >= 1)

lib/auditor-engine.ts:1795

### **Deduct 5 points**

No clear call-to-action elements detected

When: NOT (p.clearCtaCount >= 3) AND NOT (p.clearCtaCount >= 1)

lib/auditor-engine.ts:1796

### **Deduct 3 points**

No CTA above the fold

When: NOT (p.hasAboveFoldCta)

lib/auditor-engine.ts:1799

### **Deduct 3 points**

Low form usability score ([observed value]/100) — may reduce form completions

When: NOT (p.formCount > 0 && p.formUsabilityScore >= 80) AND (p.formCount > 0 && p.formUsabilityScore < 60)

lib/auditor-engine.ts:1802

### **Deduct 4 points**

Insufficient trust signals for conversion optimization

When: NOT (p.hasTrustSignals)

lib/auditor-engine.ts:1805

### **Deduct 3 points**

No social proof elements

When: NOT (p.hasSocialProof)

lib/auditor-engine.ts:1808

### **Deduct 3 points**

No clear value proposition in headings

When: NOT (p.hasValueProposition)

lib/auditor-engine.ts:1811

# Accessibility — base rules

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## Deduct 10 points

Missing lang attribute on <html>

When: NOT (p.hasLangAttr)

lib/auditor-engine.ts:1480

## Deduct 8 points

No skip navigation link

When: NOT (p.hasSkipNav)

lib/auditor-engine.ts:1484

## Deduct missing.length \* 4 points

Missing landmarks: [observed value]

When: NOT (landmarksPresent.length === 3)

lib/auditor-engine.ts:1494

## Deduct Math.min(15, p.imagesWithoutAlt \* 2) points

[observed value] of [observed value] images ([observed value]%) missing alt text

When: NOT (p.imageCount > 0 && p.imagesWithoutAlt === 0) AND (p.imagesWithoutAlt > 0)

lib/auditor-engine.ts:1503

## Deduct 8 points

[observed value] form(s) missing proper labels

When: NOT (p.formCount > 0 && p.formsWithoutLabels === 0) AND (p.formsWithoutLabels > 0)

lib/auditor-engine.ts:1510

## Deduct 5 points

[observed value] iframe(s) missing title

When: NOT (p.iframeCount > 0 && p.iframesWithTitle >= p.iframeCount) AND (p.iframeCount > 0 && p.iframesWithTitle < p.iframeCount)

lib/auditor-engine.ts:1514

## Deduct Math.min(8, unlabeled \* 2) points

[observed value] button(s) missing accessible labels

When: NOT (p.buttonCount > 0 && p.buttonsWithLabel >= p.buttonCount) AND (p.buttonCount > 0 && p.buttonsWithLabel < p.buttonCount)

lib/auditor-engine.ts:1520

## Deduct 5 points

No ARIA attributes detected

When: NOT (p.ariaCount > 10) AND NOT (p.ariaCount > 0)

lib/auditor-engine.ts:1528

### **Deduct 4 points**

Heading hierarchy has gaps — confusing for screen readers

When: (p.headingGaps.length > 0)

lib/auditor-engine.ts:1531

### **Deduct 8 points**

No focus styles detected

When: NOT (p.hasFocusStyles)

lib/auditor-engine.ts:1535

### **Deduct 3 points**

Deprecated HTML tags impact accessibility

When: (p.deprecatedTags.length > 0)

lib/auditor-engine.ts:1538

### **Deduct 5 points**

Potential contrast issues: [observed value]

When: (p.colorContrastHints.length > 0)

lib/auditor-engine.ts:1541

### **Deduct 6 points**

[observed value] HTML validity issues detected — affects assistive technology parsing

When: (p.htmlNestingErrors.length > 5)

lib/auditor-engine.ts:1544

### **Deduct 3 points**

[observed value] minor HTML validity issue(s)

