MCP SERVER | NO CODE | CLOUD HOSTED

SafeGraph MCP

Analyze global location and foot traffic patterns.

SafeGraph lets you analyze complex geographic data using natural language. It connects your AI to a massive dataset of Points of Interest (POIs), building geometries, and historical foot traffic patterns worldwide. You can query specific brands, find all locations within a radius, or map the precise footprint of any structure simply by asking questions.

A+ Quality Score 98.33/100

geospatial-data | poi-data | foot-traffic-analysis | location-intelligence | demographics | data-mapping

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vinkius.com/mcp/safegraph

SCAN TO VIEW

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.

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.

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.

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	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	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.

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.

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.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken 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.

Agent Activity

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

FinOps

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

Tool Health

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

Firewall & DLP

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

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.

SafeGraph MCP

10 tools available
Cloud-hosted on Vinkius

Need to know what's physically happening in an area? This connection gives your AI expert-level geographic analysis without ever touching complex database queries. It turns general questions into highly detailed location intelligence. You can find every coffee shop within a half-mile radius or map the exact polygon of a building using its Placekey. Furthermore, you gain access to historical data, letting you check foot traffic volumes and average visitor dwell times for any structure over time. This deep capability is available instantly via Vinkius, making it one of the most powerful geospatial datasets in the catalog. It’s pure analytical power, giving your agent the ability to act like a professional urban planner or retail analyst.

Core Capabilities

01 — Identify specific local businesses

Search for all locations belonging to a particular brand or industry within defined geographical boundaries.

02 — Map building footprints and borders

Retrieve the precise geometric polygon for an individual building, or search for all places contained inside a custom-drawn city border.

03 — Analyze historical movement patterns

Get metrics on foot traffic volume, typical visit frequency, and how long people stay at specific locations over time.

04 — Query complex spatial regions

Perform broad searches for places based on NAICS industry codes or by passing a custom geographic polygon (WKT).

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/safegraph** — connect your AI agent in three steps.

01 Install the SafeGraph mapping block into your AI workspace and input your API key.

02 Your agent processes your natural language request, identifying the necessary location parameters (lat/lon, radius, brand name).

03 The MCP executes the correct geographical query against the SafeGraph dataset and returns structured data, like polygons or lists of POIs.

The bottom line is you stop writing SQL queries and start asking questions about the physical world.

Built For

Retail analysts who need to justify lease decisions, urban planners mapping infrastructure flow, or market researchers needing precise demographic data. This tool helps people move from 'I think' to 'Here is the data.'

Commercial Real Estate Analyst

Determining if a new store location has adequate foot traffic and proximity to key competitors before signing a lease.

Urban Planner

Mapping the flow of people or identifying which structural elements (like malls or industrial complexes) serve as parent containers for smaller developments.

Market Research Specialist

Checking if a specific brand's footprint is concentrated in one neighborhood, or analyzing market density by NAICS code across regions.

What Changes When You Connect

01 You gain the ability to analyze specific brand concentrations. Instead of manually cross-referencing store maps, you can ask your agent to find all 'Starbucks' locations within Seattle instantly using `search_brand_places`.

02 The process of mapping structures becomes trivial. You don't need CAD software; just give your AI a Placekey and use `lookup_building_geometry` to pull the exact polygon coordinates for that site.

03 Understand human behavior, not just addresses. Using `lookup_place_patterns`, you can get historical data showing if a location has high foot traffic and what the typical dwell time is—critical intel for retail.

04 Complex geographic searches are handled in plain language. Need to know everything within 500 meters of a point? Use `search_distance_radius` and let your agent handle the math.

05 You can search by industry or custom boundaries using `search_industry_naics` or `search_wkt_polygon`. This lets you segment data that was previously siloed in different database tables.

Real-World Applications

Checking Competitor Density

A retail client needs to know where all their major competitors are located in a potential new market. They ask the agent, 'Find all locations for Best Buy and Target within 1 mile of this intersection.' The agent uses `search_distance_radius` and returns both lists, allowing immediate competitive mapping.

Analyzing Site Potential

An urban planner needs to understand the structural relationships in a large commercial district. They ask the agent about a major shopping center's container structure. The agent runs `lookup_parent_polygon` and confirms the overall boundaries, helping map development.

Understanding Customer Behavior

A museum director wants to gauge visitor interest in specific exhibits. They ask the agent for historical foot traffic data on a certain hall's Placekey. The agent runs `lookup_place_patterns` and reports low average dwell times, signaling a need for exhibit redesign.

Bulk Location Data Retrieval

A data scientist has 50 unique location IDs they want to analyze quickly. Instead of running 50 separate queries, the agent uses `batch_lookup_placekeys` in one call to retrieve all necessary attributes simultaneously.

Patterns to Avoid

Manual Radius Searches

✗ AVOID

Attempting to manually calculate the coordinates and radius for every potential site on a spreadsheet.

✓ INSTEAD

Use `search_distance_radius` in your agent. You just provide the starting point (lat, lon) and the desired radius in meters; the MCP handles the complex math.

Over-reliance on Basic Search

✗ AVOID

Using only general search tools that return vague results without specifying industry or geometry.

