

Leveraging

Generative

AI

Tools

For

SEO



IS YOUR WEBSITE OPTIMIZED FOR **GENERATIVE AI** **SEARCH RESULTS?**

Get a personalized report identifying core
SGE optimization opportunities.

Leveraging

Generative

AI

Tools

For

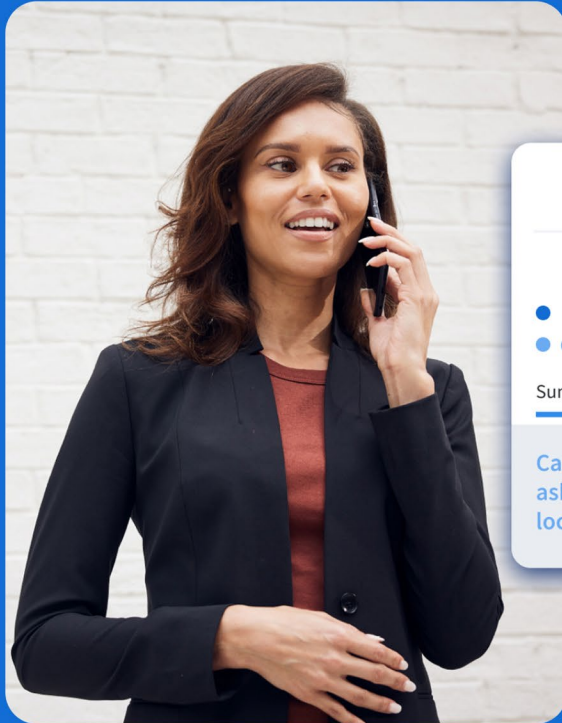
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CallRail



Neutral



- Agent
- Customer

Summary Transcription

Caller wanted an appointment for Friday. Rep asked for details about the appointment and location. Appointment scheduled with field rep.

Overall sentiment



Positive



Negative

Elevate Your Marketing with CallRail's Cutting-Edge AI

Step into the future of lead attribution — where AI meets data-driven marketing. Uncover valuable insights into the customer journey to optimize campaigns, reduce CPL, and boost ROI.

Try CallRail for free

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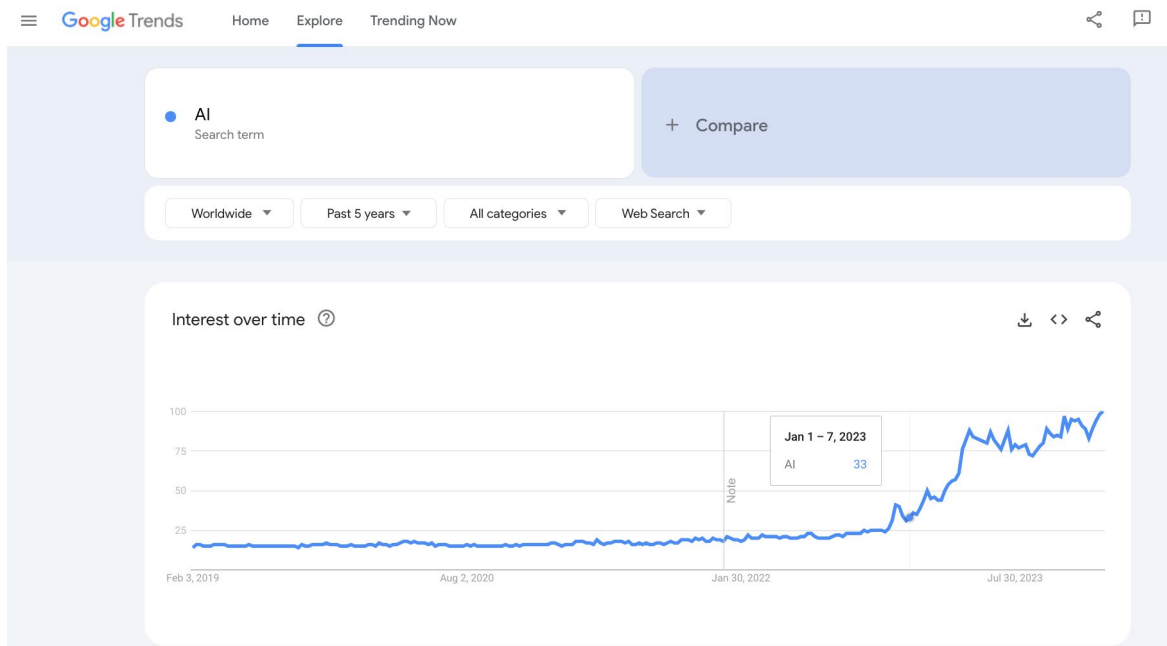
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SUPPORTED BY



Introduction

2023 was a breakout year for artificial intelligence (AI), and 2024 does not show any sign of slowing down.



Screenshot from Google Trends, January 2024

Generative AI features became a part of the user interfaces of top search engines, social media networks, advertising platforms, productivity software, and SEO tools.

While AI has been a part of most platforms for years, generative AI tools – those that use deep learning AI models to generate new outputs based on user inputs (prompts) – exploded.

In 2023:

- According to OpenAI, [80%](#) of Fortune 500 companies adopted ChatGPT.
- According to Microsoft, Bing users completed over [1 billion](#) chats with AI.

With non-stop breaking news about new AI research, large language models (LLMs), AI startups, GPT wrappers, and AI agents, it may take time to determine which solution best suits your objectives.

There may soon be an AI-powered tool that simplifies all the challenges you face in your workday. As an exercise, make a list of your common workflow challenges. That might help connect your thought process as you explore AI tools.

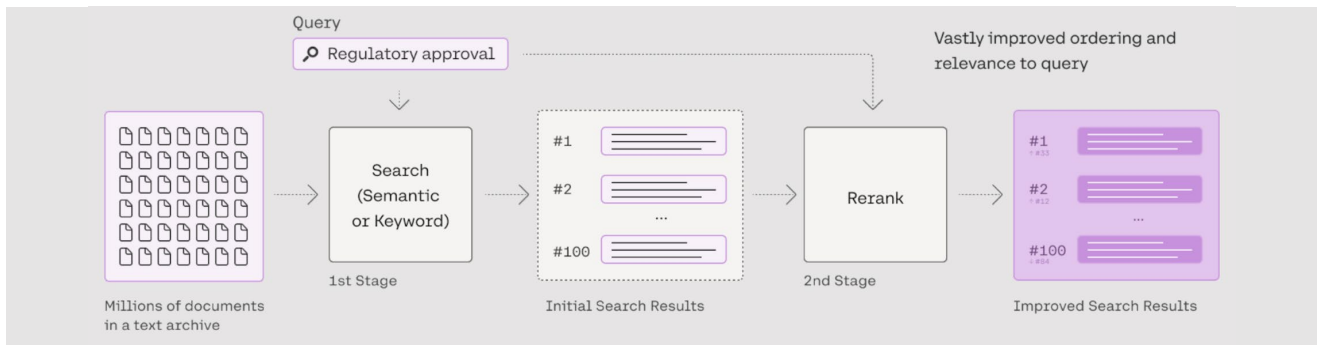
Read: [Researchers Discover How To SEO For AI Search](#)

Why AI Matters For SEO

Simply put, AI is or will be in almost everything you and your clients use – especially Google Search, which has utilized [machine learning](#) and [AI](#) for many years to improve search results.

As of February 2024, you'll find:

- Google is experimenting with AI-powered Circle to Search, Search Generative Experience ([SGE](#)), and tools for creativity and productivity in [Labs](#).
- Bing offers AI-powered deep search, chat, summaries, and image creation capabilities via Copilot with GPT-4.
- Baidu has an AI [chatbot](#) and cloud development [platform](#) similar to Google and Microsoft.
- Naver recently launched a cloud development [platform](#) for AI services.
- Brave offers an [AI summarizer](#) for search results.
- Wolfram|Alpha offers [APIs](#) for LLMs.
- Perplexity strives to modernize [PageRank](#) and surpass Google as the leading answer engine.
- Cohere aims to improve search results with rerank technology.

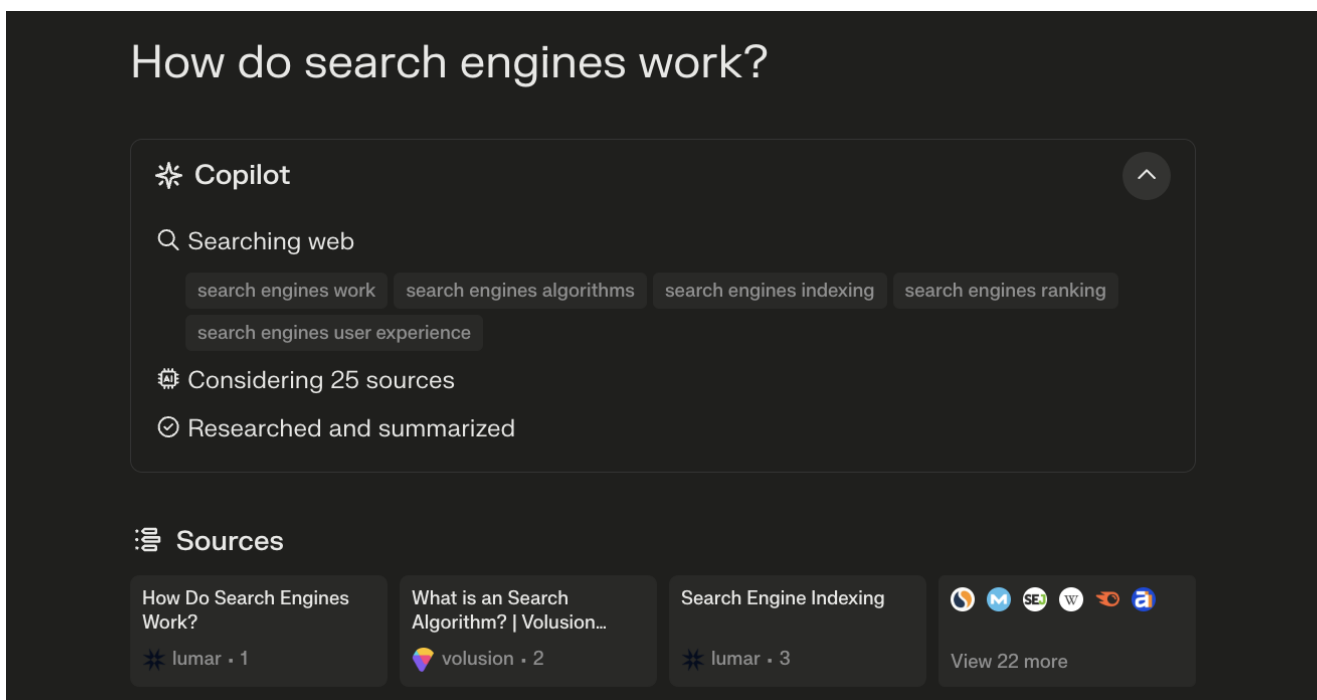


Screenshot from Cohere, January 2024

In addition, the top advertising, business, marketing, productivity, and SEO platforms are integrating generative AI chat and tools.

Aside from using AI-powered tools for SEO, marketers may consider creating custom AI tools that can be promoted to attract links, increase brand visibility, and generate leads/sales.

Observing how AI chatbots conduct web searches can also provide insight into how search with AI works and how to optimize content for both.



Screenshot from Perplexity, January 2024

Related: [AI For SEO: Can You Work Faster & Smarter?](#)

Part 1:

How Generative

AI Works

&

How Best To

Use It

Defining Narrow AI & Generative AI

The world of AI is moving at a breakneck pace, and it's difficult to keep up. So, let's start by defining our terms and scope.



Ben Steele

Managing Editor,
Search Engine Journal

Narrow Artificial Intelligence

AI is not new. It's been working away inside search algorithms and your favorite tools for years.

The core defining feature of an AI algorithm is that it can “learn” to act upon inputs for autonomous decision-making or problem-solving. [IBM defines AI](#) this way:



“At its simplest form, artificial intelligence is a field, which combines computer science and robust datasets, to enable problem-solving. It also encompasses sub-fields of machine learning and deep learning, which are frequently mentioned in conjunction with artificial intelligence. These disciplines are comprised of AI algorithms which seek to create expert systems which make predictions or classifications based on input data.”

Most modern AI algorithms are powered by neural networks known as [machine learning or deep learning](#). These terms aren't interchangeable; [deep learning](#) is a type of machine learning comprising a neural network with three or more “layers.”

Shallow machine learning models require user input to structure and categorize data. Deep learning models don't – they can independently categorize and understand the relationships between inputs.

Generally, the scope of these algorithms is narrow. They can learn to perform specific tasks based on sets of training inputs. Within this narrow scope, AI models can significantly outperform humans. AI has been able to handily [defeat human chess masters](#) for years.

In search, Google uses [AI ranking systems](#) to match words and concepts together to deliver relevant results, as well as detect spam and predict the quality of webpages.

Generative Artificial Intelligence

According to IBM, [generative AI](#) is a type of deep learning “that can take raw data – say, all of Wikipedia or the collected works of Rembrandt – and ‘learn’ to generate statistically probable outputs when prompted.”

The core difference that sets generative AI apart is the ability to create new data. This greatly increases the variety of applications you can use the models for.

While an “AI” algorithm could look at images and categorize them, a “generative AI” algorithm could tell you about an image, take actions based on the attributes of an image, or create new images.

The [transformer neural network](#) model is critical to natural language processing algorithms and large language models (LLMs) that power generative AI tools. Transformers are not necessarily generative AI, but language generative AI models owe their existence to transformer architecture.

Without getting too into the weeds, transformers are a unique way of encoding language data and analyzing the relationships between the tokens created. While LLMs require a large amount of data and human effort to train and maintain, the power of the autonomous analysis and output speaks for itself.

LLM chatbots can translate between languages and return human-like responses to prompts as if they understand what’s being typed into them.

This unique capacity to generate new data is the defining feature of generative AI, allowing it to perform an impressive array of new tasks. It's also the source of significant risk and ethical debate.

That's why, throughout this book, we will **not** use the terms "AI" and "generative AI" interchangeably. For the purposes of clarity, we will differentiate between "narrow AI" and "generative AI," but both of these terms fall under the umbrella of "AI."

So when you see "**narrow AI**," we're discussing AI algorithms that could be based on machine learning or deep learning neural networks and perform narrow functions.

And when you see "**generative AI**," we're discussing a specific type of deep learning neural network that produces outputs based on statistical probabilities.

This distinction is critical because, for example, text transcription can be done by **either type of AI**, but generative AI transcription will have distinct capabilities and features.

Limitations & Dangers Of Generative AI

Since the key feature of generative AI is the ability to create new outputs, there's been a lot of buzz about using it to create content.

As a statement of principle, SEJ sees generative AI as a way to help humans do more of their best work, not eliminate humans or human creativity.

While the market is changing rapidly, at the time of publication, SEJ's official recommendation is that you:

Do not use generative AI to create content for publishing, in whole or in part, including:

- **Ebooks, articles, news, blog posts, and other written material.**
- **Images, videos, and other multimedia.**

This is a particularly conservative stance, especially in the SEO and marketing realm. But, I hope to convince you that:

- Generative AI is not a good fit for creating content.
- Content creation is a narrow view of its potential.

Exceptions:

We see exceptions in use cases where a generative AI tool creates outputs using inputs of your original work or has a limited role. For example:

- Summarizing the work you've written or providing key points.
- Analyzing and modifying your existing content.
- Generating descriptions and metadata.
- Individual parts of work, such as creating outlines, generating ideas, organizing information, etc.

One great example is advertising platforms where generative AI is baked directly into the features. It might be impossible (or unwise) to completely avoid using it. This is less problematic if the algorithms base their outputs on a limited data set like your website. Just be sure that humans assess all outputs.

The five core issues associated with using these models for content are as follows:

- 1 Because large language models generate outputs based on statistical probability and training data, they have a tendency to [hallucinate](#) and write what sounds good over what's correct. They cannot currently fact-check their own work or reliably analyze works for accuracy.
- 2 There are unresolved legal and copyright questions about how these models work. We will not attempt to interpret ongoing litigation and legal decision-making. We know there are several in-progress lawsuits over image and language-based generative AI models, and the direction and impact of those decisions are unclear.

This presents many unknown risks when publishing the outputs of generative AI, despite what the tools may claim to offer for protection. As former associate news editor Kristi Hines points out, “The outcomes may affect how AI tools work, how much they cost, and what it takes to develop them safely. It may also make you revisit any AI-generated content you’ve previously published to ensure it is safe to use, personally and professionally.”

- [ChatGPT Creator Faces Multiple Lawsuits](#)
- [ChatGPT Faces Legal Woes Worldwide](#)
- [New York Times Vs. OpenAI](#)
- [A timeline of generative AI lawsuits](#)

- 3 There are unresolved privacy and [safety issues](#) with many large language models that limit the kinds of information you should input into them. This includes any protected or personal information, information covered under non-disclosure agreements (NDAs) and embargos, and anything else that could be sensitive.
- 4 Anyone can now create content at scale to a base level of quality. Generative AI is not a significant advantage in either strategy or content quality because anyone can apply the same automation with similar results. Publishing the same statistically probable content as everyone else is not a great way to stand out.
- 5 Despite soaring user bases and profits, generative AI tools can be unpopular and polarizing with certain audiences. Hines points out: “You should also ask yourself whether AI-generated content meets the standards of users when it comes to quality, accuracy, and helpfulness. How will your primary audience, customers, partners, and readers respond if they discover your articles, item descriptions, product photos, or demo videos are AI-generated? Some brands have received unwanted [scrutiny](#) over the perceived misuse of AI-generated content.”
 - There’s a fundamental ethical question involved with publishing content you didn’t directly create under your name and brand. You should discuss this with stakeholders who understand your audience and decide what types of content come with an assumption of trust or originality.

At SEJ, we developed – and are continually updating – a policy about how generative AI should be used internally and how we communicate information about it to you, the readers. This is an example of that policy in action.

All this being said, there are plenty of SEO use cases for generative AI. As you read this ebook, I hope you'll discover that creating content for publishing is a narrow view of how limited AI and generative AI can improve SEO workflows and outcomes.

Revolutionizing SEO With Google's Search Generative Experience

The advent of Google's [Search Generative Experience](#) (SGE) is revolutionizing online search, ushering in a new era of contextualization and intuition in information discovery.



Vincent Terrasi
Co-Founder, Draft & Goal

This technological advancement fundamentally [changes SEO strategies](#), requiring professionals to adopt a new approach to content creation.

The impact on users is equally significant, with [AI greatly facilitating access to search results](#).

This chapter proposes an advanced thematic mapping approach to maximize the effectiveness of these technologies in SEO.

It also discusses the knowledge of large language models (LLMs) such as OpenAI's GPT, Google's Bard, and Microsoft's Bing AI, highlighting their limitations and potential in SEO content creation.

The Arrival Of Google SGE

Google SGE marks a revolutionary shift in online search. This innovation sees Google take a more contextual and intuitive approach to information retrieval.

This development has a significant impact on how SEO professionals need to think and plan their content strategies.

The user experience is also changing, as [AI-guided search results are easier to find](#).

Answers are quickly accessible without having to sift through multiple tabs and pages.

Understanding how generative AI works and extracting its knowledge using new methods is essential to position yourself effectively and [understand its limitations](#).

Understanding Large Language Models (LLMs)

LLMs, such as GPT, Bard, and Bing AI, are powerful tools with impressive natural language generation and understanding capabilities.

However, these models have limitations, particularly when it comes to understanding specific contexts and updating information.

