

Generative Engine Optimization (GEO)

Overview

Large-language-model-powered systems such as **ChatGPT**, Google's **AI Overviews**, **Perplexity** and **Gemini** combine retrieval with generation to answer user queries. These *generative engines* search the web and then generate a synthesized answer with citations. Unlike traditional search engines, generative engines embed citations in a structured answer, making ranking and visibility more nuanced. Content creators have little control over when and how their websites are cited ¹. **Generative Engine Optimization (GEO)** is a new research area and marketing discipline that aims to **optimize content for generative engines** so that it is cited more often and ranked higher in generated answers ². The concept is similar to **Search Engine Optimization (SEO)** but addresses AI-generated answers rather than blue-link lists ³.

This report summarizes academic research, datasets and open-source resources, lists commercial GEO tools and startups, and highlights funding events for companies developing GEO platforms.

Academic research and datasets

Resource	Description	Citation
GEO: Generative Engine Optimization (Aggarwal et al., 2024)	First academic paper proposing GEO. It formalizes <i>generative engines</i> (combined retrieval and LLM generation) and introduces a black-box optimization framework that ingests a website and produces an optimized version to increase its visibility in generative engines ⁴ . The paper argues that visibility metrics must account for the positions and influence of citations within generated answers ⁵ . Evaluations on a prototype GE and on Perplexity.ai show GEO can improve citation visibility by up to 40 % ⁶ .	⁷
GEO-bench dataset	Dataset accompanying Aggarwal et al.'s paper. Contains 10 000 queries across multiple domains drawn from sources such as MS Macro, ORCAS-1, Natural Questions and GPT-4-generated queries ⁸ . Each query is associated with five cleaned sources and tagged with more than 50 attributes ⁹ . A public leaderboard hosted on Hugging Face allows researchers to submit new optimization methods ¹⁰ .	¹¹

Resource	Description	Citation
Answer Engine Optimization (AEO) research	AEO is an adjacent concept focusing on optimizing content for direct-answer features such as Google's featured snippets and AI overviews . Most available resources are practical guides rather than peer-reviewed papers. For example, market guides explain that AEO uses structured data and high-quality content to increase the chance of being cited by AI systems ¹² .	¹²

GEO benchmark and code resources

- **Project website** – The GEO research group hosts a project site with links to the paper, dataset and leader-board ¹³.
- **Code repository** – The authors provide code for reproducibility and optimization methods (hosted on GitHub via the project site). This code implements the black-box optimization framework and baseline strategies.
- **Dataset on Hugging Face** – The GEO-bench dataset is publicly available on Hugging Face; it includes training/validation/test splits and example queries ¹¹.

Commercial GEO platforms and tools

Numerous startups and SaaS providers offer tools to monitor how brands appear in AI-generated answers and to recommend optimizations. Many of these tools are listed in the open-source “generative-engine-optimization-tools” repository (maintained by Izak Fisher), which compiles marketing platforms and dashboards ¹⁴. Below are notable platforms, their focus areas and known funding.

Platforms with disclosed funding

Company/ platform	Description	Funding (latest known)	Sources
Athena (AthenaHQ)	Platform for monitoring and improving a brand's presence across generative engines (ChatGPT, Perplexity, Claude, Gemini). Provides a “360-degree view” of how customers discover a brand and an action centre with AI-generated recommendations ¹⁵ .	US \$2.2 million seed round (Jun 2025) from Y Combinator, FCVC, Red Bike Capital, Amino Capital and search executives ¹⁶ .	¹⁵ ¹⁶