When: NOT (p.htmlNestingErrors.length > 5) AND NOT (p.htmlNestingErrors.length > 0 && p.htmlNestingErrors.length <= 5 && p.isModernFramework) AND (p.htmlNestingErrors.length > 0)

lib/auditor-engine.ts:1546

### **Deduct 5 points**

[observed value] images missing explicit dimensions — causes layout shifts for screen reader users

When: (p.imageCount > 3 && p.imagesWithWidthHeight < p.imageCount \* 0.5)

lib/auditor-engine.ts:1551

### **Deduct 5 points**

[observed value] table(s) missing <th> header cells — screen readers cannot identify column/row context

When: (p.tablesWithoutHeaders > 0)

lib/auditor-engine.ts:1558

### **Deduct 8 points**

[observed value] video(s) missing captions/subtitles

When: (p.videosWithoutCaptions > 0)

lib/auditor-engine.ts:1565

### **Deduct 5 points**

CAPTCHA detected without accessible alternative

When: (p.hasCaptcha && !p.captchaHasAlternative)

lib/auditor-engine.ts:1568

### **Deduct Math.min(6, p.emptyButtonCount \* 2) points**

[observed value] button(s) with no accessible label

When: (p.emptyButtonCount > 0)

lib/auditor-engine.ts:1572

### **Deduct 5 points**

[observed value] focusable element(s) inside aria-hidden containers

When: (p.ariaHiddenOnFocusable > 0)

lib/auditor-engine.ts:1575

### **Deduct Math.min(6, p.duplicateIds \* 2) points**

[observed value] duplicate ID(s) — breaks ARIA references and label associations

When: (p.duplicateIds > 0)

lib/auditor-engine.ts:1578

# GEO (Generative Engine Optimization) — base rules

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## Deduct 10 points

No direct Q&A patterns for generative AI extraction

When: NOT (p.hasQAPattern)

lib/auditor-engine.ts:1827

## Deduct 8 points

No data tables for AI comparison extraction

When: NOT (p.tableCount >= 1)

lib/auditor-engine.ts:1831

## Deduct 5 points

Few or no lists

When: NOT (p.listCount >= 5) AND NOT (p.listCount >= 2)

lib/auditor-engine.ts:1836

## Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (p.hasHowToPattern)

lib/auditor-engine.ts:1843

## Deduct 3 points

Conditional deduction; see the exact trigger.

When: NOT (p.definitionLists > 0)

lib/auditor-engine.ts:1847

## Deduct 10 points

Content too thin for AI citation value

When: NOT (p.wordCount >= 1000) AND (p.wordCount < 500)

lib/auditor-engine.ts:1851

## Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (p.entityMentions.length >= 8)

lib/auditor-engine.ts:1855

## Deduct 5 points

Insufficient structured data for generative engine context

When: NOT (p.schemaCount >= 2)

lib/auditor-engine.ts:1859

### Deduct 3 points

hint

When: (p.contentReadabilityHints.length > 0) AND (hint.includes('too long'))

lib/auditor-engine.ts:1864

### Deduct 5 points

hint

When: (p.contentReadabilityHints.length > 0) AND (hint.includes('thin content'))

lib/auditor-engine.ts:1865

### Deduct 5 points

Hreflang set is missing a self-referencing tag — reduces geo-targeting accuracy

When: (p.hasHreflang) AND (p.hreflangMissingSelfRef)

lib/auditor-engine.ts:1872

### Deduct 5 points

Hreflang set is missing x-default fallback

When: (p.hasHreflang) AND (p.hreflangMissingXDefault)

lib/auditor-engine.ts:1874

### Deduct 8 points

No hreflang tags — generative engines cannot determine language/region targeting

When: NOT (p.hasHreflang)

lib/auditor-engine.ts:1877

### Deduct 4 points

No statistics or data points in substantial content

When: NOT (p.statisticCount >= 5) AND (p.statisticCount === 0 && p.wordCount > 500)

lib/auditor-engine.ts:1885

### Deduct 3 points

Conditional deduction; see the exact trigger.

