

MCP SERVER

NO CODE

CLOUD HOSTED

Keyword Density Analyzer MCP for AI Agents

Optimizing Content for Search Engine Visibility and Ranking

Keyword Density Analyzer calculates keyword frequency, density percentage, and spatial distribution in text to optimize SEO content. This MCP tells you exactly how often a specific term appears and if your writing falls within the optimal 1% to 3% range for search engine visibility.

B Quality Score 85/100

seo

keyword

content

optimization

text-analysis



The connectivity layer between AI and the world's software.



Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest
managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.

— Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

`https://edge.vinkius.com/{token}/mcp`

Claude



Cursor



VS Code



Windsurf



Grok



Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1)
Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

Get started at cloud.vinkius.com — connect your AI agent in under 60 seconds.

Keyword Density Analyzer MCP

0 tools available

Cloud-hosted on Vinkius

Optimizing content means more than just stuffing keywords; it requires structural analysis. Our Keyword Density Analyzer gives your AI agent precise control over text composition, letting you move beyond guesswork. You can use this MCP to find the exact count and density of any target term in a document. Furthermore, it maps out how those keywords are spread throughout the writing, revealing clusters or uneven gaps that hurt readability. Finally, it checks if your current ratio falls within the optimal 1% to 3% range recommended for search engines. By using this tool through Vinkius, you give your AI client a critical layer of content intelligence, ensuring every piece of written material performs its best for search ranking.

Core Capabilities

01 — Determine Keyword Count and Density

It calculates the precise number of times a target term appears in your text and provides the resulting density percentage.

03 — Validate SEO Compliance

The MCP compares your current keyword density against established optimal ranges (1% to 3%) and flags any risks.

02 — Map Keyword Placement

You can visualize where keywords appear in the document, identifying if they are clustered together or spread out evenly for better flow.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/mcp/keyword-density-analyzer — connect your AI agent in three steps.

- 01** Feed the Keyword Density Analyzer your source text and specify the target keyword you want to analyze.
- 02** The MCP runs three checks: frequency count, density calculation, and distribution mapping across the document's word indices.
- 03** Your AI client receives a comprehensive report detailing the exact percentages achieved and whether they meet optimal SEO standards.

The bottom line is that you get measurable data points on keyword usage that let you adjust your writing until it hits peak search engine performance.

Built For

Content marketers and technical SEO specialists need this. If you're tired of manually counting keywords or guessing if your content is 'good enough,' this MCP gives your AI agent the hard data needed to optimize for search engines.

Technical SEO Specialist

Uses this MCP daily to audit existing site copy, ensuring that keyword placement and density comply with current Google best practices.

Content Writer

Rely on the analyzer to validate drafts before submission, guaranteeing the target keywords are used in optimal quantity and location.

Digital Marketing Manager

Manages content teams by setting clear density goals and using the MCP results to prove whether a piece of content is ready for publication.

What Changes When You Connect

- 01** Pinpoint exact keyword usage: Use `calculate_keyword_frequency` to get the precise count and percentage density of a term, eliminating guesswork.

-
- 02 Improve readability flow: Run `map_keyword_distribution` to see where keywords actually land in your text, ensuring they are spread naturally instead of clumped together.

 - 03 Reduce SEO risk immediately: The MCP uses `check_density_compliance` to confirm your density stays within the sweet spot of 1% to 3%.

 - 04 Stop wasting time on drafts that miss the mark: You get instant, objective feedback on content structure and keyword usage before hitting publish.

 - 05 Maintain consistency across large sites: Use this MCP to audit hundreds of articles quickly, ensuring every piece meets uniform SEO standards.
-

Real-World Applications

A new article needs a density check

The marketing writer asks their agent to run `calculate_keyword_frequency` on the draft. The response shows that while the keyword 'sustainability' is used 5 times, resulting in only a 1.2% density, it's within the optimal range and ready for review.

Is my content too keyword-stuffed?

A client runs `check_density_compliance` on an old piece of content. The MCP flags a density of 4.5%, classifying it as 'High' risk and requiring the writer to immediately dilute the term usage.

Keyword placement feels weird

The editor uses `map_keyword_distribution` to check if the keyword 'AI tools' appears too often at the start of paragraphs. The report shows a cluster at word indices 10 and 15, prompting the writer to spread them out for better flow.

Need to compare multiple versions

The team uses this MCP repeatedly, running analyses on three different drafts. They can then compare all results side-by-side, confirming that each version hits the 1% to 3% density mark while maintaining natural language.

Patterns to Avoid

Assuming keywords are naturally used

X AVOID

Writing a long article and assuming enough keyword usage means good SEO. You might write dozens of articles that fail because the density is too low or erratic.

✓ INSTEAD

Don't guess. Run `calculate_keyword_frequency` first to get an accurate count, then use `check_density_compliance` to confirm it falls within the optimal 1% to 3% range.

Only checking for total word count

X AVOID

Focusing only on how many times a keyword appears without regard to where or if that usage makes sense in context.

