



THE IMPACT OF AI ON SEARCH ENGINE OPTIMIZATION

December 2024



Introduction

A Brief History of (Search) Time

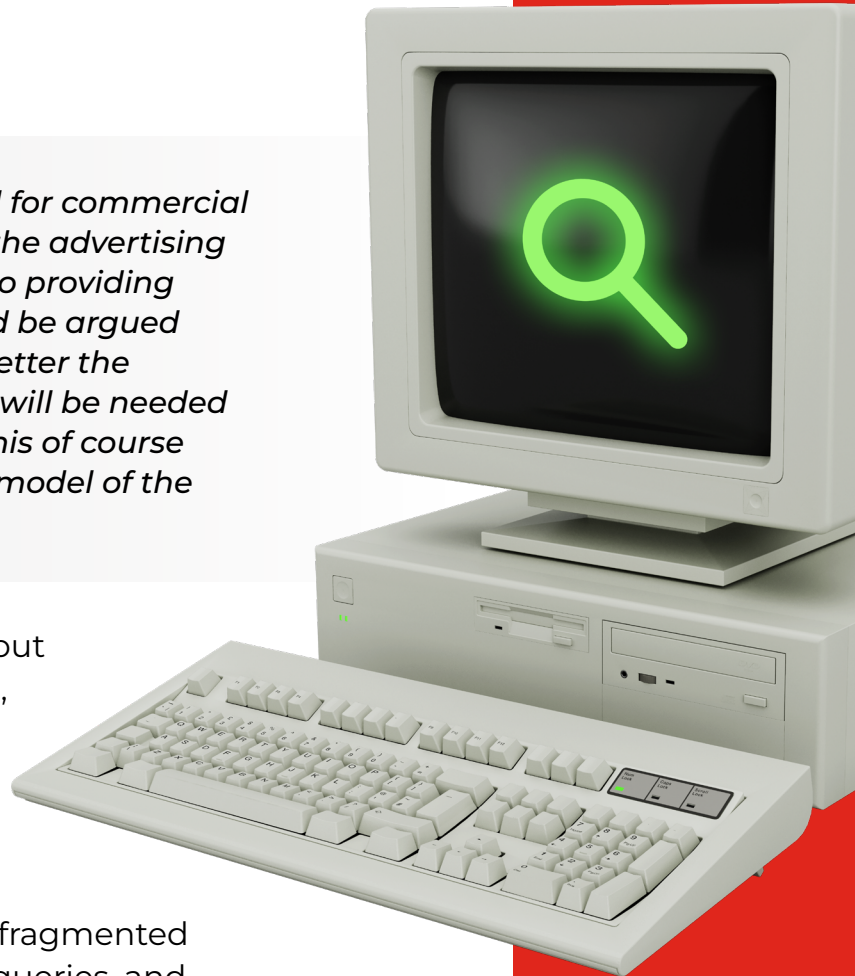
“Currently, the predominant business model for commercial search engines is advertising. The goals of the advertising business model do not always correspond to providing quality search to users. ... In general, it could be argued from the consumer point of view that the better the search engine is, the fewer advertisements will be needed for the consumer to find what they want. This of course erodes the advertising supported business model of the existing search engines.”

This could have been written yesterday about how search engines operate today. Instead, it was written in 1998 by Stanford graduate students Sergey Brin and Larry Page. They are less recognized for this paper than for founding Google.

Twenty-five years ago, online search was a fragmented experience. Yahoo! directories, Ask Jeeves queries, and AltaVista's complex search strings were among the popular methods of finding information. Ask Jeeves, which allowed you to type in a full question and (sort of) get an answer, was answering one million queries a day. Altavista and Lycos, the most popular search engines, operated best when you talked to the engine like a programmer, asking for (this OR that, AND the other thing, NEAR still something else).

Typing words into a box and getting something out wasn't a foregone conclusion.

And it shouldn't be a foregone conclusion now. **The face of search has changed and is changing every day.**



How Things Have Changed

There are two key trends that have changed the search landscape:

- Generative AI is now a viable competitor to traditional search engines.
- The fragmentation of how people search.

Together, these mean we need to create sites, and marketing, for wider sources and for non-human readers in addition to our human ones.

Just as directory sites are no longer the best ways to search, directing people to a link to have their question answered from one central repository of knowledge looks increasingly antiquated. As we'll discuss, search is increasingly happening:

- On specialized platforms.
- With non-text inputs and/or outputs.
- Without leaving a platform.

As search engines evolve, the days of directing users to a simple list of ten blue links are disappearing. The rise of specialized platforms, non-text inputs and outputs, and content that doesn't require leaving a platform has fundamentally altered how search operates.