When: NOT (p.originalDataSignals >= 3) AND (p.originalDataSignals === 0)

lib/auditor-engine.ts:1889

### Deduct 5 points

Content appears stale (over 1 year since last update)

When: NOT (p.contentFreshnessSignal === 'fresh') AND NOT (p.contentFreshnessSignal === 'recent') AND (p.contentFreshnessSignal === 'stale')

lib/auditor-engine.ts:1894

### Deduct 3 points

Conditional deduction; see the exact trigger.

When: NOT (p.uniqueInsightPatterns >= 3)

lib/auditor-engine.ts:1898

## Mobile & PWA — base rules

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### Deduct 8 points

Viewport does not include width=device-width

When: (p.hasViewport) AND (!p.viewportContent.includes('width=device-width'))

lib/auditor-engine.ts:1016

### Deduct 25 points

Missing viewport meta tag — page will not render correctly on mobile

When: NOT (p.hasViewport)

lib/auditor-engine.ts:1018

### Deduct 5 points

Missing or non-HTML5 doctype

When: NOT (p.doctype)

lib/auditor-engine.ts:1022

### Deduct 5 points

Missing charset declaration

When: NOT (p.hasCharset)

lib/auditor-engine.ts:1025

### Deduct 5 points

No theme-color meta tag

When: NOT (p.hasThemeColor)

lib/auditor-engine.ts:1028

### Deduct 8 points

No web app manifest found

When: NOT (p.hasManifest)

lib/auditor-engine.ts:1031

### Deduct 5 points

Missing Apple touch icon

When: NOT (p.hasTouchIcons)

lib/auditor-engine.ts:1034

### Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (p.hasServiceWorker)

lib/auditor-engine.ts:1037

### Deduct 8 points

No responsive image srcset — mobile users may download oversized images

When: NOT (p.hasSrcset) AND (p.imageCount > 3)

lib/auditor-engine.ts:1040

### **Deduct 8 points**

Viewport disables user zoom (maximum-scale=1 or user-scalable=no)

When: (p.viewportDisablesZoom)

lib/auditor-engine.ts:1047

### **Deduct 8 points**

[observed value] potentially undersized touch targets detected

When: (p.smallTouchTargets > 10)

lib/auditor-engine.ts:1050

### **Deduct 4 points**

[observed value] small touch target(s) may be difficult to tap on mobile

When: NOT (p.smallTouchTargets > 10) AND (p.smallTouchTargets > 3)

lib/auditor-engine.ts:1051

### **Deduct 8 points**

Fixed-width elements detected (>800px) — may cause horizontal scrolling on mobile

When: (p.hasFixedWidthElements)

lib/auditor-engine.ts:1054

### **Deduct 5 points**

Popup/modal/interstitial detected — Google penalizes intrusive interstitials on mobile

When: (p.hasPopupOrModal)

lib/auditor-engine.ts:1057

### **Deduct 3 points**

Manifest present but no service worker — PWA install prompt will not fire

When: NOT (p.hasManifest && p.hasServiceWorker && p.isHttps) AND (p.hasManifest && !p.hasServiceWorker)

lib/auditor-engine.ts:1064

### **Deduct 3 points**

Only [observed value] manifest icon size(s) — recommend at least 4 (192, 384, 512, maskable)

When: NOT (p.manifestIconsCount >= 4) AND (p.manifestIconsCount > 0 && p.manifestIconsCount < 4)

lib/auditor-engine.ts:1067

### **Deduct 2 points**

Conditional deduction; see the exact trigger.