✓ INSTEAD

For precise segmentation, combine methods. First use `search_industry_naics` to narrow the sector, then run `search_wkt_polygon` using a custom boundary for maximum accuracy.

Querying Structure Separately

✗ AVOID

Needing both the overall mall boundary and the individual store geometry in multiple steps.

✓ INSTEAD

Start by identifying the parent container with `lookup_parent_polygon`. Then, for specific stores within that area, use `lookup_building_geometry` to get their precise footprint.

The Right Fit

Use this MCP if your job requires knowing exactly where things are—structurally, commercially, or historically. If you need to know the polygon of a building, the traffic volume at a corner store, or every coffee shop within a 1-mile radius, this is what you use. Don't use it if you just need general business directory listing data; for simple lookups by name and city, a basic mapping API might suffice. However, if your analysis needs to factor in historical foot traffic (using `lookup_place_patterns`) or segment results based on complex industry codes (`search_industry_naics`), this SafeGraph MCP is essential because it provides the deep geospatial context that general APIs lack.

Tracking physical locations used to be a painful, multi-tab process.

Today, mapping out a market means jumping between five different dashboards: one for demographics, one for competitor addresses, another for historical traffic data, and finally, a GIS tool just to draw the custom polygon boundaries. You spend hours copying coordinates from one spreadsheet into another, constantly verifying if the raw address corresponds to the actual physical footprint.

With this MCP connection, you describe the problem in plain language. Your agent handles the entire process—it pulls the required polygons using `lookup_building_geometry` and combines that with foot traffic data via `lookup_place_patterns`. You get a single, actionable report without ever leaving your chat window.

SafeGraph MCP gives you precise insights into location patterns.

You no longer need to run separate queries just to confirm boundaries. The tool allows you to identify the parent container—the mall or complex—and then drill down immediately using `lookup_parent_polygon` and `lookup_building_geometry` for every store inside.

The difference is that your AI client doesn't just give you a list; it gives you quantifiable, geometrically accurate data about *how* people use the space. It's the difference between guessing and knowing.

SafeGraph MCP with 10 Tools

Use these specialized tools to filter, sort, segment location data, map precise footprints, analyze pedestrian flow, and retrieve deep geographic intelligence.

#	TOOL	DESCRIPTION
01	batch_lookup_placekeys	Performs multiple Placekey lookups efficiently using a single JSON array input.
02	graphql_raw_query	Executes any raw GraphQL query against the SafeGraph API for complex data retrieval.
03	lookup_building_geometry	Retrieves the exact polygon coordinates defining a specific building's physical footprint.
04	lookup_parent_polygon	Identifies and maps the encompassing parent location, such as an airport or mall, for any given site.
05	lookup_place_patterns	Retrieves historical data showing pedestrian foot traffic volumes and average dwell times at a specific location.
06	lookup_placekey	Gets detailed attribute information for any known location using its unique Placekey ID.
07	search_brand_places	Searches for all locations belonging to a specific brand within a defined city boundary.
08	search_distance_radius	Finds places that fall within a specified radius from given latitude and longitude coordinates.
09	search_industry_naics	Searches for locations using specific NAICS industry codes combined with a regional filter.
10	search_wkt_polygon	Finds all places contained within an area defined by a custom geometric polygon (WKT format).

See It in Action

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

U Search for all the Starbucks branches strictly inside the city of Seattle, WA.

I've successfully queried SafeGraph places. Found 50 highly visible Starbucks locations associated inside Seattle, providing the unique Placekey IDs sequentially for each site mapped correctly.

U Check what the detailed building geometry polygon is for Placekey '22m-xyz-1234'.

I executed a targeted building geometry lookup securely. The geometric bounding lines forming the structure of site '22m-xyz-1234' are POLYGON((-122.123 47.982, ...)), completely reflecting its physical real-world footprint mapped securely.

U Can you gather the historical pedestrian traffic patterns evaluating typical visit frequencies around Placekey '123-abc-987'?

The foot traffic data has been cleanly retrieved from the registry! Based on safe historical compilations, this location captures an approximate volume of 12,000 visitors routinely holding a median dwell time reaching precisely 45 minutes on active days.

Frequently Asked Questions

01 **How do I find all locations for a specific brand using SafeGraph MCP?**

You run `search_brand_places`. You just tell your agent the brand name (like Starbucks) and the city, and it returns every matching location in that area.

02 **Can I analyze foot traffic with SafeGraph MCP?**

Yes. Use `lookup_place_patterns` to retrieve historical data on how many people visited a place and what their average time spent there was.

03 **What is the difference between using search_distance_radius and search_wkt_polygon?**

`search_distance_radius` finds everything in a circle around one point. `search_wkt_polygon` lets you draw an irregular shape, like a specific neighborhood boundary, to find everything inside that custom area.

04 **Does SafeGraph MCP handle complex queries?**

It does. For ultimate flexibility, use the `graphql_raw_query` tool, which lets you pass any complex query directly to the API root structure.

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 `"safegraph": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → 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

SafeGraph 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 →

vinkius.com · support@vinkius.com

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