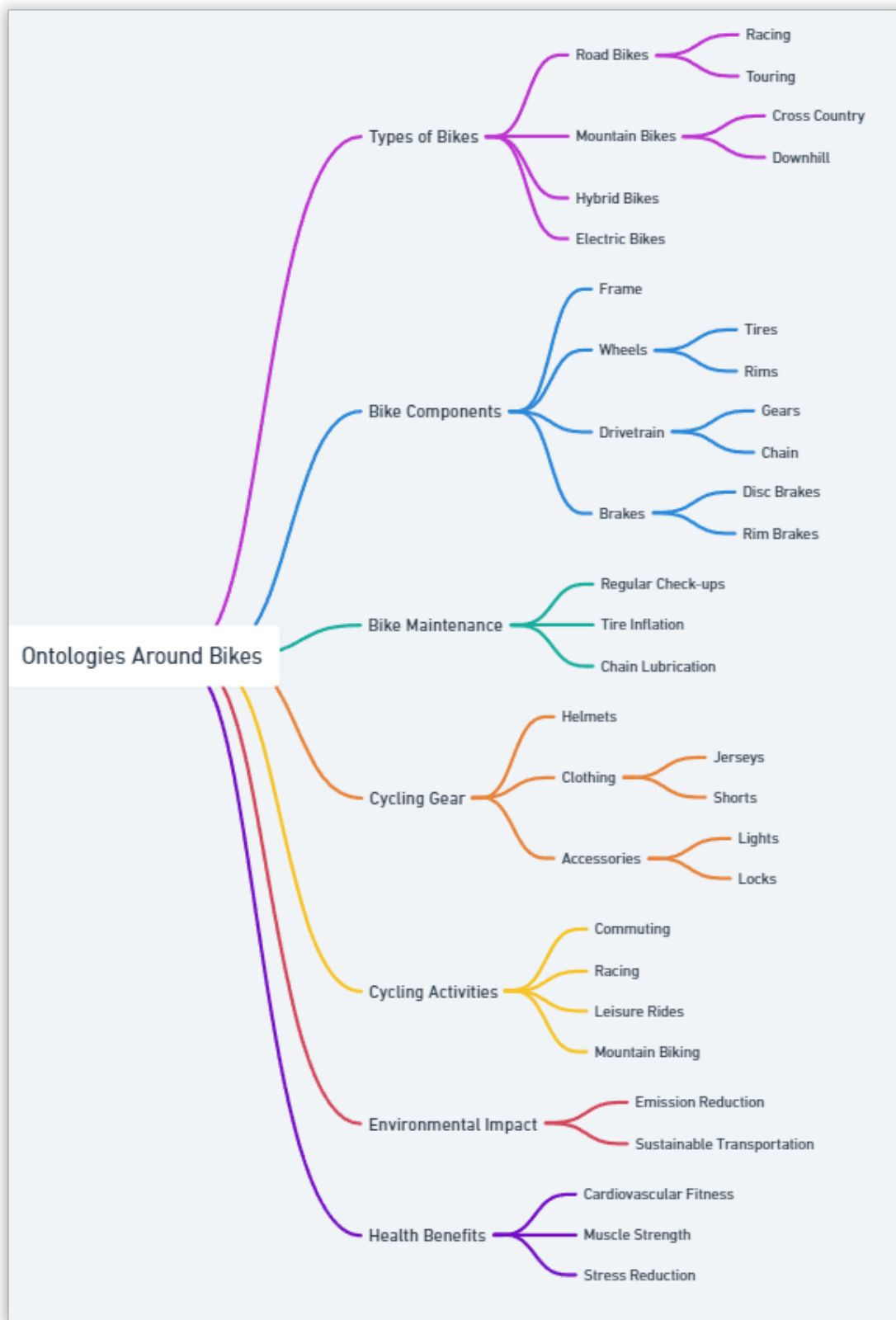


Image from author, January 2024

SEO project staff need to understand these limitations in order to maximize their content creation efficiency.

There are two types of knowledge: that which comes from the data used for training and that which is in the search engine index and is used as part of the answers. To illustrate this, I'd like to show you how we can map this knowledge.

Thematic Mapping Importance

Thematic mapping is a critical tool in SEO that [organizes and structures content](#) in a logical and intuitive way.

It ensures that all facets of a topic are covered, increasing the relevance and quality of the content. Using an LLM for thematic mapping offers unique advantages in generating new ideas and perspectives.

Structuring A Thematic Map

Topic mapping is the practice of [grouping related ideas and topics into clusters](#) to facilitate the creation of coherent and comprehensive content.

This approach not only helps to organize ideas in a logical way but also to identify gaps in existing content.

Topic Map Architecture

Choice Of Topic And Keywords

Choose a niche topic and identify the relevant keywords. You can start with the LLM of your choice, but I prefer one approach.

The first is to use Google's **generative** AI, such as PaLM 2, if you have a good command of Google's tools (for your information, I have set up a training course on Data Marketing Labs).

Here's a very simplified prompt to get the ontologies present in ChatGPT:

- Give me a list in a table of the ontologies around "YOUR CONCEPT."

ChatGPT 4 ▾

You
give me a list in a table of the ontologies around bike

ChatGPT
Creating a table of ontologies around bicycles involves categorizing various aspects related to bicycles, such as types, components, uses, and related concepts. Here's a structured table to represent these ontologies:

Category	Subcategory	Examples/Details
Types of Bikes	Mountain Bikes	Designed for off-road cycling, rugged terrain
	Road Bikes	Built for speed on paved roads
	Hybrid Bikes	A mix of mountain and road bike features
	Electric Bikes	Bikes with integrated electric motors
	BMX	For stunts and racing on dirt tracks
	Folding Bikes	Compact and foldable for easy transport
Bike Components	Frame	The core structure of the bike
	Wheels	Includes tires, rims, and spokes
	Brakes	Disk, rim, or drum types
	Gears	Chain rings, cassettes, derailleurs
	Saddle	Bike seat
	Handlebars	Steering mechanism
Bike Uses	Commuting	Used for daily transportation
	Racing	High-performance bikes for competition
	Leisure	↓ usual riding, often on comfortable bikes

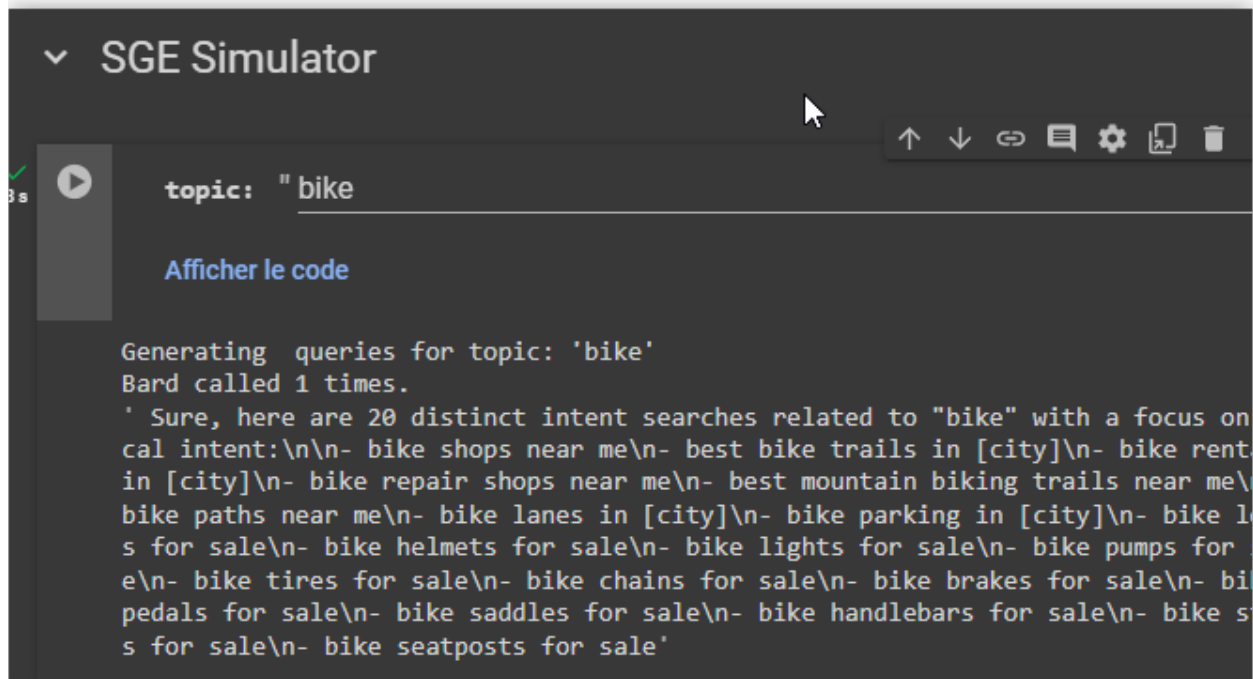
Screenshot from ChatGPT4, January 2024

Brainstorming

For each expression, you'll ask the LLM to brainstorm by creating several passages related to the expression.

I'm often asked why I make several passages. The answer is simply because, depending on the creativity threshold and the answers in Google's index, the LLM may have slightly different answers. This allows the field of possibilities to be included.

Here's a picture where I'm using [PaLM 2](#) to generate topics that the AI knows perfectly well and that are searched for by web users. The more topics you ask for, the better the coverage of your topic.



Screenshot from SGE Simulator, January 2024

Extraction

Next, you can extract all the entities mentioned in relation to a concept.

Initially, I used Python libraries, but now you can use an LLM because the task is very simple for it.

In the end, everything is stored in an array, and you can count the number of times a concept appears. I'd like to explain this part in more detail.

In this image, you can see that for each of the previous topics, I'm doing five generations to try to recover as many relevant elements as possible, which will help me generate the mind map.

For each generated text, I use PaLM 2 to extract the important terms, and everything is stored in a table.

Mr. Bike Shop offers a wide range of cycling products, including fixies, fixed gear, single-speed, track, and BMX bikes. They also have a variety of affordable and budget-friendly options.
Trek Bicycle Stores carry Trek and Electra bikes, as well as a variety of cycling gear. They can help you find the perfect bike for your needs and budget.
Cannondale Bike Shops are authorized dealers of Cannondale bikes. They offer a wide selection of bikes, as well as parts and accessories.
Bicycle Pedaler is a bike shop located in Wichita, Kansas. They carry a variety of bikes, including road bikes, mountain bikes, and hybrid bikes. They also offer bike repair services.
The Bike Shop Inc. is a bike shop located in Enid, Oklahoma. They carry a variety of bikes, including road bikes, mountain bikes, and BMX bikes. They also offer bike repair services.
Coopers Bicycle Center LLC is a bike shop located in Stillwater, Oklahoma. They carry a variety of bikes, including road bikes, mountain bikes, and hybrid bikes. They also offer bike repair services.
Conte's Bike Shop is a bike shop headquartered in Virginia, with locations in Washington and Maryland. They carry a variety of bikes, including road bikes, mountain bikes, and hybrid bikes. They also offer bike repair services.

Extracting entities from response.
 Bard called 11 times.
 Found 'Mr Bike Shop' mentioned 1 time(s) in response.
 Found 'Trek Bicycle Stores' mentioned 1 time(s) in response.
 Found 'Cannondale Bike Shops' mentioned 1 time(s) in response.
 Found 'Bicycle Pedaler' mentioned 1 time(s) in response.
 Found 'The Bike Shop Inc' mentioned 1 time(s) in response.
 Found 'Coopers Bicycle Center LLC' mentioned 1 time(s) in response.
 Found 'Conte's Bike Shop' mentioned 1 time(s) in response.
 Found 'The Bike Shop' mentioned 1 time(s) in response.

Screenshot from PaLM 2, January 2024

As you can see, each step takes place in a [Google Colab](#), which provides ready-to-use tables and makes it easy to sort your data with a few clicks.

Analyzing entity names

1 to 25 of 984 entries ☐ ?

index	Entity	Total Mentions ▼	Average Prominence
39	Bike	140	0.16874922916083254
427	Shimano	39	0.010812544602374357
290	bicycle	34	0.04024854234177221
350	tires	27	0.060771153918689376
735	Gear	21	0.022291819075444804
861	Pannier	21	0.00557186425295681
258	Helmet	20	0.10951894242303077
440	REI	20	0.008847947432608333
328	pump	19	0.028283721776232566
441	brakes	19	0.06347825111829576
458	Classic	19	0.011713477213266026
311	road	18	0.00998323266578557
315	Cycling	18	0.09083046282672158
472	Touring	18	0.41672780630961115
447	Pedal	16	0.05657213905611072
90	New York City	15	0.0007362285119334366
343	Specialized	15	0.00883446979404521
411	Michelin	15	0.0023424540260255284
412	Continental	15	0.0027329864820986147
413	Schwalbe	15	0.0033364994762076676
498	Fizik	15	0.0021395939772389373
508	GRIPS	15	0.25
732	Ortlieb	15	0.0034128566140380614
750	Thule	15	0.010947452229299362
757	Trailer	15	0.13690476190476192

Show 25 per page 1 2 10 30 40

Screenshot from Google Colab, January 2024

Next, you can build the thematic map from this prompt.

```

user_prompt = f"""
Please create a topical map for {specific_topic}, based on the keywords : {keywords}. Respect the iso code {iso}
Visualize the topical gap in table format.

Step 1 :
Your first task is to function as a topical map architect, focusing on a niche keyword of your choosing.
The keyword and subject for your topical map are [Your Topic].
Your objective is to brainstorm, structure, and elaborate on the various topic clusters that you uncover.
After this, you'll need to polish and fine-tune your topical map.
Your map should include at least 50 nouns/ predicates associated with [Your Topic], such as unique products or categories.
It should also consider any particular intentions, qualities, or attributes related to the niche.
These should be categorized into five primary sections.

```

Screenshot from author, January 2024

Here's a possible result:

****Step 1: Topical Map Creation****

****Topic:** Bike**

****Nouns/Predicates:****

****1. Bike Types****

- Peloton bike
- Electric bike
- Mountain bike
- Road bike

****2. Bike Components****

- Sound bike boy bell
- Bike clips
- Bike pedals
- Road bike pedals

****3. Bike Activities****

- Run walk bike regularly
- Human fully aware bike

****4. Bike Accessories****

- Mountain bike tires

****5. Bike Safety****

****Step 2: Semantic Graph****

Subtopic 1	Subtopic 2	Semantic Connection
Peloton bike	Electric bike	Both are types of bikes that are powered by electricity.
Electric bike	Sound bike boy bell	Both are components that can be added to a bike.
Sound bike boy bell	Human fully aware bike	Both are related to the safety of the rider.
Human fully aware bike	Run walk bike regularly	Both are related to the physical activity of riding a bike.
Run walk bike regularly	Mountain bike tires	Both are related to the terrain that a bike can be ridden on.
Mountain bike tires	Road bike pedals	Both are components that can be added to a bike.
Road bike pedals	Bike clips	Both are components that can be added to a bike.

****Step 3: Mind Map********Topic:**** Bike****Subcategories:****

- | | |
|-----------------|-----------------------|
| 1. Bike Types | 2. Bike Components |
| - Peloton bike | - Sound bike boy bell |
| - Electric bike | - Bike clips |
| - Mountain bike | - Bike pedals |
| - Road bike | - Road bike pedals |
| - BMX bike | - Bike seat |

3. Bike Activities

- Run walk bike regularly
- Human fully aware bike
- Bike racing
- Bike touring
- Bike commuting

4. Bike Accessories

- Mountain bike tires
- Bike helmet
- Bike lights
- Bike pump
- Bike rack

5. Bike Safety

- Bike brakes
- Bike reflectors
- Bike locks
- Bike insurance
- Bike maintenance

6. Bike Brands

- Specialized
- Trek
- Giant
- Cannondale
- Scott

7. Bike Shops

- REI
- Performance Bike
- Dick's Sporting Goods
- Walmart
- Target

8. Bike Events

- Tour de France
- Giro d'Italia
- Vuelta a España
- Tour of California
- USA Cycling National Championships

9. Bike Clubs

- The League of American Bicyclists
- Sierra Club
- National Bike Club
- Adventure Cycling Association
- Bikers Against Child Abuse

10. Bike Advocacy

- People for Bikes
- Rails-to-Trails Conservancy
- Bike Walk Alliance
- National Center for Safe Routes to School
- International Bicycle Fund

Visualization

You can visualize the whole thing using mind-mapping tools, and the results are very instructive.

For easy visualization, there is a free Assistant in ChatGPT called AI Diagrams.

I invite you to search for it, and then you can request the generation of your mind map from the table from the previous steps.