When: NOT (p.touchFeedbackDetected)

lib/auditor-engine.ts:1075

### **Deduct 5 points**

Estimated page weight ~[observed value]KB — heavy for mobile data plans

When: (p.estimatedPageWeightKb > 0) AND (p.estimatedPageWeightKb > 5000)

lib/auditor-engine.ts:1079

## Deduct 5 points

Estimated page weight ~[observed value]KB — heavy for mobile data plans

When: (p.estimatedPageWeightKb > 0) AND NOT (p.estimatedPageWeightKb > 5000) AND (p.estimatedPageWeightKb > 3000 && !p.isModernFramework)

lib/auditor-engine.ts:1080

# AEO (Answer Engine Optimization) — base rules

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## Deduct 8 points

FAQ content exists but lacks FAQPage schema

When: NOT (p.hasFAQSchema) AND (p.faqCount > 0)

lib/auditor-engine.ts:1917

## Deduct 15 points

No FAQ content or schema

When: NOT (p.hasFAQSchema) AND NOT (p.faqCount > 0)

lib/auditor-engine.ts:1918

## Deduct 5 points

How-to content exists but lacks HowTo schema

When: NOT (p.hasHowToSchema) AND (p.hasHowToPattern)

lib/auditor-engine.ts:1922

## Deduct 5 points

Conditional deduction; see the exact trigger.

When: NOT (p.hasHowToSchema) AND NOT (p.hasHowToPattern)

lib/auditor-engine.ts:1923

## Deduct 10 points

Content not optimized for featured snippets

When: NOT (p.hasQAPattern)

lib/auditor-engine.ts:1927

## Deduct 8 points

No Speakable schema for voice search

When: NOT (p.hasSpeakableSchema)

lib/auditor-engine.ts:1931

## Deduct 5 points

Paragraphs too long for answer engine extraction

When: NOT (p.avgWordsPerParagraph > 0 && p.avgWordsPerParagraph <= 30) AND (p.avgWordsPerParagraph > 40)

lib/auditor-engine.ts:1935

## Deduct 3 points

Conditional deduction; see the exact trigger.

When: NOT (p.hasBreadcrumbNav && p.hasBreadcrumbSchema) AND (p.hasBreadcrumbNav)

lib/auditor-engine.ts:1939

## Deduct 5 points

No breadcrumb navigation

When: NOT (p.hasBreadcrumbNav && p.hasBreadcrumbSchema) AND NOT (p.hasBreadcrumbNav)

lib/auditor-engine.ts:1940

### **Deduct 5 points**

Conditional deduction; see the exact trigger.

When: NOT (p.listCount >= 3)

lib/auditor-engine.ts:1944

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (p.hasVideoObject)

lib/auditor-engine.ts:1948

### **Deduct 4 points**

Few concise answer paragraphs for snippet extraction

When: NOT (p.conciseAnswerBlocks >= 5) AND (p.conciseAnswerBlocks < 2)

lib/auditor-engine.ts:1954

### **Deduct 4 points**

No direct answer patterns ("X is defined as...", "X refers to...")

When: NOT (p.directAnswerPatterns >= 3) AND (p.directAnswerPatterns === 0)

lib/auditor-engine.ts:1958

### **Deduct 3 points**

Paragraphs too long for voice assistant extraction

When: NOT (p.voiceReadyContentLength) AND (p.avgWordsPerParagraph > 40)

lib/auditor-engine.ts:1962

# Schema.org — base rules

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## Local SEO — base rules

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# WCAG (Web Content Accessibility Guidelines) — base rules

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## Deduct 10 points

No prefers-reduced-motion support

When: NOT (p.hasReducedMotion)

lib/auditor-engine.ts:2163

## Deduct 8 points

No high contrast mode support

When: NOT (p.hasHighContrastMode)

lib/auditor-engine.ts:2167

## Deduct 8 points

Links may not be distinguishable from surrounding text

When: NOT (p.linkDistinguishable)

lib/auditor-engine.ts:2171

## Deduct 5 points

No error suggestion mechanisms detected in forms

When: NOT (p.hasErrorSuggestions) AND (p.formCount > 0)

lib/auditor-engine.ts:2175

## Deduct 10 points

[observed value] autoplay media element(s) detected

When: (p.autoplayMedia > 0)

lib/auditor-engine.ts:2178

## Deduct 8 points

No relative units for text sizing detected

When: NOT (p.hasTextResize)

lib/auditor-engine.ts:2183

## Deduct 5 points

Low semantic-to-div ratio — [observed value] divs vs [observed value] semantic elements