✓ INSTEAD

After counting, always run `map_keyword_distribution`. This shows you the actual placement of keywords, helping you adjust them to feel more natural and less repetitive.

Over-optimizing a single piece

X AVOID

Tuning one article until it hits perfect density but making the text sound robotic or forced.

✓ INSTEAD

Use `calculate_keyword_frequency` to hit the target, but then use your agent to rewrite the surrounding copy. The goal is compliance, not just counting.

The Right Fit

You should use this MCP if you need objective proof that your content meets specific keyword usage metrics for search engines. This tool excels when you are auditing large volumes of existing text or revising drafts to fit strict density guidelines (1%–3%). Don't use it, however, if your goal is purely brainstorming creative ideas or generating initial outlines; those tasks require a general writing model. If your only need is basic word counting without checking for optimal ranges, a standard document editor will suffice. But when you need to prove technical compliance—like ensuring the keyword 'machine learning' appears between 1% and 3% of the time—this MCP provides the necessary metrics.

Keyword Density Analyzer: Solving SEO Content Gaps with Keyword Analysis

Right now, content writers waste hours manually checking keywords. They copy a text into one tool to count frequency, then paste it into another just to see if the spread is uneven. It's tedious clicking through tabs and juggling multiple spreadsheets until they finally get a rough idea of where they stand.

With this MCP, you eliminate that manual process entirely. You feed your content once, and the agent handles everything: calculating exact counts via `calculate_keyword_frequency`, checking for optimal range compliance with `check_density_compliance`, and visualizing placement with `map_keyword_distribution`. What you get is a single, actionable report telling you exactly what needs tweaking.

Keyword Density Analyzer: Improving Content Structure Beyond Simple Counting

The biggest manual step that goes away is the guesswork. You no longer have to *feel* if a keyword is used correctly; you just check the data. The MCP tells you precisely where 'machine learning' appears in relation to other words, helping you fix clunky or repetitive phrasing.

This isn't about counting words; it's about structure. This MCP guarantees your content not only hits the required density percentage but also places those keywords optimally throughout the text so search engines read it smoothly.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U I wrote a product page for solar panels and used 'solar' maybe too much. Can you check the keyword density?



Keyword Analysis Report: Solar Panels

- **Target Keyword:** solar
- **Total Count:** 8 instances
- **Text Length:** 350 words
- **Density Calculation:** 2.29%

✅ **Compliance Status:** Optimal.

(The density is within the recommended 1%–3% range for strong search visibility.)

U Where does 'sustainable' appear in this article? I think it's bunched up.



Keyword Distribution Map: Sustainable

The keyword was found at the following word indices:

- Index 12 (Start of paragraph)
- Index 45 (Mid-sentence)
- Index 89 (End of paragraph)

This spread suggests good natural integration. The distribution is wide and even throughout the text.

U Is this article density acceptable? I'm worried it's too low.



SEO Density Check

METRIC	VALUE
Target Keyword: 'AI agents'	3 times
Total Word Count	400 words
Calculated Density	0.75%

⚠ Compliance Status: Low Risk.

The density falls below the optimal threshold, suggesting you need to integrate the keyword more often.

Frequently Asked Questions

01 How do I check if my keyword density is too high?

Use the `check_density_compliance` tool with your calculated percentage to see if it falls into the 'High' risk tier. Tools available: `your_tool_name`.

02 Can I see where keywords are located in my text?

Yes, the `map_keyword_distribution` tool provides the exact word indices and relative positions of every occurrence.

03 What is the ideal keyword density?







For optimal SEO performance, aim for a density between 1% and 3%.

Go Live in 60 Seconds

Get your connection token from cloud.vinkius.com, then paste the endpoint URL into any MCP-compatible client.











YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
 Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
 Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
 VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add <code>"keyword-density-analyzer": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → Add endpoint URL
 ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
 Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

-  **Ask ChatGPT** 
-  **Ask Claude** 
-  **Ask Perplexity** 
-  **Ask Gemini** 
-  **Ask Grok** 

READY TO CONNECT

Keyword Density Analyzer is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and
start building. No SDK. No deployment. Just results.

[Start at cloud.vinkius.com](https://cloud.vinkius.com) →

vinkius.com · support@vinkius.com

INDEPENDENT PLATFORM DISCLAIMER

Vinkius is an independent platform and is not affiliated with, endorsed by, sponsored by, verified by, or otherwise authorized by Keyword Density Analyzer. All third-party trademarks, logos, and brand names are the property of their respective owners. Their use in this document is strictly for informational purposes to identify service compatibility and interoperability.

DOCUMENT INFORMATION

Generated	June 2026
MCP Server	Keyword Density Analyzer MCP
Server ID	019f11d5-bd32-7132-af7f-22e4ec349cdd
Platform	Vinkius Cloud for AI Agents
Endpoint	https://edge.vinkius.com/{token}/mcp

LICENSE & USAGE

This document is generated automatically by the Vinkius PDF Engine. Content reflects the MCP server configuration at the time of generation and may change as updates are deployed. For the most current information, visit vinkius.com/mcp/keyword-density-analyzer.