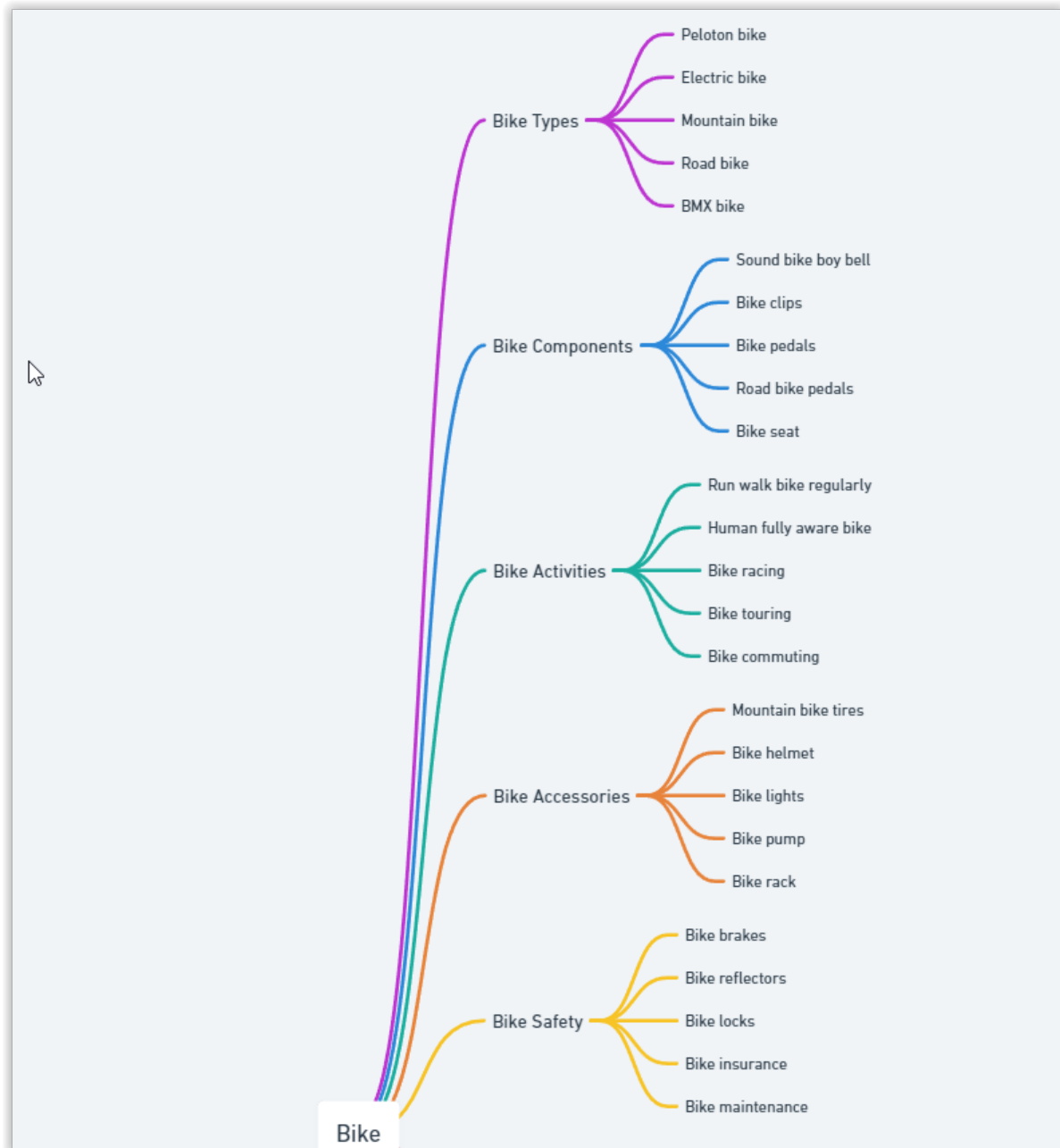


Image from author, January 2024

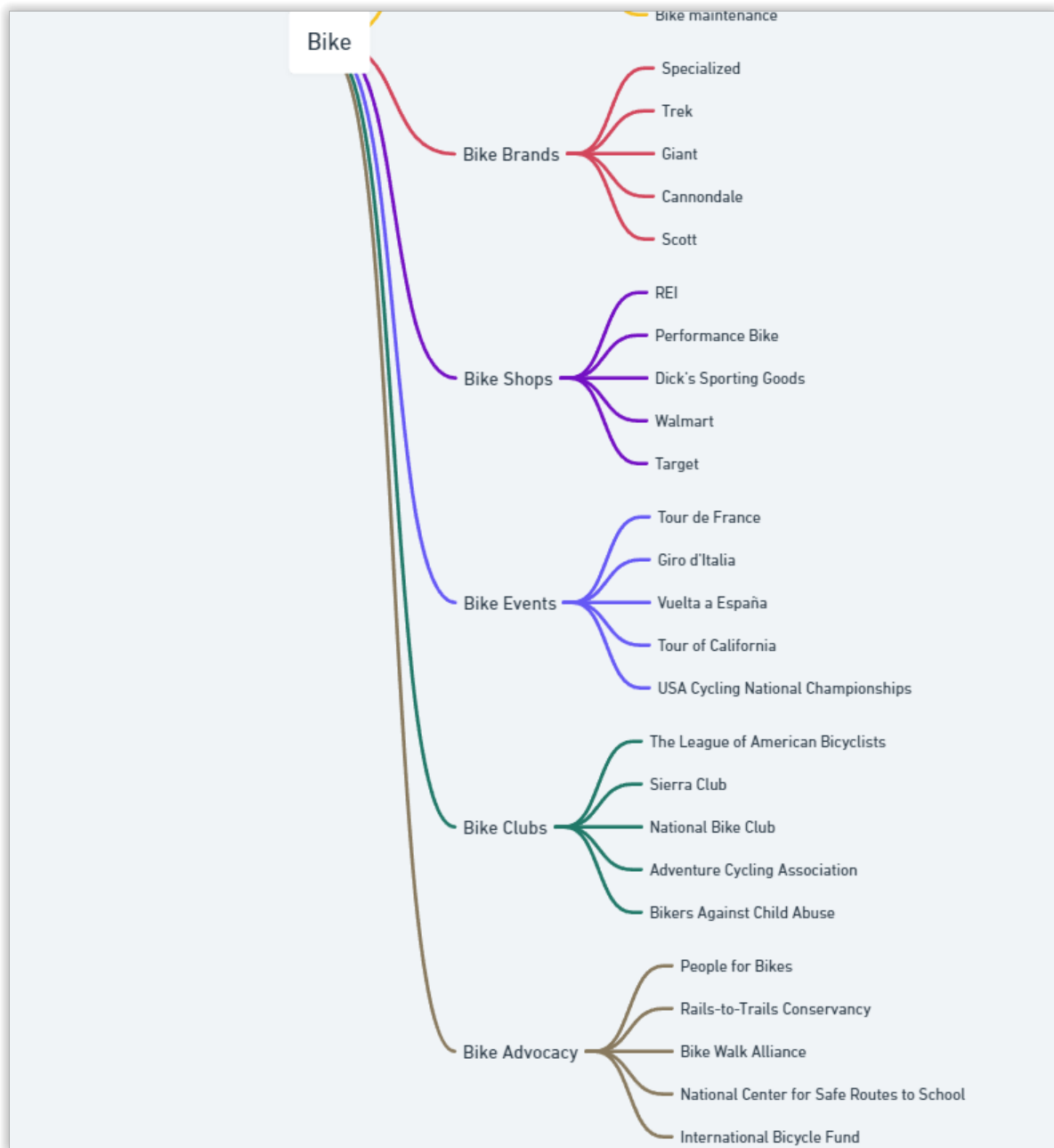


Image from author, January 2024

Now, I'd like to suggest some advanced actions to anticipate Google SGE.

Advanced Strategies For Google SGE

- Use Google's PaLM 2 to check that the map covers all aspects of your topic.
- Integrate the map into your content research and writing process.
- Turn each sub-theme into a webpage, blog post, or other form of content and link them together to create an interconnected web of content.

This methodology provides a robust way to understand the role of [generative AI in search engines](#) and optimize for generative AI search features.

It's enriched with detailed examples and explanations and focuses not just on [topic optimization](#), but on prioritizing content quality and [targeting specific search intentions](#).

Human intervention remains critical to search intent and content quality.

The combination of [a skilled writer and AI](#) can enhance content optimization, using tools to maximize the efficiency and relevance of your ecosystem.

With the advent of generative AI, any SEO professional can build their own tool.



How An AI Tool

Can Quickly Facilitate

High-Quality

SEO-Friendly

Content Creation

What started with AI-driven enhancements to Explorer and Content Guidance in Conductor has expanded.

It's time to look at the latest addition to Conductor's content intelligence suite: the brand new [Writing Assistant](#), a live content creation and optimization tool.

This smart writing assistant:

- Provides real-time recommendations.
- Is powered by real-time SERP insights paired with OpenAI's most advanced AI model.
- Gives real-time insights *as you write* to maximize success on SERPs and with your target audience.



Write Faster With Intent, Clarity & Relevance In Mind

Unlike other AI-powered content editing tools, [Writing Assistant](#) takes a holistic approach by evaluating the quality of content related to user intent, clarity, and relevance.

Whether you're creating new content from scratch, optimizing a draft pre-publish, or improving existing content, Writing Assistant helps you write better content in less time by providing real-time guidance as you're writing.

How To Properly Use AI To Help Create Strong Content

Copy and paste any in-progress or existing content into Writing Assistant's [text editor](#) to generate actionable, quantitative insights, like additional keyword opportunities, body copy suggestions, and much more, without leaving the page.

This fine-tuned AI-assistant:

- **Generates detailed content outlines:** Writing Assistant solves one of the hardest parts of creating content – getting started – by automatically generating a content outline relevant to your target topic.

The platform quickly synthesizes large amounts of competitive and audience research data when building these outlines, showing you exactly how to structure each piece of content and what info to include.

- **Provides winning title tag and meta description suggestions:**

These AI-powered suggestions come pre-optimized using real-time SERP signals, leveraging the best practices of the current top rankers so you can focus on the core content.

- **Assesses how well content adheres to search topic intent (and how to improve):** Ranking is important, but what's more important is making sure you match the intent of what people are searching for.

That's where the Questions to Answer functionality comes in. It analyzes how well your content addresses the top *People Also Ask (PAA)* questions from Google and gives guidance on how to improve if needed.

- **Speeds up collaboration for faster publishing timelines:** Directly share drafts, and all related recommendations with key stakeholders for a more efficient review cycle and align around the same set of data-driven best practices.

[Watch a quick demo of Writing Assistant](#) to see it in action for yourself.

Part 2:

Scalable AI Tools

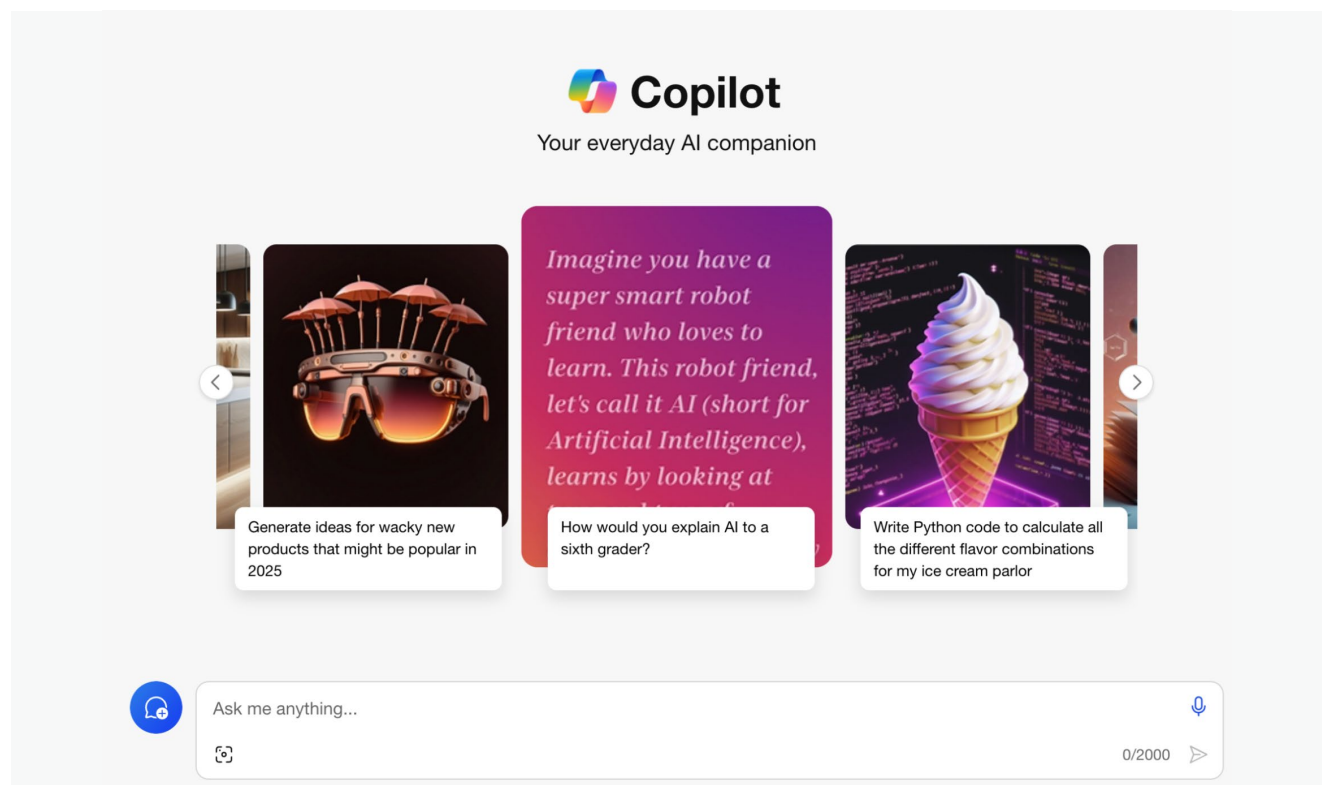
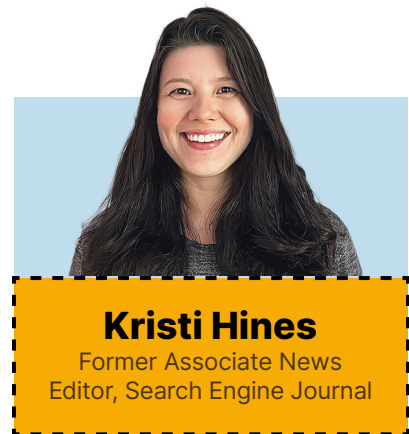
For

SEO

The Top Generative AI Chatbots

Generative AI chatbots have come a long way since OpenAI released the ChatGPT “research preview” in November 2022.

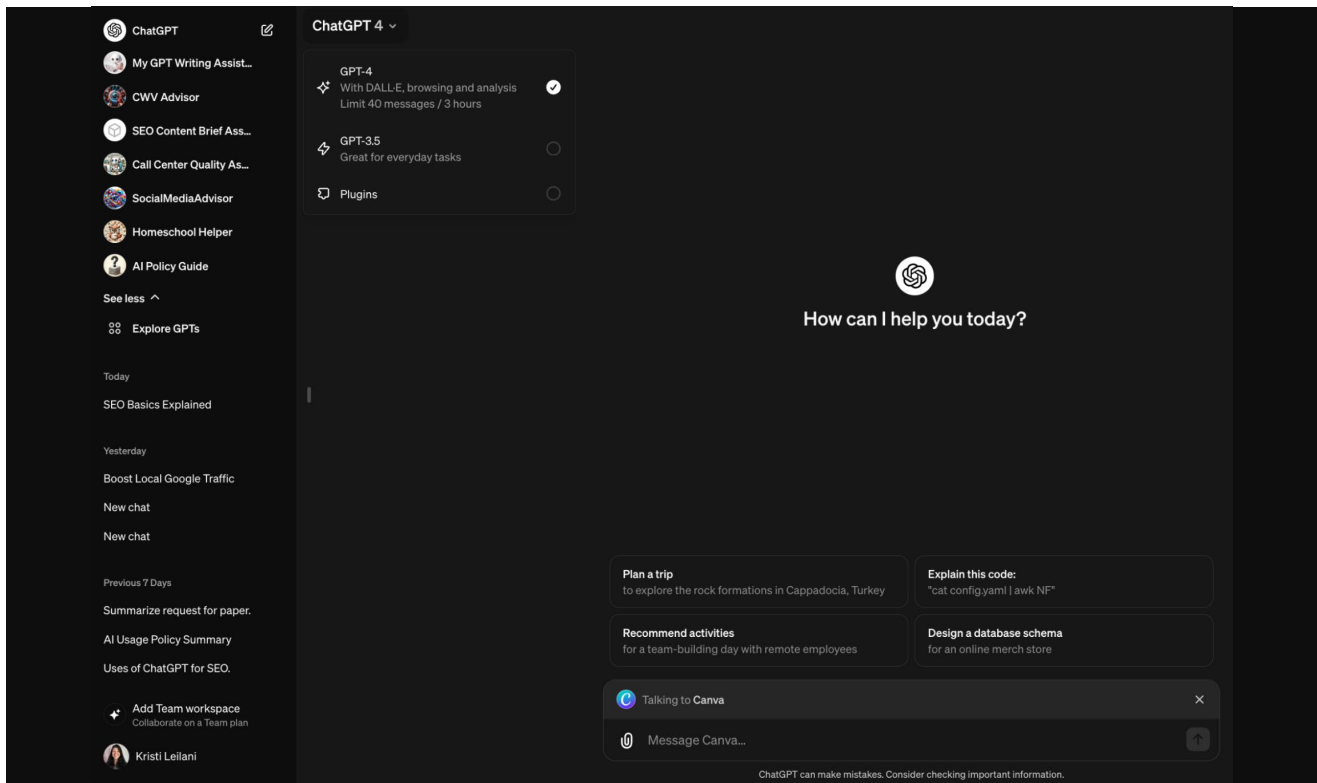
Many can now help you with analysis, content creation, coding, documents, images, research, summarization, and other complex tasks.



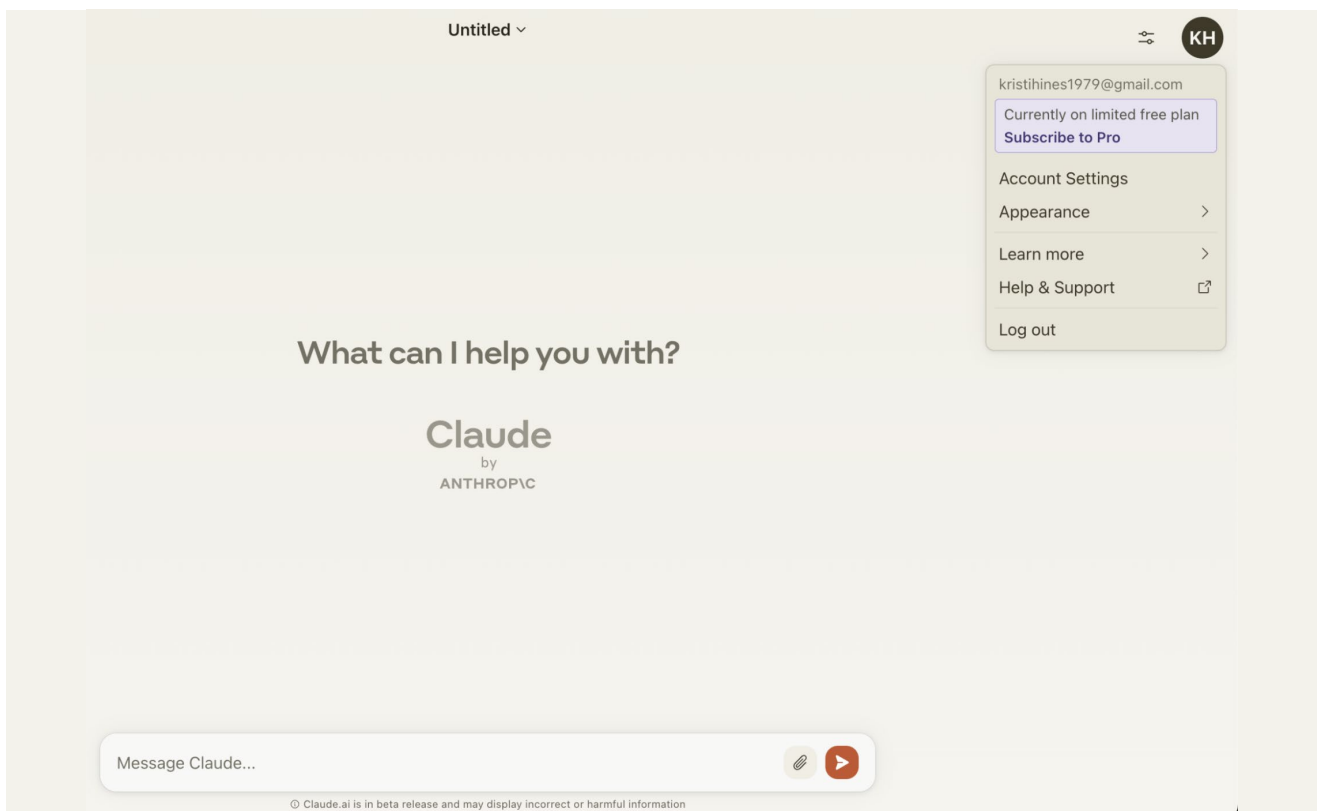
Screenshot from Copilot, January 2024

Some are free, while others have free and paid options.