When: NOT (wcagSemanticRatio > 8) AND (wcagSemCount > 0)

lib/auditor-engine.ts:2189

## Deduct 10 points

No semantic HTML5 elements detected

When: NOT (wcagSemanticRatio > 8) AND NOT (wcagSemCount > 0)

lib/auditor-engine.ts:2190

### **Deduct 5 points**

[observed value] elements with `tabindex="-1"` — may hide content from keyboard users

When: `(p.negativeTabIndex > 5)`

lib/auditor-engine.ts:2193

### **Deduct deduct points**

[observed value] potential color contrast issue(s)

When: `(p.contrastIssueCount > 0)`

lib/auditor-engine.ts:2196

### **Deduct 8 points**

No focus styles detected

When: `NOT (p.hasFocusStyles)`

lib/auditor-engine.ts:2200

### **Deduct 5 points**

Missing lang attribute

When: `NOT (p.hasLangAttr)`

lib/auditor-engine.ts:2204

### **Deduct $\text{Math.min}(8, \text{p.ariaRoleValidity.length} * 2)$ points**

Invalid ARIA roles: [observed value]

When: `(p.ariaRoleValidity.length > 0)`

lib/auditor-engine.ts:2209

### **Deduct 5 points**

High cognitive load signals (auto-carousels, animations, notification badges, complex layouts)

When: `(p.cognitiveLoadScore > 15)`

lib/auditor-engine.ts:2213

### **Deduct 2 points**

Moderate cognitive load from interactive patterns

When: `NOT (p.cognitiveLoadScore > 15) AND (p.cognitiveLoadScore > 8 && !p.isModernFramework)`

lib/auditor-engine.ts:2214

### **Deduct 4 points**

[observed value] heading level skip(s) — confuses screen reader navigation

When: `(p.headingLevelSkips > 2)`

lib/auditor-engine.ts:2218

### **Deduct 5 points**

No form error identification detected

When: `NOT (p.formErrorIdentification) AND (p.formCount > 0)`

lib/auditor-engine.ts:2222

### **Deduct 3 points**

Timed elements detected without option to extend

When: (!p.timingAdjustable)

lib/auditor-engine.ts:2225

### **Deduct 5 points**

Multiple fixed/sticky elements may obscure focused content (WCAG 2.4.11)

When: (!p.focusNotObscured)

lib/auditor-engine.ts:2229

### **Deduct 5 points**

Authentication form may require cognitive tasks without alternatives (WCAG 3.3.8)

When: (!p.accessibleAuth && p.formCount > 0)

lib/auditor-engine.ts:2232

### **Deduct 5 points**

Drag-and-drop detected without pointer-based alternative (WCAG 2.5.7)

When: (!p.draggingAlternative)

lib/auditor-engine.ts:2235

### **Deduct 3 points**

Conditional deduction; see the exact trigger.

When: NOT (p.ariaLiveRegionCount >= 2) AND (p.ariaLiveRegionCount === 0 && p.formCount > 0)

lib/auditor-engine.ts:2238

## Limitations and useful next steps

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Start with a finding's evidence, reproduce the issue, and decide whether the recommendation fits the page's purpose. Validate accessibility with assistive technology and real interaction; validate performance with browser measurements and appropriate field data. Confirm security leads in an authorized test environment. Use search-engine tools to establish indexing rather than treating this audit as an indexing verdict.

Not supplied by this deterministic page scan: authenticated analytics traffic, Search Console clicks/impressions/rank, commercial backlink authority, real-user performance distributions, or complete cross-device conformance. Optional integrations and source signatures do not establish that an external service is configured correctly.

Methodology sources: Google Search Central canonical, pagination, robots and AI-feature documentation; W3C WCAG 2.2; web.dev LCP guidance; OWASP Top 10, ASVS and WSTG. The source-derived entries and current implementation, rather than generic third-party claims, define what this edition actually inspects.