Company/ platform	Description	Funding (latest known)	Sources
Profound	Enterprise platform that tracks how brands appear in AI search and provides answer-engine insights. The company generates synthetic prompts to analyse brand presence and integrates with websites to monitor which pages are crawled ¹⁷ .	US \$3.5 million seed (Aug 2024) from Khosla Ventures, South Park Commons and angels ¹⁸ ; US \$20 million Series A (Jun 2025) led by Kleiner Perkins with participation from Khosla Ventures, Nvidia NVentures, Saga, South Park Commons and SV Angel ¹⁹ .	¹⁸ ¹⁹
Bluefish AI	Tempe-based startup providing AI visibility monitoring and brand-safety console. Helps businesses in industries like tourism, healthcare and retail monitor their presence on generative engines and identifies influential third-party sources ²⁰ .	US \$5 million seed funding from Crane Ventures and Laconia (mid-2025) ²¹ .	²⁰
Otterly.AI	Austrian startup offering a dashboard that tracks AI search results and link citations across models like ChatGPT, Perplexity and Google AI Overviews. It monitors brand mentions and sentiment and plans to add a recommendation engine ²² .	No public funding disclosed (some sources indicate a €0.5 million seed, but figures are unverified).	²²
Goodie AI	All-in-one answer-engine optimization suite for consumer-brand marketers. Provides monitoring, analysis and optimization features (pricing not widely available) ²³ .	No public funding disclosed.	²³

Other GEO/AEO tools (curated from the open-source list)

These tools focus on monitoring generative-engine visibility, analysing citations, and offering optimization recommendations. Pricing and business models vary; some have free trials while others target enterprise customers.

Tool	Focus area
AiCarma	Daily visibility score and weekly reports showing how ChatGPT, Perplexity and Google AI Overviews mention a brand ²⁴ .

Tool	Focus area
AI Rank Tracker	Experimental tool from DejanSEO that mines language-association graphs to show which entities LLMs associate with a brand ²⁵ .
Am I on AI?	Simple checker showing how often ChatGPT recommends a business and offering priority fixes ²⁶ .
AppearOnAI	Action-oriented audit and playbook to boost site visibility inside ChatGPT, Claude and Gemini answers ²⁷ .
Avenue Z (AIO)	Consultancy service that provides share-of-voice templates and guided roadmaps for AI visibility ²⁸ .
Bluefish AI	Unified visibility and brand-safety console with consumer-engagement tools ²⁹ .
BrandLight.ai	Tracks and “reshapes” narratives AI engines tell about a brand using influence-source scoring ³⁰ .
Cognizo	Combines prompt-level analytics, sentiment and customer-journey gap detection into an “AI Visibility CRM” ³¹ .
Evertune	Provides an AI Brand Index and benchmarks which publishers influence LLM output ³² .
Exanimo.ai	White-label GEO platform for agencies; supports multi-client dashboards and SOC-2 compliance ³³ .
FalconRank.ai	Offers instant rankings for AI Overviews, ChatGPT, Gemini and more; rolls results into a single “AI Visibility Score” ³⁴ .
Gumshoe AI	Surfaces the citations competitors own and suggests takeover tactics ³⁵ .
LLMO Metrics	Scores visibility and prioritises tweaks most likely to boost citations in ChatGPT, Gemini and Copilot ³⁶ .
ModelMonitor	Monitors brand mentions across 50 + models (OpenAI, Anthropic, Grok, etc.) with API and webhooks ³⁷ .
Otterly.AI	Real-time dashboard for Google AI Overviews, ChatGPT and Perplexity; tracks citations, sentiment and share of voice ³⁸ .
Peec AI	Marketing console benchmarking ChatGPT, Claude, Gemini and Perplexity visibility across countries; includes competitor leaderboards ³⁹ .
Peekaboo	Competitor-insights engine showing which rivals capture your traffic in AI chat and by how much ⁴⁰ .
Profound	Enterprise answer-engine optimization platform; monitors brand presence and generates optimization recommendations ¹⁷ .
Promptwatch	Tracks brand mentions, pinpoints answer gaps and suggests new content topics ⁴¹ .