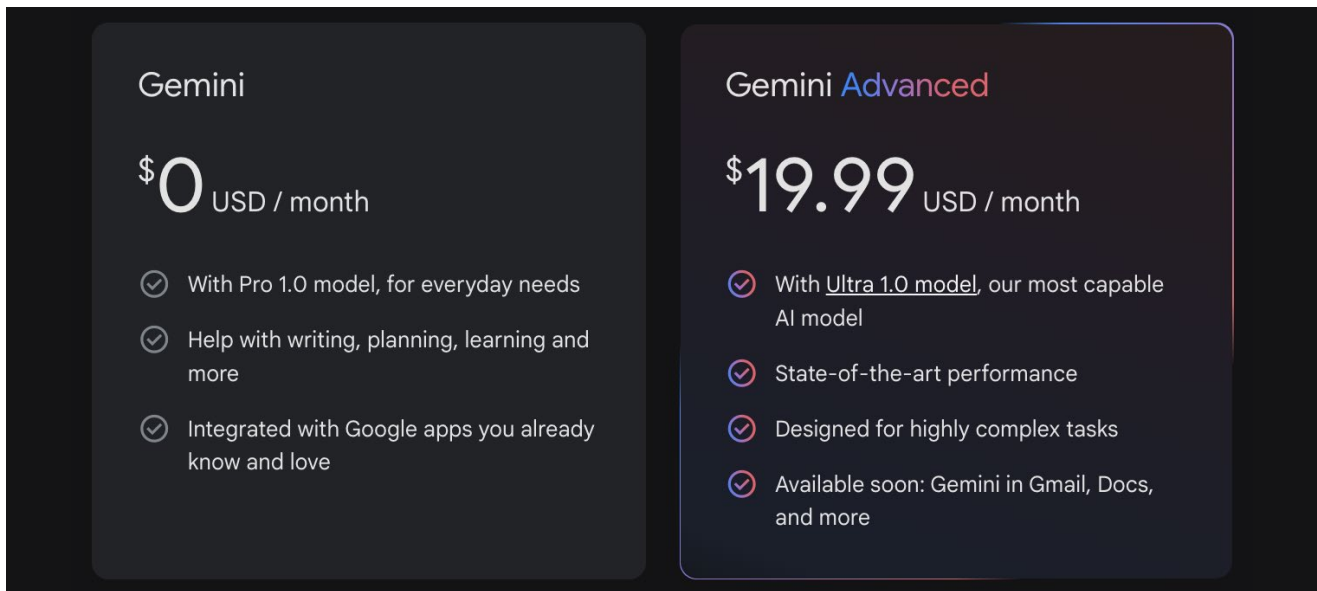
ChatGPT, Claude, Gemini (formerly Bard), Perplexity, and Poe offer free plans and premium subscriptions starting at \$20 monthly.



Screenshot from ChatGPT, January 2024



Screenshot from Claude, January 2024



Screenshot from Gemini (formerly Bard), January 2024

- [ChatGPT](#) gives subscribers access to GPT-4, DALL·E, file uploads, beta features, web browsing with Bing, over 1,000 third-party plugins, the ability to create custom chatbots (GPTs), and a store full of custom GPTs.
- [Claude](#) by Anthropic offers a larger context window than most, making it better for tasks involving large chunks of text or uploaded documents. Subscribers get access to the latest model and beta features.
- Google [Gemini](#) Advanced utilizes Ultra 1.0 to connect to Google Docs, Google Drive, Gmail, YouTube, Flights, Hotels, and Maps.
- Microsoft [Copilot](#) (GPT-4) uses the web and plugins from Instacart, Kayak, Klarna, and Shop.
- [Perplexity](#) provides answers to questions with deep search and sources. Open-source models from Meta and Mistral AI are available in [Labs](#). Subscribers can switch between GPT-4, Claude, Gemini Pro, and online LLMs.
- [Pi](#) (Inflection-1) positions itself as more emotionally intelligent and personalized chat.
- [Poe](#) hosts dozens of official chatbots powered by the latest models from Anthropic, Google, Meta, Mistral AI, OpenAI, and Stability AI. It also allows you to create custom chatbots on many of those platforms. Subscribers get more access to the latest models.



GPT-4
OpenAI's most powerful model. Stronger than ChatGPT in quantitative questions (math and physics), creative writing, and many other challenging tasks. Powered by GPT-4 Turbo.

OFFICIAL SUBSCRIBED



Playground-v2
Generates high quality images based on the user's most recent prompt. Allows users to specify elements to avoid in the image using the "--no" parameter at the end of the prompt (e.g. "Tall trees, daylight --no...").

OFFICIAL



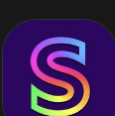
Claude-instant-100k
Anthropic's fastest model, with an increased context window of 100k tokens (around 75,000 words). Enables analysis of very long documents, code, and more.

OFFICIAL SUBSCRIBED



DALL-E-3
OpenAI's most powerful image generation model. Generates high quality images with intricate details based on the user's most recent prompt.

OFFICIAL SUBSCRIBED



StableDiffusionXL
Generates high quality images based on the user's most recent prompt. Allows users to specify elements to avoid in the image using the "--no" parameter at the end of the prompt (e.g. "Tall trees, daylight --no...").

OFFICIAL



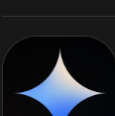
Claude-2-100k
Anthropic's most powerful model, with an increased context window of 100k tokens (around 75,000 words). Particularly good at creative writing.

OFFICIAL SUBSCRIBED



Claude-instant
Anthropic's fastest model, with strength in creative tasks. Features a context window of 9k tokens (around 7,000 words).

OFFICIAL



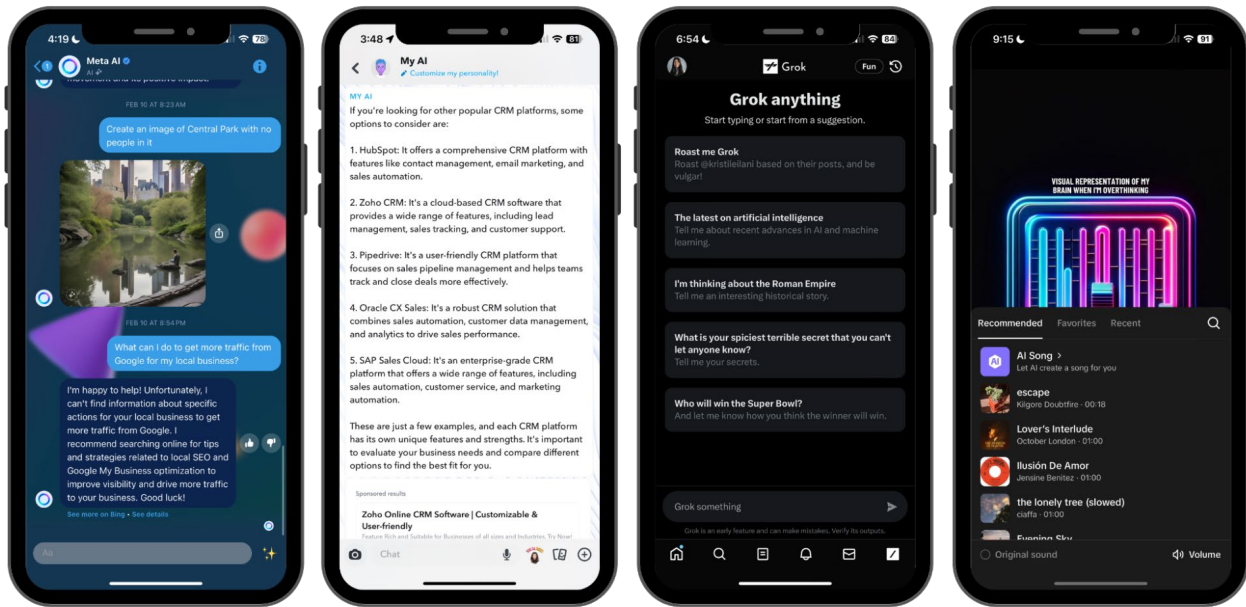
Gemini-Pro
Beta version of the multi-modal model from Google's Gemini family that balances model performance and speed. Exhibits strong generalist capabilities, excels particularly in cross-modal reasoning, and support...

OFFICIAL

Screenshot from Poe, January 2024

Generative AI & AI Chatbots On Social Media

While Gemini may have access to YouTube content, other social networks built AI chatbots into the platforms.



- Meta launched a Meta AI chatbot to generate images and search the web with Bing on [Messenger](#), Instagram, and WhatsApp.
- [Quora integrates AI](#) into some answers.
- Snapchat's [My AI](#) was one of the first AI chatbots that users could direct messages and integrate into group chats.
- TikTok recently [tested](#) an AI song generator.
- X, formerly known as Twitter, launched [Grok](#) for Premium+ subscribers, which has access to X posts/tweets as “sources” for responses.

Bytedance was also working on an AI model, but the parent company of TikTok [allegedly](#) did it in a way that violated OpenAI and Microsoft TOS. This hasn't appeared to delay the platform's AI plans, but it may affect the future availability of the [CapCut plugin](#) for ChatGPT.

While not a social media platform, you can chat with Pi via Inflection on [Messenger](#), [Instagram](#), and [WhatsApp](#).

AI Chatbots With Context

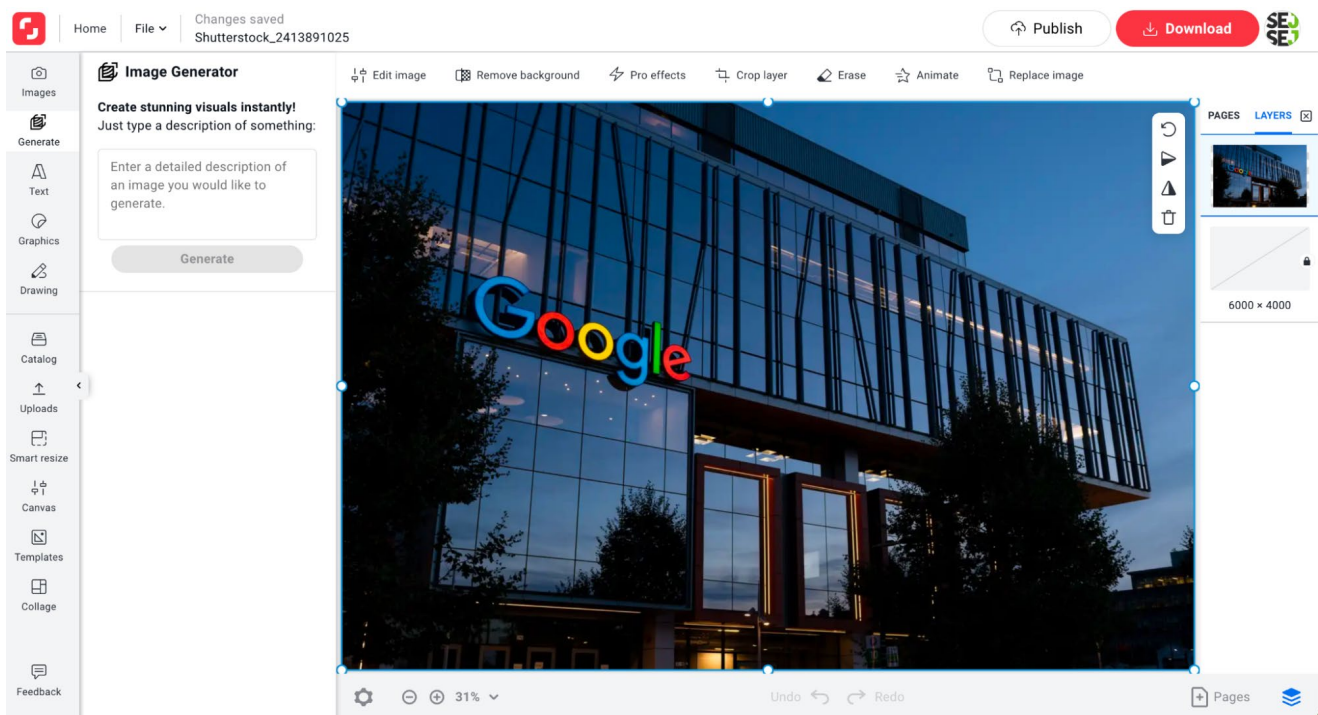
As you use AI chatbots more frequently, you may repeat specific details to get better responses.

Some platforms allow you to add essential context about yourself, your work, and what you are trying to accomplish so that AI provides the best response for your needs.

- ChatGPT lets users provide context and specific directions with [Custom Instructions](#).
- Perplexity lets users offer context, instructions, location, and language preferences in the [AI Profile](#).

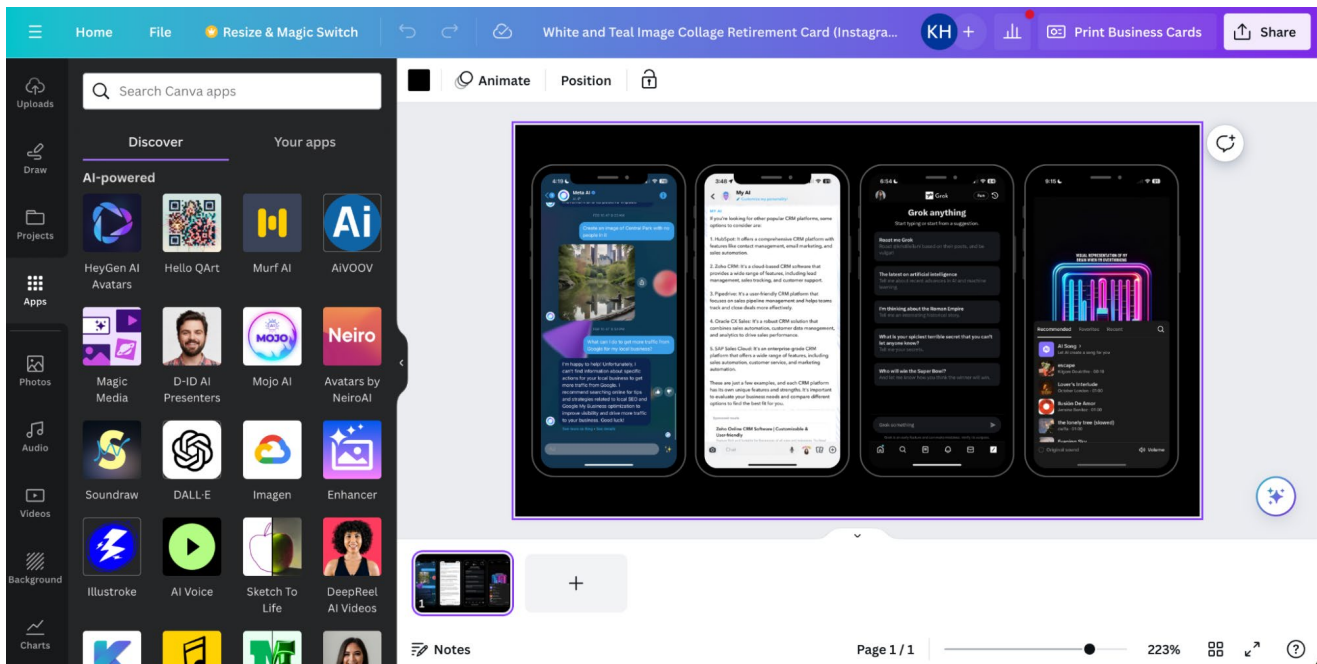
Built-In AI Chatbots And Features In Tools

You don't always have to find a new tool to get AI assistance. Many popular business tools, software, and online services have built-in generative AI chatbots or limited AI features, integrations, and plugins.



Screenshot from Shutterstock, January 2024

In addition to having an AI tool with direct access to your company's data, you have the confidence that comes with a platform you already use. These types of tools may also be more likely to be privacy-conscious and protect information (but always read the terms!).



Screenshot from Canva, January 2024

The following are examples of platforms with scalable AI features for advertisers, marketers, agencies, teams, and enterprises.

- Accounting: [Intuit](#)
- Advertising: [Amazon Ads](#), [Google Ads](#), [LinkedIn Ads](#), [Meta Ads](#), [Microsoft Ads](#), [Bing Ads](#), [Yahoo Ads](#)
- Analytics: [Mixpanel](#), [SimilarWeb](#)
- Business Intelligence: [Amazon Quicksight](#), [SAP](#)
- Coding: [AWS](#), [GitHub](#), [StackOverflow](#)
- Communication: [Slack](#)
- Customer Relationship Management & Marketing: [HubSpot](#), [Salesforce](#)
- Customer Service: [Amazon Connect](#), [CallRail](#), [Intercom](#), [LivePerson](#), [ServiceNow](#), [Vertex Contact Center](#), [Zendesk](#)
- Ecommerce: [Amazon](#), [Shopify](#)
- Email Marketing: [ActiveCampaign](#), [Constant Contact](#), [Mailchimp](#), [Omnisend](#)
- File Management: [Dropbox](#)
- Graphic Design: [Adobe](#), [Canva](#)
- Hiring: [LinkedIn](#)

- Legal: [Thomson Reuters](#)
- Meetings: [Zoom](#)
- Manufacturing: [AWS Supply Chain](#)
- Productivity: [AWS](#), [Google Workspace](#), [Microsoft Copilot 365](#), [Smartsheet](#), [Zoho](#)
- Project Management: [Airtable](#), [Asana](#), [Atlassian](#), [Monday](#), [Wrike](#)
- SEO: [Ahrefs](#), [Conductor](#), [Semrush](#), [SERanking](#), [Surfer](#), [Ubersuggest](#)
- Social Media Marketing: [Agorapulse](#), [Buffer](#), [HootSuite](#), [Sprout Social](#)
- SMS Marketing: [Klaviyo](#)
- Stock Photography: [Getty Images](#), [Shutterstock](#)
- Video: [Loom](#), [Webex](#)
- Website Building: [Wix](#), [WordPress](#)

< | WIX



Bring your ideas to life with AI

Get started faster with the help of AI. Tell us about yourself and get personalized tools, images and text for your site.

Start Chat

Set up without AI

AI can make mistakes, so double-check that the results are accurate before using them.

Screenshot from Wix, January 2024

Learn About Generative AI In Business

Learn how to utilize generative AI in business with the following free courses:

- Introduction to AI for Business Users ([Microsoft](#))
- Introduction to Generative AI Learning Path ([Google](#))
- Generative AI for Executives ([Amazon](#))

Building Your Own AI Solutions

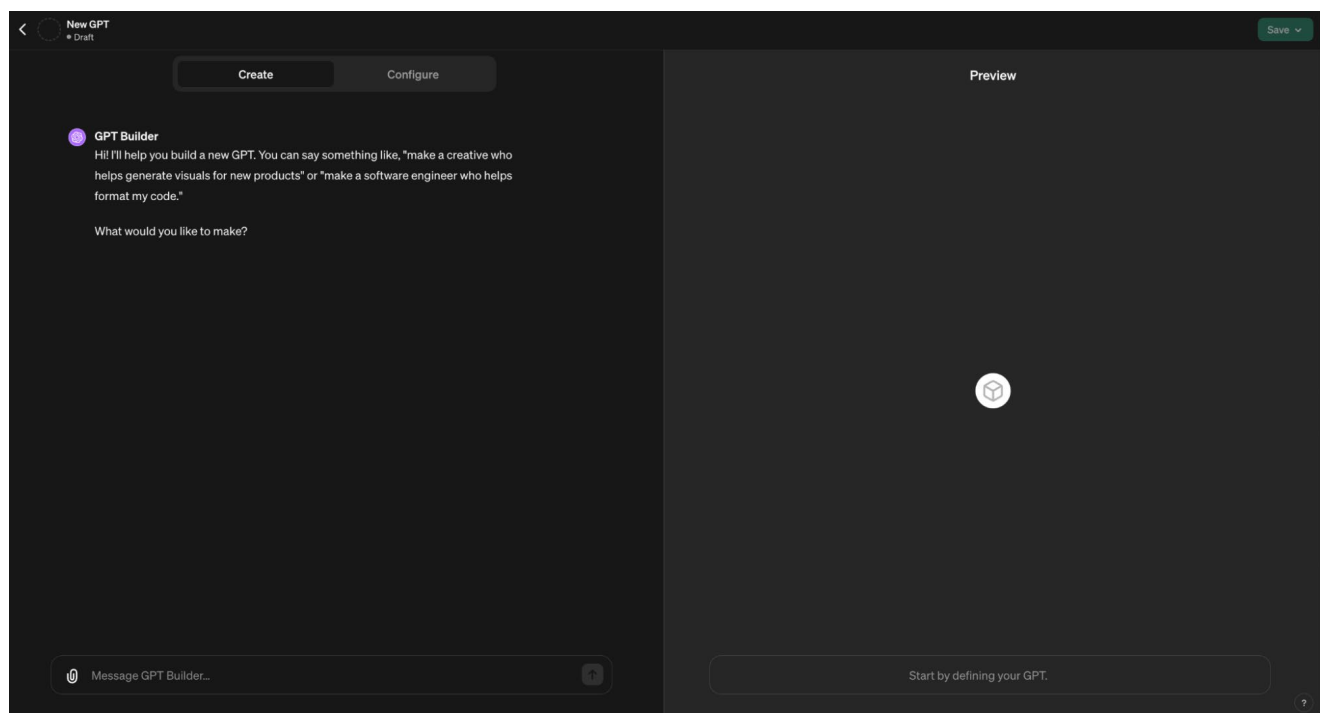
You may find very specific use cases or problems that current tools don't offer an immediate solution to.