Another trend shaping this evolution is the rise of zero-click searches, where users find complete answers directly on the search engine results page (SERP) without needing to click through to a website. This phenomenon is reshaping the purpose of search, moving from delivering links to meeting users' needs instantly.

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AI has amplified this shift, creating platforms centered around large language models that accept various inputs, generate diverse outputs, and keep users within their ecosystems. These AI-native applications may do a better job of helping meet the user's intent than an ad-supported model.

This presents challenges and opportunities for marketers, especially in the nonprofit space. Search is no longer just about finding content; it's about how users interact and consume it.

What does this mean for the future of search, and how should organizations adapt?

The Changing Nature of Search

While Google and Microsoft dominate the AI-powered search space, competitors are emerging, pushing innovation further. Platforms like OpenAI's ChatGPT and Perplexity are expanding search boundaries by offering conversational interfaces that allow users to find information through more natural, dialogue-based interactions.

Social media platforms are also becoming key players in the search market. For example, Instagram, TikTok, and YouTube are increasingly used for search queries, particularly among younger audiences. These platforms are category killers, redefining how search is used for discovery and influencing SEO strategies.



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Traditional search engines are no longer the default for younger generations. As Prabhakar Raghavan, Google's SVP for Knowledge & Information, explained:

"We keep learning, over and over again, that new internet users don't have the expectations and the mindset that we have become accustomed to. In our studies, something like almost 40% of young people, when they're looking for a place for lunch, they don't go to Google Maps or Search. They go to TikTok or Instagram."

As users turn to these social platforms for real-time, user-generated content, they are increasingly bypassing traditional search engines altogether.

Growth of AI Capabilities

When generative AI debuted, marketers hailed it as a transformative tool to streamline workloads. Yet, early iterations fell short of expectations, failing to resonate emotionally with audiences — especially in the nonprofit sector, where connection is critical. [Research from that time highlighted a clear performance gap:](#) AI-generated content consistently ranked lower in search engine results compared to human-created work. Marketers realized that, at this stage, AI couldn't match the quality, emotional impact, or expertise of experienced professionals, leading to a cooling of initial excitement.

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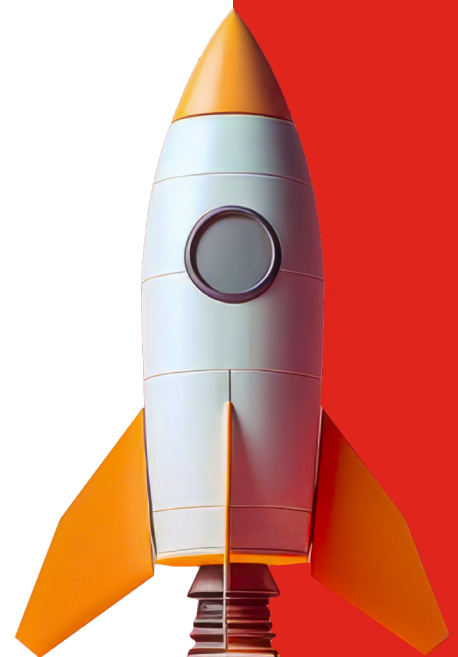
However, as AI technology advanced, the landscape began to shift. Tools like ChatGPT now produce content that rivals — and sometimes exceeds — human output. A self-reinforcing feedback loop powers this transformation as more users engage with tools like ChatGPT; they generate vast amounts of data, which accelerates AI's learning and refinement. Improved infrastructure, such as platforms like Databricks and Snowflake, enables processing massive datasets, further driving AI's rapid evolution.

These advancements also aligned with [Google's Helpful Content Update](#), which rewards high-quality, utility-centered content. As AI became more adept at meeting these standards, its outputs began competing more effectively in search rankings, signaling a new era in which AI could hold its own in content creation.

This growth shows no signs of slowing. [From March 2023 to February 2024, 2.5 times more Americans reported using ChatGPT at work](#), a trend that is expected to continue.

[ChatGPT is now the fastest-growing consumer tool in history](#). With its growing capabilities and ease of use, it is becoming an essential tool for businesses seeking to streamline operations and maintain competitiveness.

Unsurprisingly, adoption is highest among young adults, a demographic poised to dominate the workforce. As these users increasingly incorporate AI into their professional lives. Organizations (and the humans on the team) that fail to adopt these tools risk being left behind.