Tool	Focus area
Quno.ai	Brand-visibility scorecard, prompt-library tester and AI-SEO writer with a free tier ⁴² .
Rankscale.ai	GEO suite including rank tracking, competitive gap analysis and tactics blog ⁴³ .
Scrunch AI	Provides content analysis for AI readability and optimization recommendations ⁴⁴ .
Senso.ai	Detects content gaps and keeps messaging consistent across AI surfaces; integrates with CMS for auto-publishing ⁴⁵ .
Share of Model	Jellyfish's platform measuring proportional mentions across LLMs (share of voice) ⁴⁶ .
Trackerly.ai	Daily brand-mention tracker covering multiple LLMs in 20 + languages; auto-builds reports ⁴⁷ .
Trakkr.ai	Free beta tool doing daily prompt generation and tracking across the five biggest LLMs ⁴⁸ .
What AI Knows About You	Audits the facts, sentiment and hallucinations AI engines present about a brand and alerts for reputation risks ⁴⁹ .
xfunnel.ai	Maps the conversion journey inside LLM answers to identify missing FAQs and optimization opportunities ⁵⁰ .

Guidance for optimizing content for AI search

- **Focus on high-quality, relevant content** – GEO and SEO both emphasize that content should be **authoritative, trustworthy and aligned with the user's intent** ⁵¹ . Structured data (e.g., schema markup), citations from trusted sources, and clear language help generative models understand and quote your content ⁵² .
- **Use conversational and long-tail phrases** – Generative models often process **natural-language prompts**, so including conversational questions and answers can increase the chances of being cited ⁵³ .
- **Provide statistics, quotes and citations** – Aggarwal et al. found that including **citations, quotations and statistics** in website content significantly boosts visibility in generated answers, increasing citations by over **40 %** ⁵⁴ .
- **Monitor AI visibility** – Use GEO tools to track how different AI models mention your brand and which prompts trigger citations. Identify competitor citations and adjust content accordingly.
- **Iterate and adapt** – AI engines evolve quickly; strategies should be updated based on changes in models and ranking behaviour ⁵⁵ .

Conclusion

Generative Engine Optimization is emerging as an important discipline alongside search engine optimization. Academic research shows that optimizing websites specifically for generative engines can yield **substantial visibility improvements** ⁶ . Commercial demand for GEO has spurred a new generation of startups and tools that help brands measure how AI models cite them and recommend optimizations. As AI-powered search grows, marketers and content creators should adopt GEO best

practices and monitor their presence across generative engines to remain visible in zero-click search environments.

1 2 8 9 10 11 13 **GEO: Generative Engine Optimization**

<https://generative-engines.com/GEO/>

3 12 51 52 53 55 **What is generative engine optimization (GEO)?**

<https://searchengineland.com/what-is-generative-engine-optimization-geo-444418>

4 5 6 7 54 **GEO: Generative Engine Optimization**

<https://arxiv.org/html/2311.09735v3>

14 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 40 41 42 43 45 46 47 48 49 50

raw.githubusercontent.com

<https://raw.githubusercontent.com/izak-fisher/generative-engine-optimization-tools/refs/heads/main/README.md>

15 23 39 44 **Top 10 Generative Engine Optimization Tools To Try in 2025 | AthenaHQ - Pioneering Generative Engine Optimization (GEO)**

<https://www.athenahq.ai/articles/generative-engine-optimization-tools/>

16 **Athena Raises \$2.2M in Seed Funding**

<https://www.finsmes.com/2025/06/athena-raises-2-2m-in-seed-funding.html>

17 19 **\$20M to pioneer Answer Engine Optimization**

<https://www.tryprofound.com/blog/series-a>

18 **Move over SEO, Profound is helping brands with AI search optimization | TechCrunch**

<https://techcrunch.com/2024/08/13/move-over-seo-profound-is-helping-brands-with-ai-search-optimization/>

20 21 **Arizona Startups Revolutionizing AI Search Visibility for Businesses | Arizona Business Collective**

<https://arizonabusinesscollective.com/arizona-startups-revolutionizing-ai-search-visibility-for-businesses/>

22 **AI is burying company websites in search results, but Otterly.AI thinks it can help | TechCrunch**

<https://techcrunch.com/2024/12/18/ai-is-burying-company-web-sites-in-search-results-but-otterly-ai-thinks-it-can-help/>