It's now possible to connect different platforms and functions together, use chatbots to create your own tools, or even customize generative AI tools for your purposes. These are a few of the ways you can develop your own solutions.

Custom Chatbots With Minimal Coding

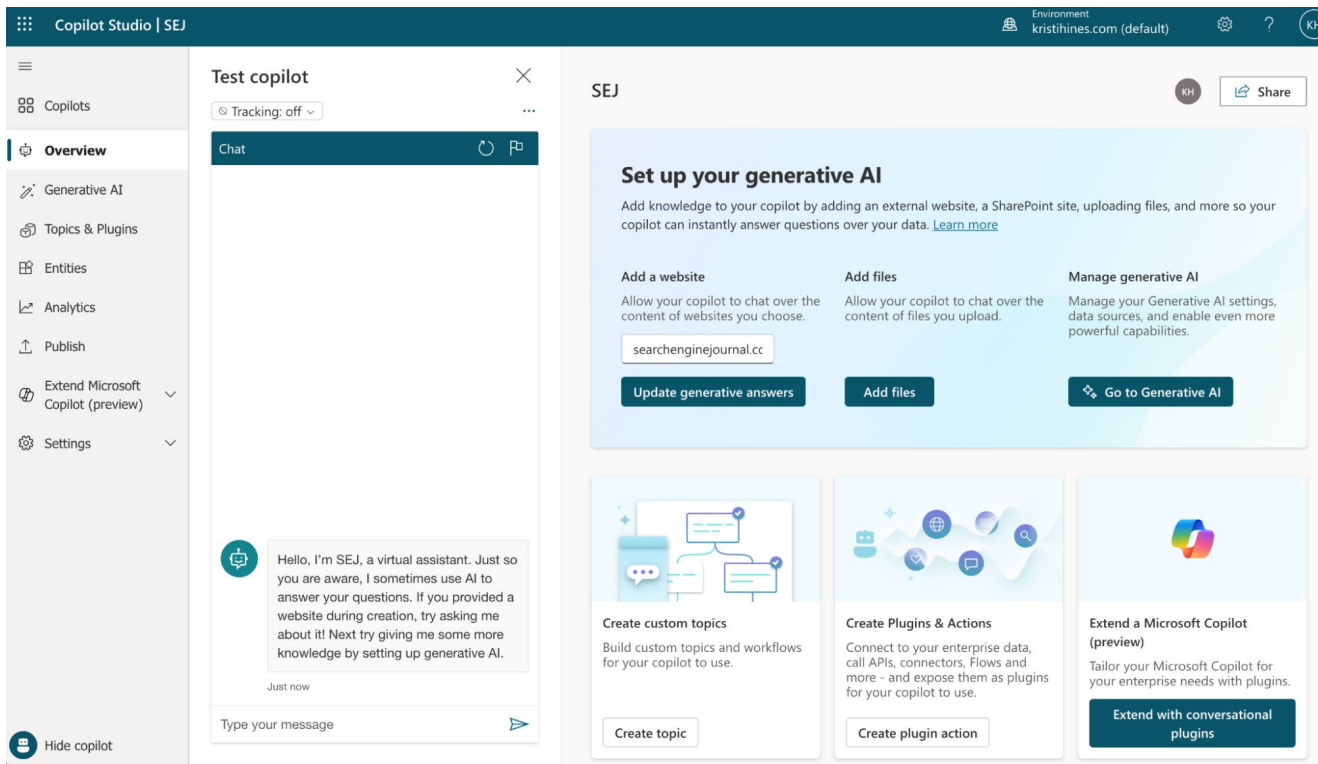
You can create custom chatbots in under 10 minutes when you need an AI chatbot tailored to your needs.

ChatGPT allows subscribers to build [GPTs](#) – chatbots that use GPT-4 with web browsing, DALL·E, and code analysis with custom instructions, knowledge files, and actions to complete specific tasks.



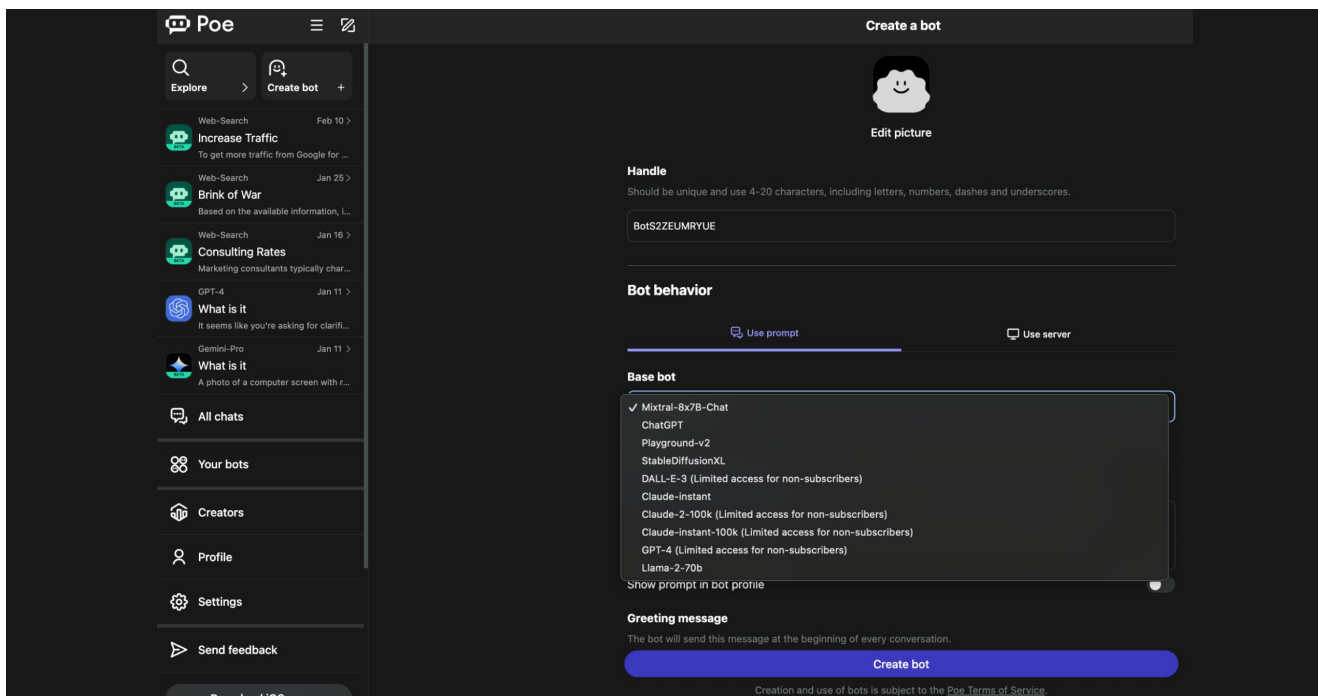
Screenshot from ChatGPT, January 2024

Microsoft [Copilot Studio](#) allows 365 users to create custom Copilot experiences using your company's data.



Screenshot from Copilot, January 2024

Poe users [create custom chatbots](#) using eight of the most popular AI models. You can give each chatbot specific instructions for each conversation and knowledge files to reference.

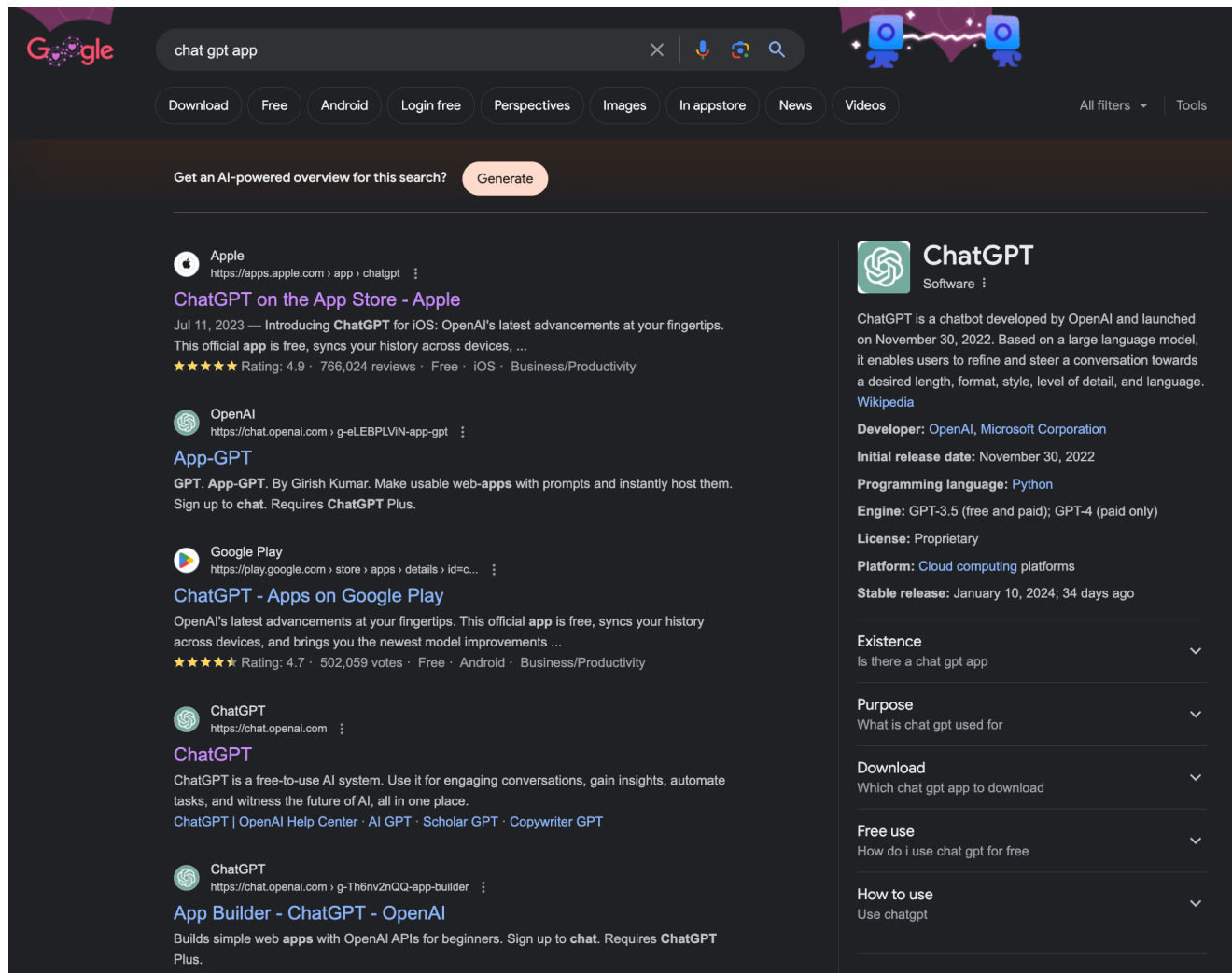


Screenshot from Poe, January 2024

SEO Benefits Of Creating Custom AI Chatbots And GPTs

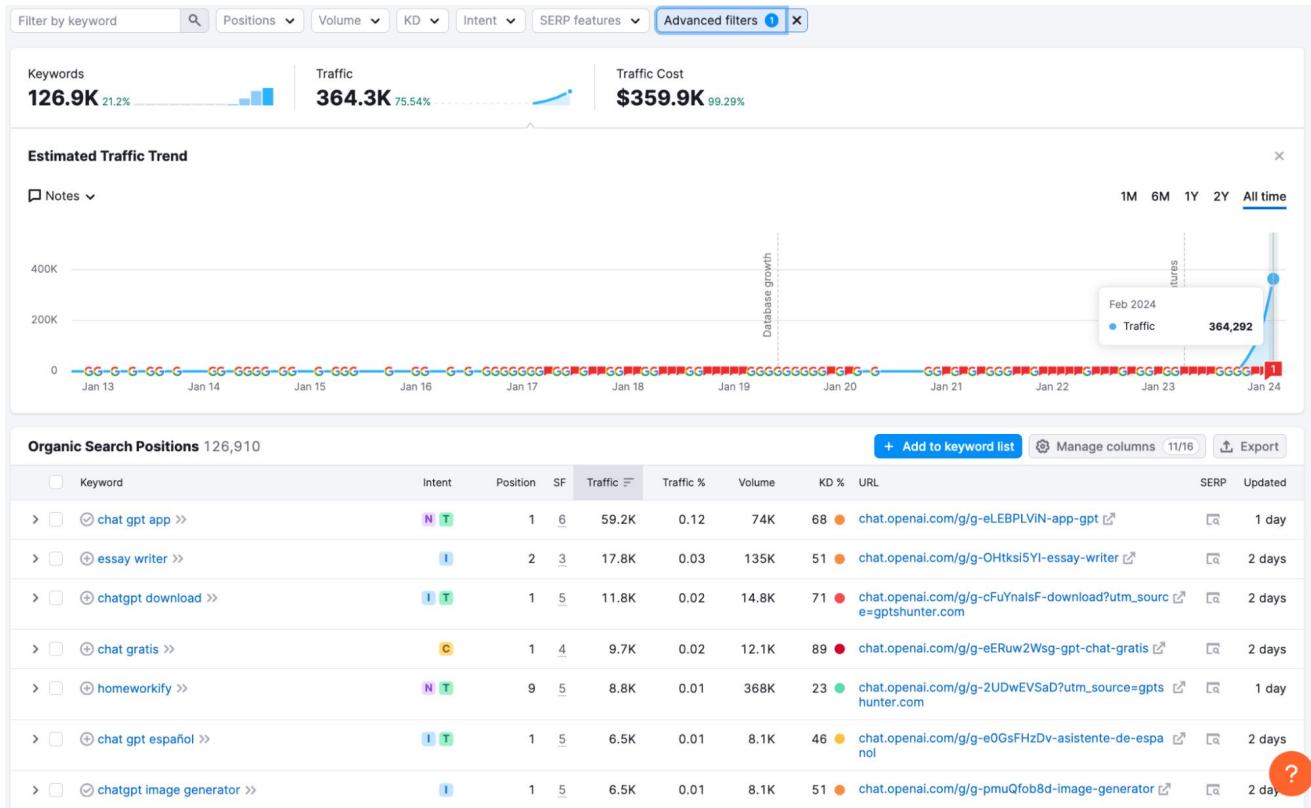
Even if you don't need a custom AI chatbot, think about it from an SEO perspective.

For starters, GPTs appear to rank well in search results.



Screenshot from search for [chat gpt app], Google, January 2024

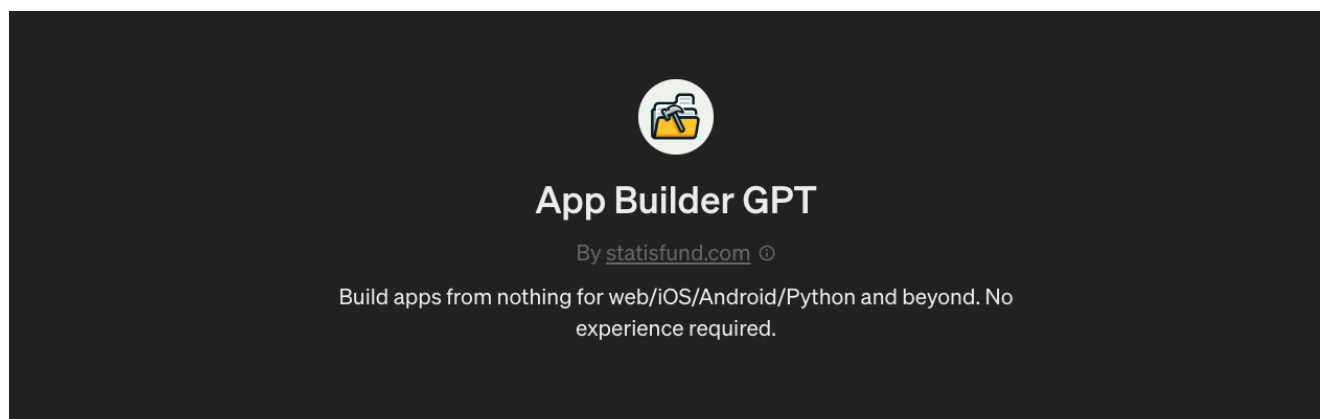
According to Semrush, GPTs receive organic search traffic from Google.



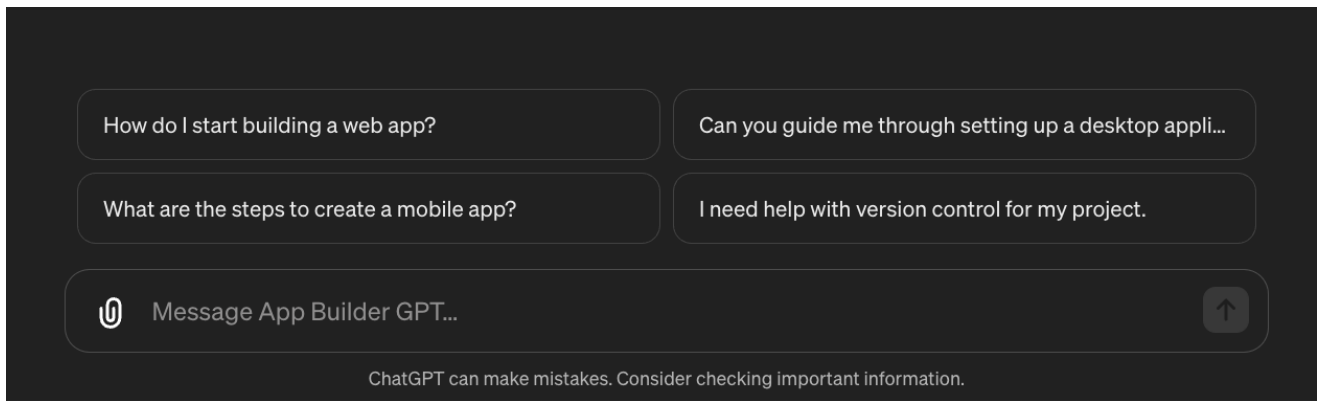
Screenshot from Semrush, January 2024

Making a free tool or inexpensive solution for you or your clients that can be promoted on a webpage could lead to links, brand visibility, and a new tool for lead generation and sales.

It's beneficial since OpenAI allows GPT builders to place a website link on the GPT page.



Screenshot from ChatGPT, January 2024



Screenshot from ChatGPT, January 2024

You could also create a new product/income stream for your business or your clients.

Be aware of the disclaimers for using AI, as mentioned at the beginning of this section. It's also essential to research the risks of developing custom generative AI features for others.