Implications of AI-Driven Search

Google has faced challenges in incorporating AI into its core search offering. One of the most significant hurdles has been the accuracy of AI-generated content. In several high-profile cases, Google's AI produced incorrect or dangerous information, such as recommending harmful cleaning mixtures or providing false historical data — like incorrectly stating that Andrew Jackson graduated in 2005 or encouraging users to eat rocks. These missteps highlight the ongoing challenge of ensuring the reliability of AI-driven content without sufficient human oversight.

These also upend traditional search engine marketing. [Gartner estimates that organic traffic could be halved by 2028](#) as AI-generated content pushes traditional web links further down the page. This shift forces businesses to reconsider long-standing SEO practices that have been essential for driving traffic and engagement.

To adapt, we need to diversify digital marketing strategies. Relying solely on SEO is no longer sustainable in a landscape dominated by AI-driven search results. Let's explore how to adapt.

"To adapt, we need to diversify digital marketing strategies."

give me ideas to adapt to AI-driven search



Solutions

The following solutions address the fundamental shifts in SEO brought about by AI advancements. Organizations can navigate the complexities by recalibrating strategies to align with the AI-driven search engines' algorithm, embracing emerging search modalities, and integrating human oversight to maintain accuracy, nuance, and cultural relevance.

Adapt SEO for AI-Driven Search

As AI reshapes search, traditional SEO methods like keyword optimization and link-building are becoming less effective. Instead, focus on creating content that aligns with AI-driven search platforms, prioritizing user intent and easy-to-digest information.

- **Target Long-Tail Keywords:** AI excels with specific queries, so focus on long-tail keywords to boost visibility in AI-generated summaries.
- **Answer-Focused Content:** Structure your content to answer common questions directly, leveraging Natural Language Processing (NLP), which AI-driven search engines use to better understand and interpret language. These systems prioritize user intent over exact keyword matches, meaning your content should focus on providing comprehensive and relevant information that satisfies what users are truly seeking. Use schema markup to enhance visibility in rich snippets and AI-driven search results, ensuring your content is easily interpreted by both search engines and users.
- **Leverage Structured Data:** Implement structured data to help AI better understand and categorize your content, increasing your chances of being featured in search results.

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Prepare for Multimodal Search

Search is expanding beyond text to include voice, visual, and conversational inputs. Optimize your content for these new interfaces:

- **Voice Search:** Ensure content is structured to answer voice queries naturally, especially for location-based or how-to questions.
- **Visual Search:** Tag your images with relevant metadata and alt text to optimize for visual search tools like Google Lens.
- **Conversational Interfaces:** Consider integrating chatbots and AI assistants into your website to enhance user experience.
- **Website Optimization:** Ensure your website is mobile-friendly, loads quickly, and has a clean design. Good UX signals to search engines that your site is valuable.

Driving Website Traffic in the Zero-Click Era

With zero-click searches becoming the norm, your strategy must evolve. Focus on making your website a destination for high-value content and experiences, such as:

- **Exclusive Resources:** Provide downloadable guides, research reports, or white papers that users can't access anywhere else.
- **Interactive Tools:** Offer calculators, quizzes, or interactive dashboards tailored to your audience's needs.
- **Compelling Stories:** Use multimedia storytelling — videos, infographics, and dynamic content — to provide depth that search engines can't replicate.



Additionally, driving website traffic now requires a robust lead-generation strategy. Encourage visitors to take the next step by offering email sign-ups, webinars, or gated content. These strategies increase engagement and support your **first-party data collection efforts**, enabling you to market directly to your audience in the future.

Leverage Personalization and Privacy

As AI enables hyper-personalization, focus on first-party data collection to comply with evolving privacy standards. Implement consent management tools while providing personalized experiences ethically.

Embrace the Shift

The future of SEO is increasingly AI-driven. Your organization can thrive by adapting your strategy, diversifying channels, and ensuring human oversight.

As we said at the outset, the 10 blue links model of sending traffic efficiently to websites is waning, along with the amount of traffic that goes to websites from search engines. Google first broke this model by introducing featured snippets at the top of their results. In 2024, only 36% of US Google searches resulted in users visiting a non-Google site. AI is taking this trend even further by surfacing complete answers directly within search platforms, leaving only citations as links.

This shift underscores the importance of creating compelling value on your website, giving visitors a reason to engage beyond what they find in search results. Websites should offer unique, interactive tools and resources that give users a reason to visit, rather than relying on zero-click answers.

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Use Generative AI While Keeping Your Own Unique Voice

Generative AI can assist in the content creation process. It can help:

- Brainstorm potential topics and outlining.
- Edit and proof your work.
- Give you ideas to clear writer's block.
- Suggest ways to optimize your content for SEO. Like suggesting keywords and developing meta descriptions.
- Create multimedia features as part of your content.