Learn How To Build Custom AI Chatbots

Learn how to build custom chatbots and GPTs with these free courses and guides:

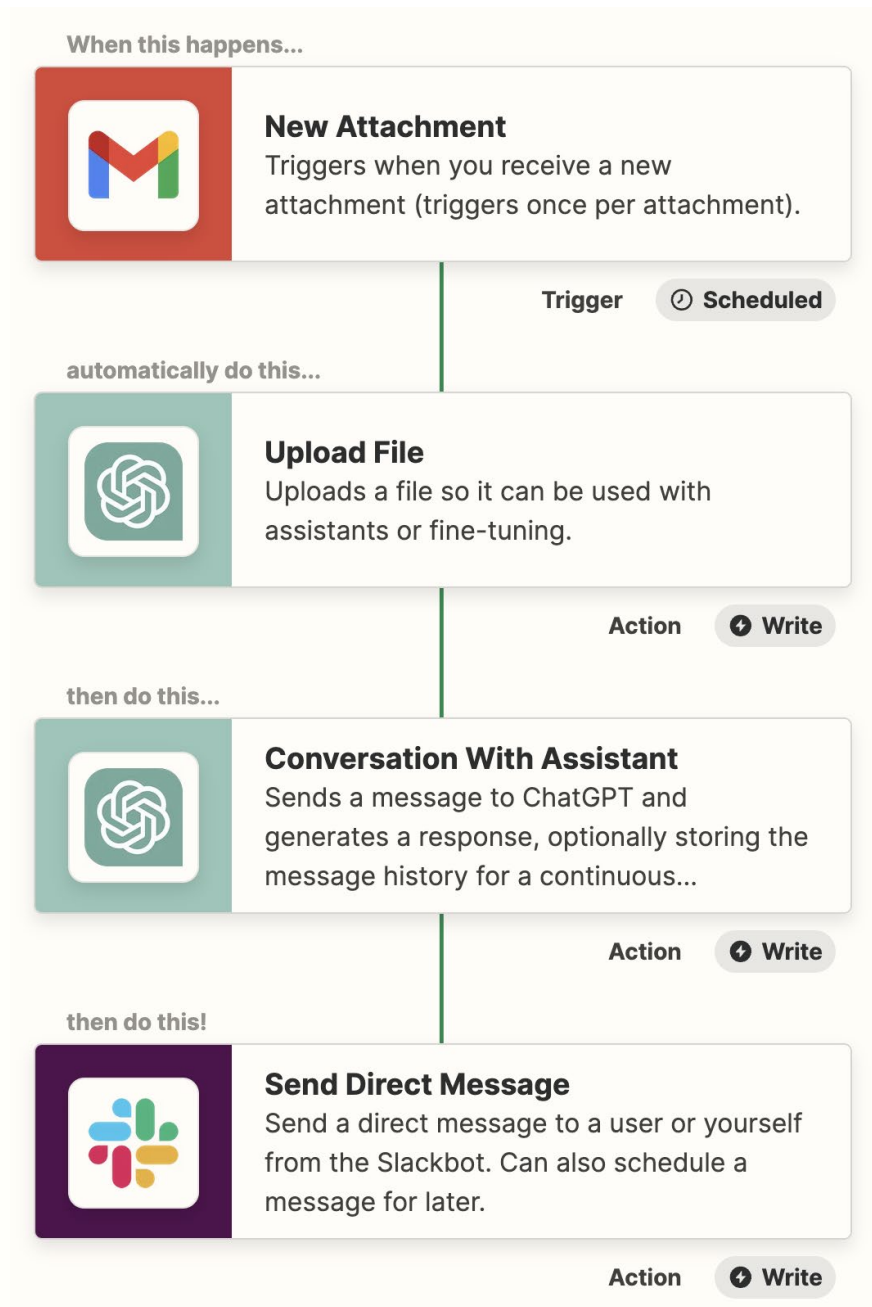
- ChatGPT Prompt Engineering for Developers ([DeepLearning.AI](#))
- Quickstart Guide to Building Generative AI Copilots ([Microsoft](#))
- How to Create a Custom Bot ([Poe](#))

Automated AI Agents

Do you want to automate tasks with AI?

With Zapier (and plans starting at \$20 a month), you can connect your [ChatGPT](#) account, [Claude](#) (via API), or [Cohere](#) (via API) to thousands of popular business applications to create automated workflows.

For example, I can create a workflow that connects Gmail, ChatGPT, and Slack and works when a new email matching a search is received.



Screenshot from Zapier, January 2024

Actions For GPTs

Remember the custom generative AI chatbots mentioned earlier that ChatGPT subscribers can build with minimal coding?

If you're willing to do a small amount of coding, Zapier also offers [actions](#) that connect GPTs to Zapier's platform of app integrations.



Set up your Custom action.

[Get help](#)

Action *

Facebook Groups: Post Message

Clear

Creates a new message post in a group's feed

Facebook Groups Account *

Facebook Groups Kristi Leilani Hines

Connect new

Reconnect

Refresh

[Manage accounts](#)

Group *

Have AI guess a value for this field

The group you select must have the "Zapier" app installed. [Learn more here.](#) [more](#)

Message *

Have AI guess a value for this field

[Show all options](#)

☐ **Require preview before running AI Action** ([learn more](#))

< Back

Delete

Done

Screenshot from Zapier, January 2024

This would allow you to create a GPT that discusses your plans for the day, sends your schedule to Google Calendar, or adds to-do list items as new tasks in Asana.

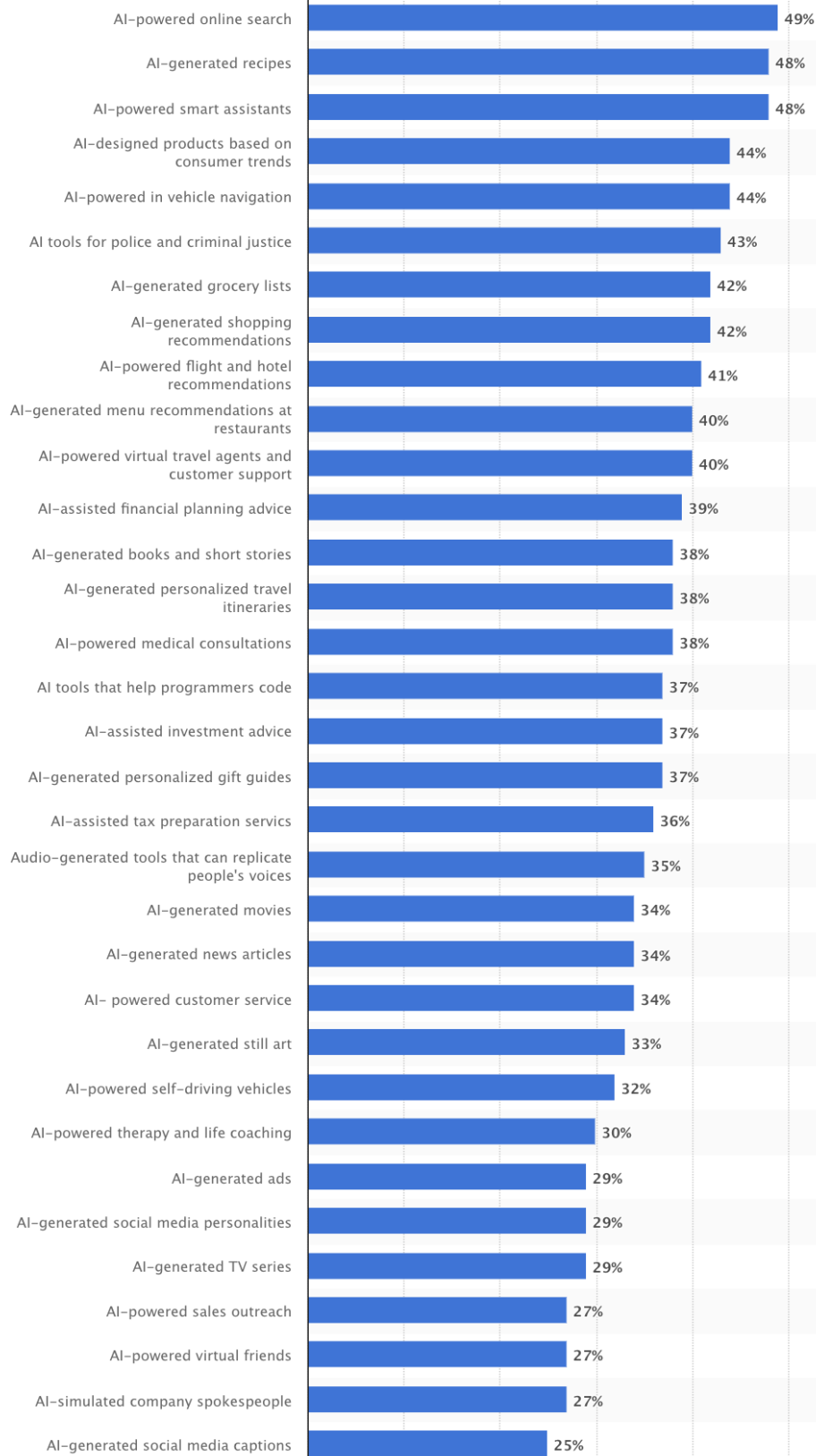
Again, when using the features – especially in a professional setting – confirm if it is acceptable to use AI with business applications like Google Drive, Microsoft 365, Slack, and those that have access to sensitive company or client data.

Train AI Models And Build Generative AI Applications

If none of the AI chatbots and tools mentioned thus far provide the customized level of solution you need, then you should work with the following for enterprise AI solutions.

- Build with the latest AI models using [Anthropic](#), [Cohere](#), [OpenAI](#), and [Perplexity](#) APIs.
- Build AI applications and train your AI models with [Amazon](#), [Google](#), [IBM](#), [Microsoft](#), [NVIDIA](#), [Oracle](#), and [Salesforce](#).
- Build with open-source models from [Hugging Face](#), [Meta](#), and [Mistral AI](#).

According to 2,205 survey respondents in the U.S., the most-wanted AI-powered [products](#) include online search, shopping recommendations, books, movies, news articles, ads, sales outreach, and social media captions.



Screenshot from Statista, January 2024

Learn How To Develop AI Solutions

Learn how to build AI products with the following courses and learning paths:

- Generative AI Learning Plan for Developers ([Amazon](#))
- Machine Learning Engineer Learning Path ([Google](#))
- Develop Generative AI solutions with Azure OpenAI Service ([Microsoft](#))
- Microsoft Azure AI Fundamentals ([Microsoft](#))

Prompting To Understand AI Discovery

There are three reasons you should explore the art of prompting.

1. Detailed prompts can get you closer to the response you want from generative AI tools.

If you hired a web developer, you wouldn't tell them to make you a website. You would tell them about your business, products, customer demographics, and the functionality you want (blog, ecommerce store, chatbot, knowledge base, etc.) so they could build a unique website for your company.

The same goes for generative AI tools. Be specific.

2. Understanding prompts can help you optimize your content for the future of [AI in search](#).

The following is an example of a prompt offered to users of Perplexity in its FAQ to help find specific information.

In it, Perplexity suggests that the user be specific about the information they need.

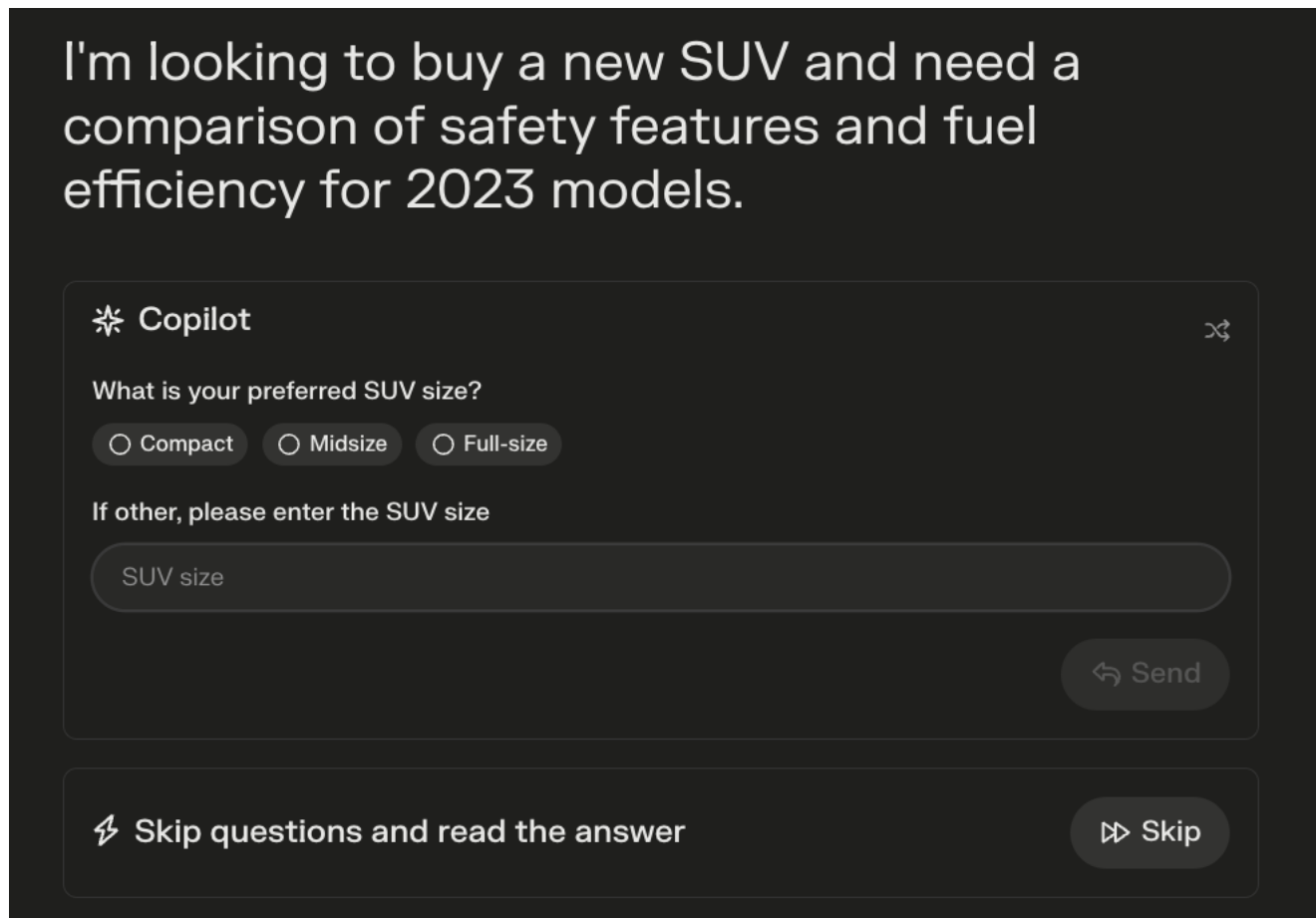
Car Purchase

I'm looking to buy a new SUV and need a comparison of safety features and fuel efficiency for 2023 models.

Keywords: Safety features, fuel efficiency, 2023 SUV models.

Screenshot from Perplexity, January 2024

When the user enters the suggested prompt into Perplexity, they may be asked a question to narrow down the results, such as the size of the vehicle or price range.



I'm looking to buy a new SUV and need a comparison of safety features and fuel efficiency for 2023 models.

 Copilot 

What is your preferred SUV size?

☐ Compact ☐ Midsize ☐ Full-size

If other, please enter the SUV size

 Send

 Skip questions and read the answer  Skip

Screenshot from Perplexity, January 2024

Then, Perplexity offers a summary of the sources with information about safety features and fuel efficiency for 2023 SUVs.

I'm looking to buy a new SUV and need a comparison of safety features and fuel efficiency for 2023 models.

✧ Copilot

📄 Understanding question

📄 Reading response

Compact

🔍 Searching web

2023 compact SUV safety features comparison

2023 compact SUV fuel efficiency comparison

🔍 Found 16 sources

📄 Sources

IIHS-HLDI: Crash Testing & Highway Safety

🇺🇸 iihs • 1

These Small SUVs Have the Best Gas Mileage

🇺🇸 usnews • 2

These Are the Safest Small SUVs

🇺🇸 usnews • 3

Access Denied

MT motortrend • 4

Access Denied

MT motortrend • 5

Best MPG 2023 SUVs | Cars.com

🇺🇸 cars • 6

Safest Small SUVs in 2024

🇺🇸 carfax • 7

Fuel Economy of 2023 Small SUV 2WD

🇺🇸 fueleconomy • 8

Check Out Which SUVs Ranked the Highest for...

🇺🇸 autoweek • 9

Compact SUVs with Best Gas Mileage

TC truecar • 10

2023 IIHS Top Safety Picks

🇺🇸 iihs • 11

Suvs with Best Gas Mileage for 2023

🇺🇸 autodna • 12

Access Denied

MT motortrend • 13

Best Gas Mileage SUVs: Most Fuel-Efficient SUV...

🇺🇸 edmunds • 14

Safest SUVs for 2023 and 2024

🇺🇸 caranddriver • 15

True MPG: most efficient small SUVs

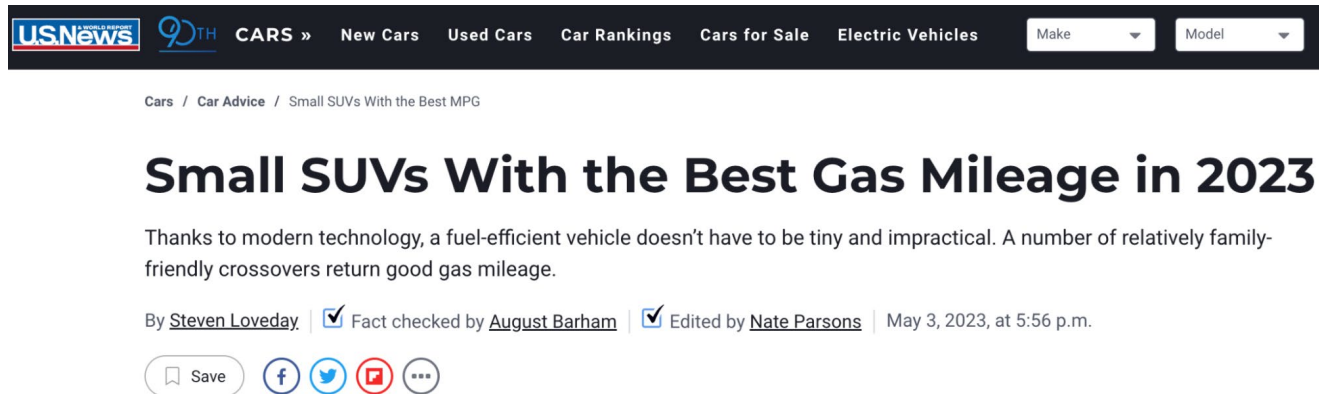
🇺🇸 whatcar • 16

🌐 Answer

When considering the purchase of a compact SUV in 2023, focusing on safety features and fuel efficiency is crucial. The Insurance Institute for Highway Safety (IIHS) and fuel economy data provide valuable insights into the best options available.

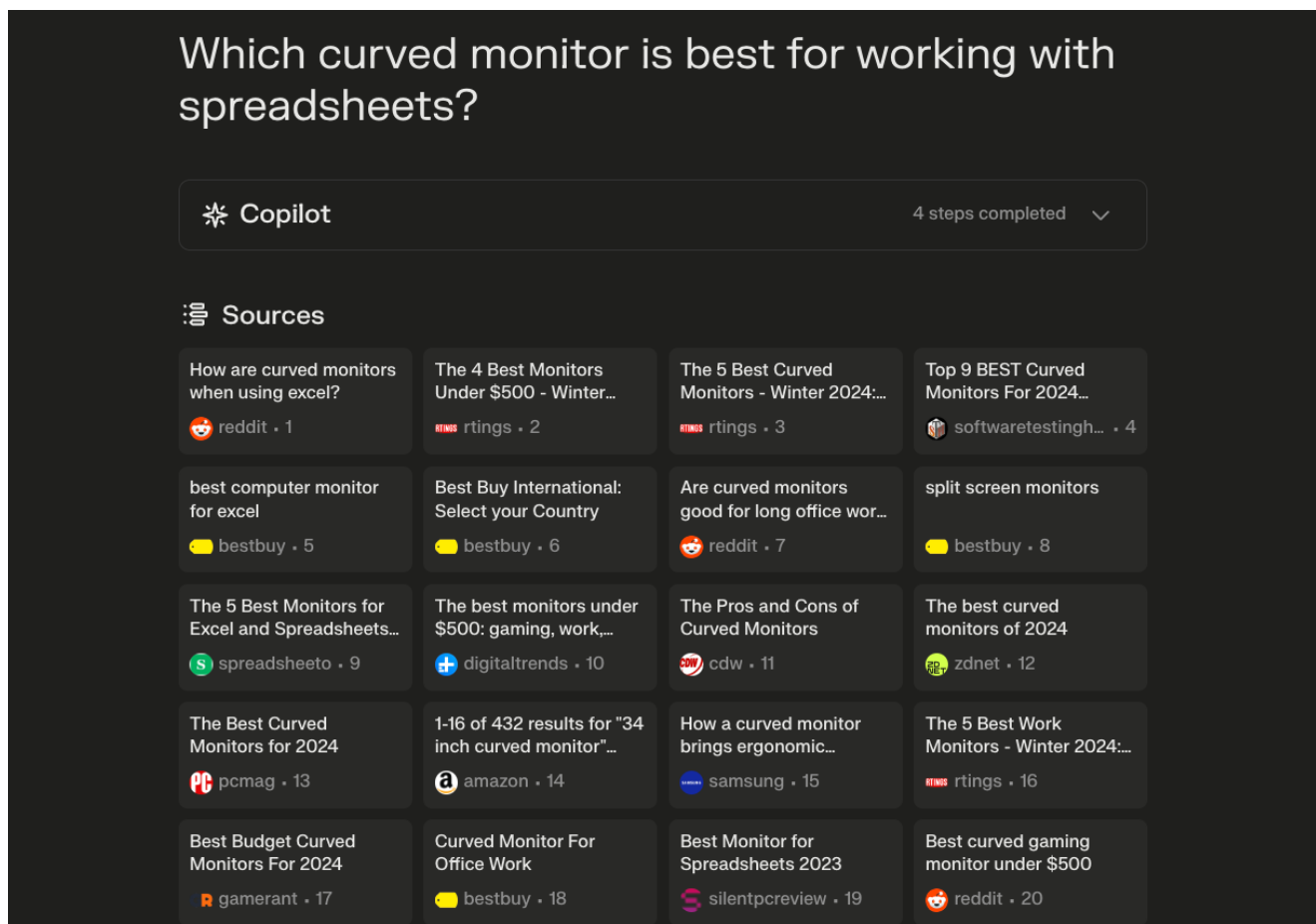
Screenshot from Perplexity, January 2024

Publishers could use the results of AI-powered answer engines like Perplexity to reverse engineer why AI chose each source for the query.

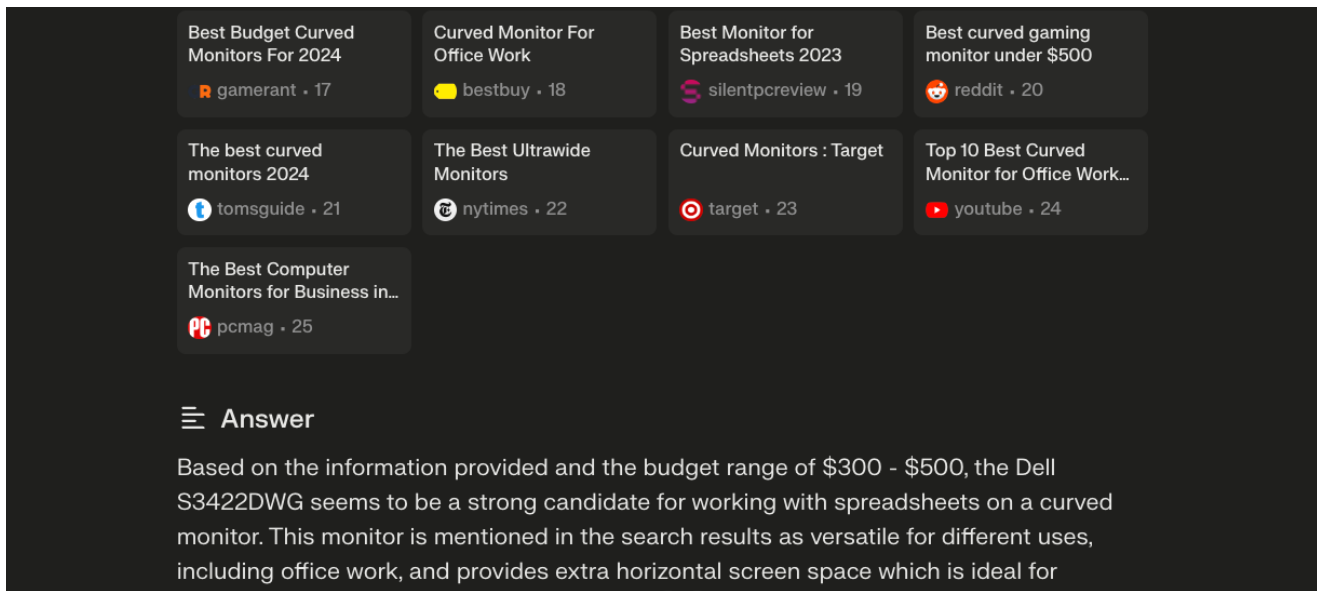


Screenshot from U.S. News, January 2024

As tech companies teach users to create prompts that combine context with a specific goal, brands must get to know the prompts used in AI answer engines, like the top keywords used in search engines.



Screenshot from Perplexity, January 2024



Screenshot from Perplexity, January 2024

In the above example of a prompt specifying a computer monitor that is best for working with spreadsheets, several results are from popular retailers.

Ecommerce store owners could use these examples to better optimize product and category pages for a chance to get in front of a customer with a specific purchasing intent.

3. Knowing the sources used for AI-generated answers will allow brands to determine the top publications products must be featured on to reach AI chat users.

Using the right prompts, brands can pinpoint the publications featured most often as sources by AI chatbots for their target customers.

It may also give brands an idea of how they would want to be featured in AI answers for [ad campaigns](#).


Get the


You

What is the best rice cooker for easy cleanup?


Copilot

Certainly! When it comes to rice cookers, **easy cleanup** is a top priority. Here are some highly-rated options that not only make delicious rice but also keep your kitchen hassle-free:

- Zojirushi Induction Heating System Rice Cooker & Warmer:** This model ensures even cooking thanks to induction heating. It offers presets for various rice types, including white, sushi, quick, mixed porridge, sweet, brown, cake, and steam. The rice texture remains consistent during the "keep warm" function. However, note that everything needs to be hand-washed ¹.
- Aroma Housewares 8-Cup Rice and Grain Cooker:** A great value option, this cooker is easy to use and clean. It features a non-stick inner pot and a simple design. It's perfect for everyday rice cooking ².
- Cuckoo CRP-P1009SB Rice Cooker:** If you're looking for a pressure rice cooker, this one is a winner. It combines pressure cooking technology with easy-to-clean features. The inner pot is removable and non-stick ¹.
- Zojirushi NS-TSC18 Micom Rice Cooker and Warmer:** If you need a larger capacity, this model is a great choice. It has a "keep warm" function and maintains consistent rice texture. The removable inner pot makes cleanup a breeze ¹.

Remember to choose based on your specific needs and preferences. Happy cooking! 🍳

Ads ⓘ

 Dash Mini Rice Cook... \$21.95 Williams S...	 Zojirushi 5.5-Cup Rice... \$118.99 45... Kohl's	 Rise By Dash Mini Rice... \$17.88 Walmart	 Uber Appliances... \$39.99 QVC	 Cuisinart 8-Cup Rice... \$89.99 Kohl's	 Town 56816 Residential... \$58.99 Webstaura...	 BLACK+DEC KER 6-Cup... \$23.79 \$34.99 Kohl's	 Aroma ARC-954SBD 8-... \$39.99 Bed Bath &...	 Dash 2-Cup Mini Rice... \$21.99 QVC	 Zojirushi 6 Cup Rice... \$64.99 QVC	 Zo NYC-36 4 \$352.49 Webstaur
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New topic

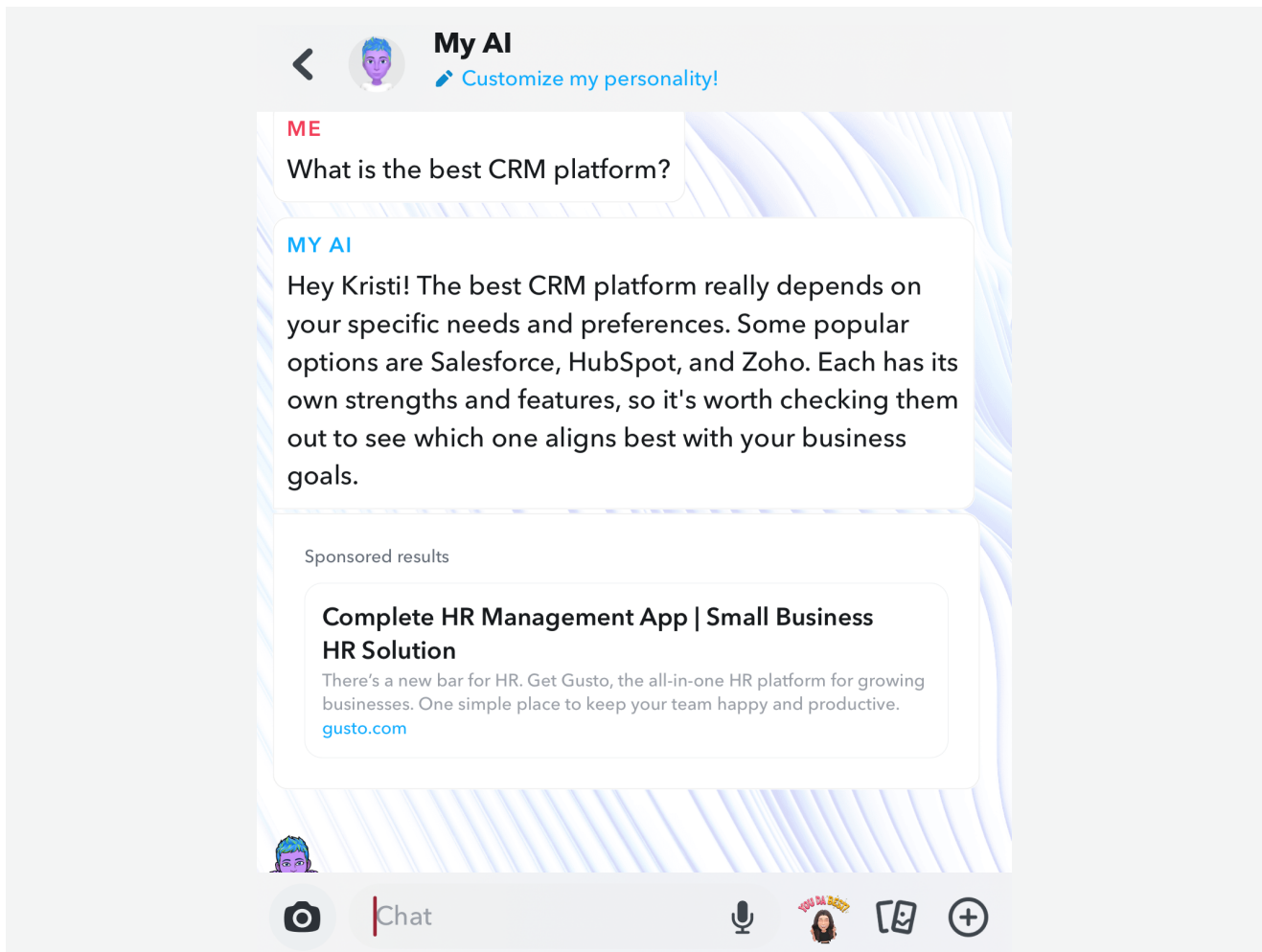
Ask me anything...






0/2000

Screenshot from Copilot, January 2024



Screenshot from Copilot, January 2024

4. Prompting is essential for using platforms with generative AI features.

Soon, search engines may not be the primary way people discover content, research purchases, and find places to shop.

They may ask ChatGPT, Copilot, Gemini, Meta AI, or another AI chatbot. That's what Google's CEO [reportedly](#) anticipates.

Notably, many of the top tech platforms offer guides to prompting for users and developers alike.

- What Is Prompt Engineering? ([Amazon](#))
- Prompt Engineering For Generative AI ([Google](#))
- Prompt Engineering With Llama 2 ([Meta](#))
- Learn About Copilot Prompts ([Microsoft](#))

- Six Prompt Engineering Strategies For Better Results ([OpenAI](#))
- Prompting Tips and Examples ([Perplexity](#))
- Best Prompting Tips For Text & Image Generation Bots ([Poe](#))

See also: [List Of 16 GPT SEO AI Tools Publicly Available Right Now](#)

FROM OUR SPONSOR

CallRail

How AI Can Transform

Simple Phone Calls

Into

Massive

Marketing Data

Imagine that every call your business receives is the key to unlocking insights that can supercharge your marketing strategy, elevate sales performance, and [propel revenue growth](#).

With CallRail's [AI-powered Premium Conversation Intelligence™](#), this vision becomes a reality, empowering marketers to harness the full potential of their conversations and drive growth.

AI Can Accurately Analyze, Tag, & Qualify Leads For A Faster Sales Funnel

Leveraging powerful [algorithms trained on over 650,000 hours](#) of voice data to automatically transcribe and analyze phone calls with an impressive level of accuracy, Premium Conversation Intelligence stands as the pinnacle of marketing AI.

This means precision in:

- Marketing attribution.
- Keyword spotting.
- Auto-tagging.
- Lead qualification.
- Sentiment analysis.

AI can save your team countless hours and provide them with laser-focused insights.

Drastically Improve ROI With AI's Ability To Attribute Conversions

Traditional marketing attribution often grapples with accurately identifying the source of conversions.

However, Conversation Intelligence can empower you to make informed decisions that directly impact your ROI by precisely attributing conversions to specific marketing efforts – enabling you to allocate your resources effectively to the strategies that drive results.

Automatically Have Key Business Insights Pulled From Sales Conversations

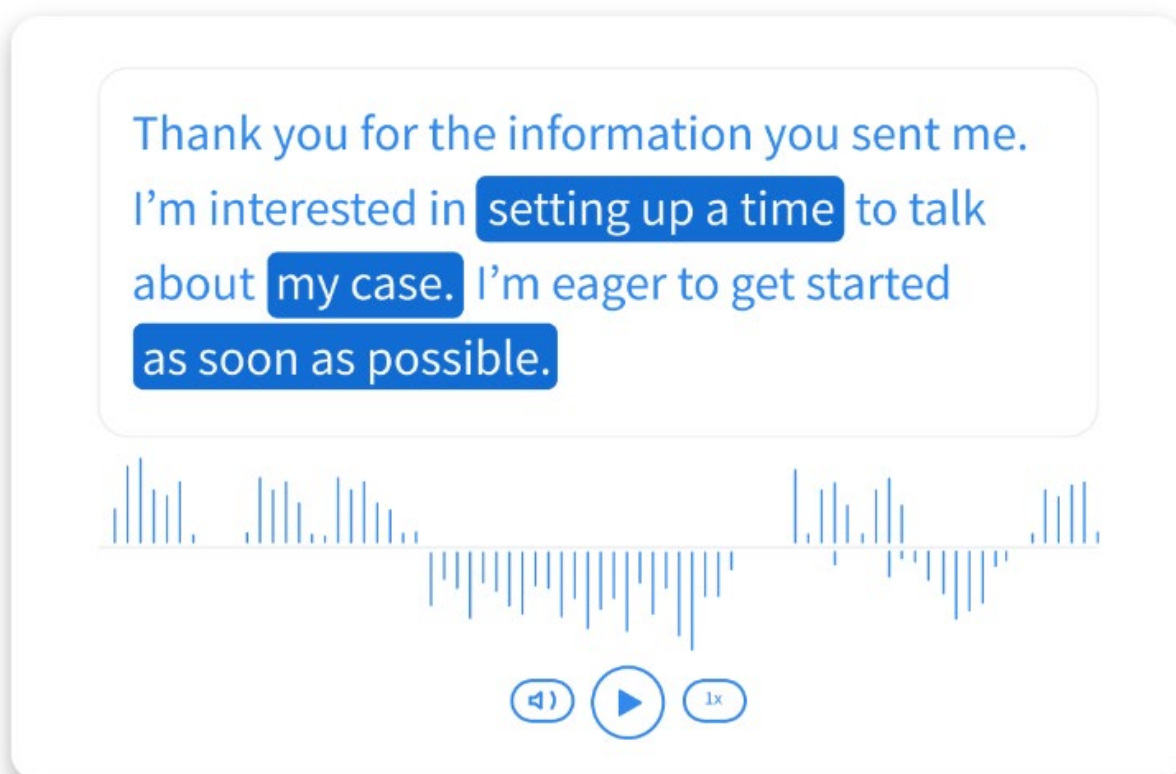
Fine-tuning marketing and keyword bidding strategies has never been more precise.

You can use AI to analyze customer calls and extract invaluable insights from these interactions.

From identifying key phrases that resonate with the audience to uncovering trends that shape consumer behavior, AI is like having a direct line to the pulse of your audience, enabling you to optimize keyword bidding strategies and discern the sources driving valuable leads.