It should not, however, write for you. At Mothers Against Drunk Driving (MADD), they would never say, “drunk driving accident,” because drunk driving is a series of conscious, dangerous, and illegal decisions that endanger all of us as a violent crime, not an accident. Organizations want to change language, so people think of people first rather than referring to people by their circumstances. This is why you see “people with disabilities,” instead of “disabled people” or “person experiencing homelessness” rather than “homeless person” or “the homeless.”

Similarly, AI isn't well-trained in cultural accuracy and sensitivity. While improving, it often lacks the nuanced understanding of the context that human writers bring, leading to using outdated or inappropriate terms. This can undermine messages, especially when communities are actively reshaping language.

Human oversight is essential. A generative AI that is trained on general data won't use empathy or consider mission-driven content. It will see that most people use “the homeless” or “crash” and “accident” as synonyms and will use whatever language raises the most money if that is the goal set for it. Humans need to guide both with additional goals and by codifying unspoken rules.



Maintain Human Oversight in AI Content

AI can streamline content creation, but it lacks cultural nuance and empathy. Ensure human review of AI-generated content to align with your values and mission, especially for nonprofit organizations.

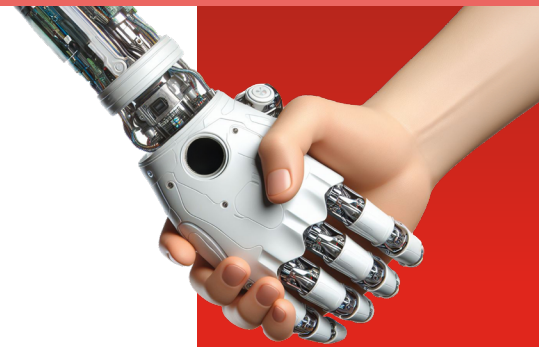
Reimagining SEO for Search and AI

The rise of AI-driven answers means being part of how people request information and how systems retrieve it. Many traditional link-based SEO strategies will decline in importance. Instead, focus on answering specific user questions effectively and authoritatively.

Some questions you want to assess for your organization:

- What organizations are working on [mission]?
- What does [org] do?
- Is [org] trustworthy?
- How can I get help with [services]?
- How do I donate to [mission]?
- How do I donate to [org]?
- Can I donate with Apple Pay / Google Pay / Paypal / Venmo / Cryptocurrency / etc.?
- Can I make a memorial donation?

"Ensure human review of AI-generated content to align with your values and mission."



It's also a happy coincidence that writing for generative AIs overlaps with how you should write for humans. Researchers looked at what produced the best improvements in generative AI results.¹ Things that had worked for traditional search engines, like keyword stuffing and using unique words, showed little to no improvement for generative AI pick-up.

Instead, the successful guides for writing for generative AI could have been written by your favorite high school English teacher:

- Use quotations.
- Use statistics.
- Cite your sources.
- Be authoritative.
- Write for fluency, making your writing easy to understand.

And, of course, you must ensure that both search and AI engines can crawl your website for relevant information. That means your website's robots.txt file must be correctly configured to allow search engines to crawl your site. Similarly, avoid blocking important pages that you want to be indexed. In addition, implement structured data (data marked for schema) across your site to help search engines and AI systems better understand and categorize your content. Structured data improves how information is presented in search results and can increase your chances of being featured in rich snippets, further boosting your discoverability.

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1. <https://openreview.net/pdf/d7aef3973d67b5dcaf1b84b76042e9ff6a705d3b.pdf>

The Final Word:

Navigating What's Next

AI will continue influencing search engine marketing, and the changes are undeniable. What was once a simple search-and-find process has evolved into a more dynamic interaction. AI-driven platforms are altering how users access and consume information, pushing marketers to reconsider long-standing strategies. As we've seen throughout this paper, AI has become more than just a tool; it's reshaping how search operates and how users engage with content. The future of search marketing lies in understanding these shifts and embracing the new opportunities they create for deeper user engagement and more thoughtful content delivery.

As you reflect on the strategies discussed in this white paper, consider these next steps:

1. **Audit Your Website:** Ensure it offers tools, resources, and unique content that engage users beyond search results.
2. **Explore AI Solutions:** Use tools like CoPilot, ChatGPT, or Perplexity to get insights on your results. You can also use solutions like Moore's SimioCloud that incorporate AI to enhance insights and improve efficiency.
3. **Invest in First-Party Data:** Strengthen lead generation efforts to future-proof your marketing.

Navigating this new era of search doesn't have to be overwhelming. With the right approach, you can position your organization to thrive. [Contact our team to learn how we can support your success.](#)