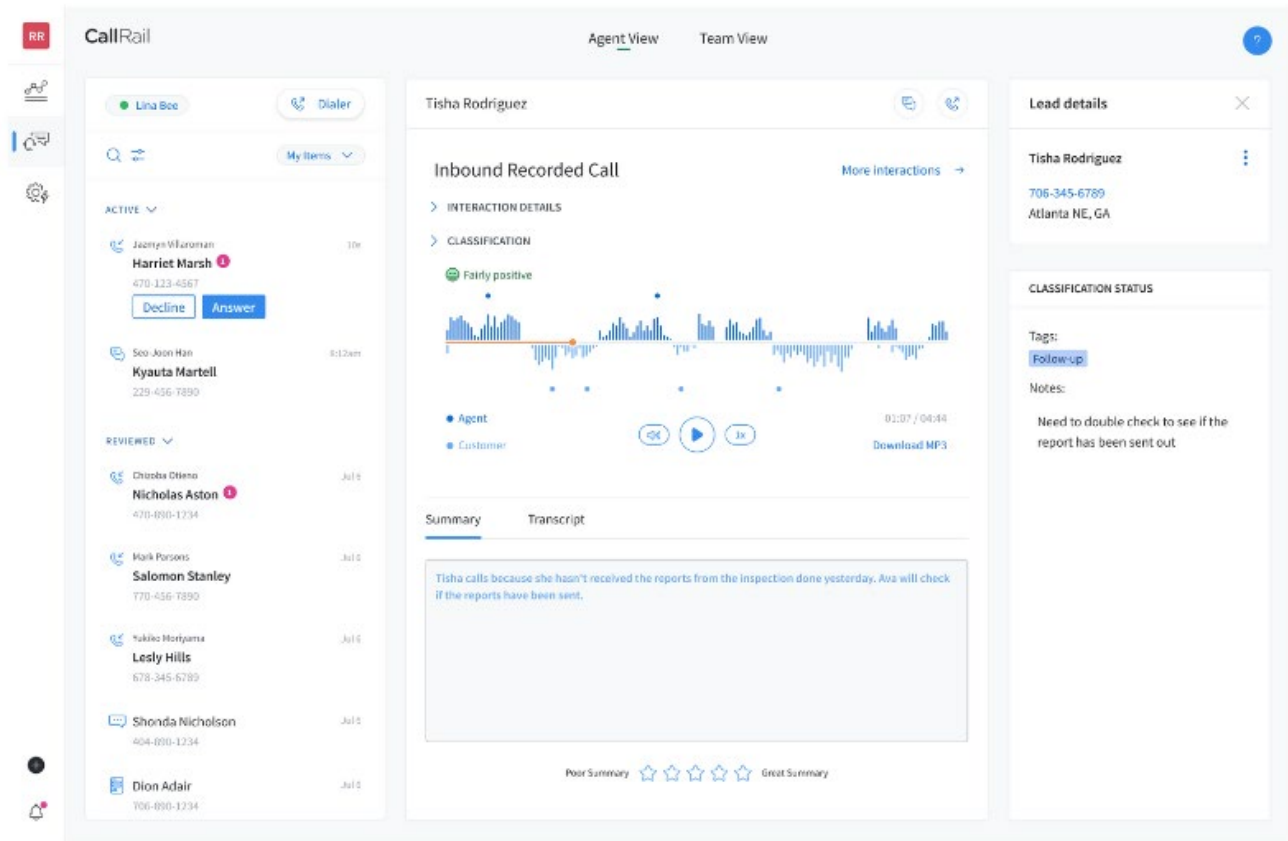
AI Can Help You Quickly Identify & Seize High-Value Opportunities

Given the fast-paced nature of marketing, every lead counts – especially when it's highly qualified. CallRail enables you to streamline your lead qualification process, ensuring prompt lead qualification, all with minimal manual intervention, by creating Automation Rules based on the keywords that matter most.



Unveil Coaching & Training Opportunities To Quickly Power Up Your Team

Here's where CallRail's AI-powered insights shine, highlighting coaching and training opportunities by analyzing call transcripts. You can enhance your team's performance by identifying key moments for training and development in their conversations.



Embrace The Power Of Premium Conversation Intelligence

Implementing Conversation Intelligence in your marketing strategy isn't just a choice - it's a strategic imperative. The benefits are clear: precise attribution, deep customer insights, streamlined lead management, and continuous improvement opportunities.

[Get started with a free 14-day trial; no credit card required.](#)

Part 3:

Implementing

&

Automating

Generative AI

Integrating ChatGPT With Google Sheets For Enhanced Data Analysis



Ludwig Makhyan

Head of Technical SEO,
EssilorLuxottica

[ChatGPT](#) remains one of the most talked about tools in the world of SEO.

Some users are finding ways to leverage the platform for [content and SEO](#); others use it to create ads, optimize meta titles, create structured data, and be more productive overall.

And being more productive by integrating ChatGPT and Google Sheets together makes a lot of sense to me.

How To Integrate ChatGPT And Google Sheets

Integrating ChatGPT and Google Sheets can be achieved in a few ways.

While we'll explore multiple ways to tie these two solutions together, the easiest method at the time of writing this post is to:

- Open Google Sheets.
- Click *Extensions > Add-ons > Get add-ons*.
- Search "GPT for Sheets."

You can also go directly to the website [GPT for Work](#) to install the add-on on Sheets – and you can use this same method to work with ChatGPT in Excel.

Add-ons make it simple to use ChatGPT with Sheets, but if the add-on becomes unsupported or stops working, you can use the methods below.

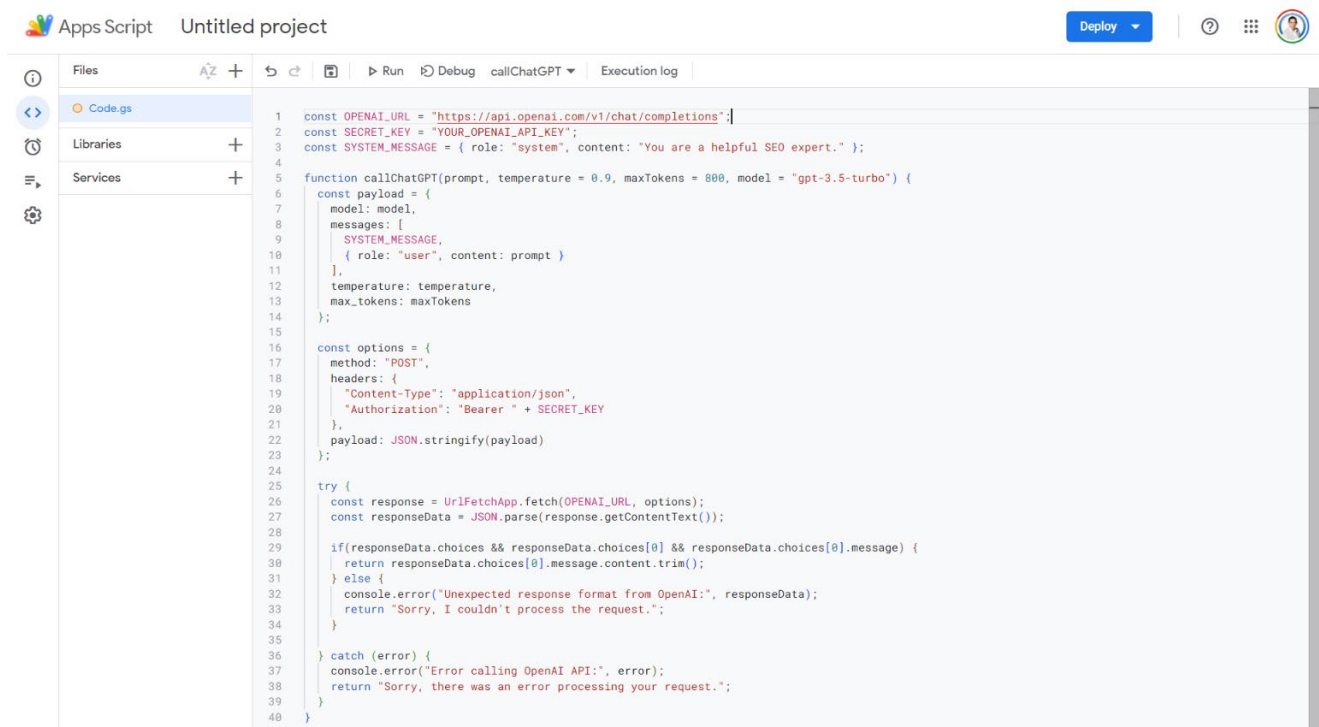
Different Ways To Integrate ChatGPT And Google Sheets

ChatGPT's API allows developers to easily use the platform's responses in their own code.

You can use Apps Script inside of Sheets to get this setup. First, you'll want to:

- Sign up for the [Open API](#).
- Make note of your API key (*Personal > View API keys from the top menu*).
- Open Google Sheets.
- Go to *Extensions > Apps Script*.

ChatGPT has the code available for easy copying, which is outlined below:



Screenshot from Google Sheets Apps Script, January 2024

Code to copy:

```

const OPENAI_URL = "https://api.openai.com/v1/chat/completions";
const SECRET_KEY = "YOUR_OPENAI_API_KEY";
const SYSTEM_MESSAGE = { role: "system", content: "You are a helpful
SEO expert." };
  
```

```

function callChatGPT(prompt, temperature = 0.9, maxTokens = 800, model
= "gpt-3.5-turbo") {
  const payload = {
    model: model,
    messages: [
      SYSTEM_MESSAGE,
      { role: "user", content: prompt }
    ],
    temperature: temperature,
    max_tokens: maxTokens
  };

  const options = {
    method: "POST",
    headers: {
      "Content-Type": "application/json",
      "Authorization": "Bearer " + SECRET_KEY
    },
    payload: JSON.stringify(payload)
  };

  try {
    const response = UrlFetchApp.fetch(OPENAI_URL, options);
    const responseData = JSON.parse(response.getContentText());

    if(responseData.choices && responseData.choices[0] && responseData.
choices[0].message) {
      return responseData.choices[0].message.content.trim();
    } else {
      console.error("Unexpected response format from OpenAI:",
responseData);
      return "Sorry, I couldn't process the request.";
    }
  }

```



```

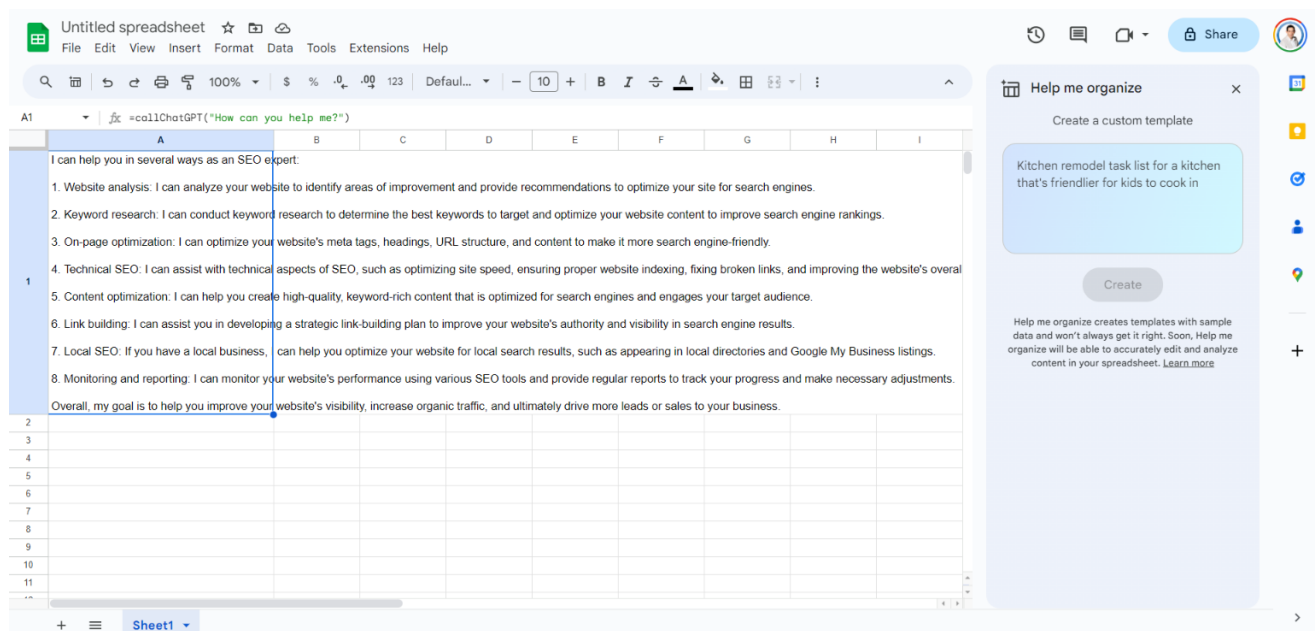
} catch (error) {
  console.error("Error calling OpenAI API:", error);
  return "Sorry, there was an error processing your request.";
}
}

```

You'll need to work your way through the code and change certain parameters. Primarily, you'll replace "YOUR_OPENAI_API_KEY" with the API you jotted down previously.

Now, you can run the script and try it yourself.

A quick test run of the `=callChatGPT("How can you help me?")` function will let you know if it's working. The function should print out a list of items ChatGPT can help you with:



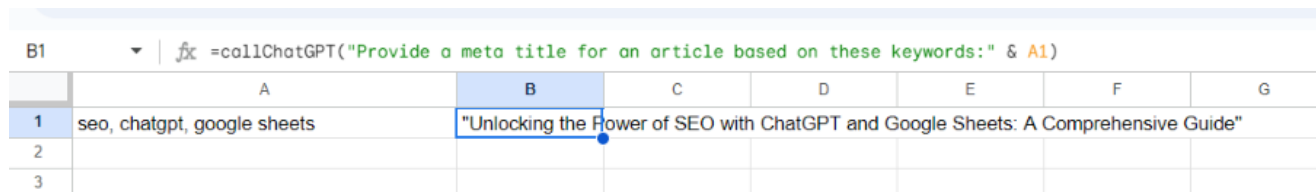
Screenshot from Google Sheets, January 2024

Inside your Sheets cells, you can call the Script using the following “callChatGPT(CELL-AND-ACTION-HERE),” and it will provide a response. Google might ask you to accept certain permissions, so be sure that you do if you want the script to work.

You may also utilize the function based on other cells, for example:

- Put these keywords in cell A1: seo, chatgpt, google sheets.
- In B1 cell input this function: =callChatGPT(“Provide a meta title for an article based on these keywords:” & A1).

You should receive a response like this:



	A	B	C	D	E	F	G
1	seo, chatgpt, google sheets	"Unlocking the Power of SEO with ChatGPT and Google Sheets: A Comprehensive Guide"					
2							
3							

ChatGPT response based on a single cell.

Tweak this formula based on your data, keywords, and other details.

Benefits Of Integrating ChatGPT With Google Sheets

Sheets is a product that I use quite often – it works great. But Sheets and Excel seem to lack innovations that allow you to use your data in new, exciting ways.

Integrating ChatGPT reduces the need to switch between both products and will boost your productivity in the process.

You can use the two together to:

- **Generate or translate text**, which will allow you to create multiple posts on social media in a variety of target languages.
- **Create an ideas section for titles** to help you come up with titles that are more clickable or user-friendly.
- **Summarize text** that you can use for previews or snippets.
- **Make fast work of mundane tests**, such as coming up with meta descriptions or product descriptions.

Tables help you visualize data and are great when reporting to clients, but they're tedious to fill in. You can also use ChatGPT to generate tables for your data to better view and understand your data.

For example, you can create a table to monitor:

- Title lengths.
- Meta tag lengths.
- Bounce rate changes.

When it comes to making sense of your data and analyzing it, you can have ChatGPT run the calculations for you and then create charts or tables around it.

Visualizing your data will make it easier to analyze and use it.

I'm sure you'll find many great uses for ChatGPT and Sheets, but the following are some that I've found to be personally useful.

8 Ways To Use ChatGPT And Google Sheets Together

There are many ways to use ChatGPT and Sheets together, from tag generation to outlines and SEO research.

1. Generate Tags

Together, ChatGPT and Sheets make it easy to generate tags for products and build up your product tag library.

Just create a task for GPT, and it will generate tags for each product you select, saving you so much time in the process.

2. Clean Lists

Sheets and GPT can work together to help you clean up your lists.

Let's say that you have a list of names. Because users input their names, some may be in all capital letters, and others may have emojis or inconsistencies in capitalization.

GPT can use the GPT_FILL function to clean up your name list and standardize it for easy use and organization.

3. Create Descriptions

Do you need to create [product descriptions](#) in bulk? ChatGPT can help.

Using the script, you can generate short product descriptions based on examples on your spreadsheet.

ChatGPT will analyze your example and generate descriptions that match the tone and style of your brand.

4. Generate Taglines, Ad Copy, and Titles

With similar functions, you can use Sheet and ChatGPT to generate:

- Ad copy.
- Taglines.
- Titles.
- More.

ChatGPT can create ad copy that's on-brand, captivating subject lines for emails, and other copy that will engage customers. With these tools, you can save your marketing team time and generate compelling content that converts.

5. Create Outlines

Creating outlines for blog posts can be time-consuming. Integrating ChatGPT into Sheets will save you time by generating outlines for your posts in seconds.

GPT can provide a structure for your posts and create outlines that will keep audiences engaged.

6. Keyword Research

With Google Sheets and ChatGPT, you can save time with [keyword research](#). Just feed GPT a primary keyword and ask it to generate suggestions. The chatbot will generate a list of potential target keywords.

You can also use GPT to generate [long-tail keywords](#).

You can use these keywords as “seeds” for your research or, at the very least, review them to ensure they’re worth targeting.

7. Generate Schema Markup Suggestions And Internal Linking Ideas

Inside of Sheets, you can use GPT to make schema markup suggestions based on the content and type.

For example, if your contact displays your address and phone number, ChatGPT can provide schema markup suggestions to help search engines better understand the information on your page.

You can also ask ChatGPT to provide you with internal linking ideas. Just provide a page topic to get more related topics for internal linking.

8. Perform Competitor And Content Gap Analysis

Want to streamline your [competitor and content gap analyses](#)? ChatGPT can help.

Just input some data about your competitors and ask GPT to provide you with some insights.

You can even ask the chatbot to provide suggestions for missing topics or areas to expand in your content.

Just provide ChatGPT with some background on your content landscape, and it can provide suggestions right in Sheets.

ChatGPT And Google Sheets: Better Together

Integrating ChatGPT into Sheets can help enhance data analysis, save time, and streamline processes.

Once you have an API key, integration is simple, and you’ll have access to a number of functions that you can use to analyze information, create charts, generate ideas, and more.

However, for simplicity, it's easier to use add-ons that take care of the integration without scripts.

Once you connect ChatGPT and Sheets, you'll be able to crunch numbers and ask the chatbot to begin helping you handle tedious tasks.

Even generating metadata or creating titles can be immensely helpful. You can even have ChatGPT help you create redirects or add rules to robots.txt.

Example Formulas

Here are some example formulas you may want to use:

- Input the main keyword in the A1 cell and some secondary keywords in the B1 cell.
- In C1 input: `=callChatGPT("Based on this keyword "&A2&" as the main keyword, and these ones as secondary keywords: "&B2&", recommend an SEO friendly meta description. Make sure the length of your recommendation is a maximum of 150 characters, including the spaces.")`.
- In D1 input: `=callChatGPT("Based on this keyword "&A2&" as the main keyword, and these ones as secondary keywords: "&B2&", recommend an SEO friendly meta title. Make the length of your recommendation to be a maximum of 55 characters, including the spaces.")`.
- In E1 input: `=callChatGPT("For a page to rank well in search engines on the topic of "&A2&", what would be your page content outline? Include these secondary keywords: "&B2&", Provide the page outline with proper headings and structure. Output the outline only. Do not include a page title.")`.

BONUS with script:

- In F1 input: `=callChatGPT("Write SEO friendly FAQschema JSON, limited to 5 questions and answers, for an article with these keywords: "&A2&", "&B2&" and this outline: ("&E2&"). Add the script opening and closing tags for Json.")`.

	A	B	C	D	E	F
1	Primary Keyword	Secondary Keywords	Description	Title	Outline	FAQ with Schema
7	seo	chatgpt, google sheets	Optimize your website for SEO with ChatGPT, Google Sheets, and a SEO-friendly meta description. Boost visibility and drive organic traffic.	"Achieve Higher Rankings: Boost SEO with ChatGPT and Google Sheets"	I. Introduction to SEO A. Definition and importance of SEO B. Benefits of implementing SEO strategies II. Understanding ChatGPT A. Overview of ChatGPT and its capabilities B. How ChatGPT can be used for SEO optimization C. Advantages of leveraging ChatGPT in SEO practice	{ "@context": "https://schema.org", "@type": "FAQPage", "mainEntity": [{ "@type": "Question", "name": "What is SEO?", "acceptedAnswer": { "@type": "Answer",

Screenshot from Google Sheets, January 2024

Voilà – now you have an outline, meta title, meta description, and FAQ schema that goes with your keywords.

GPT-4 With Vision SEO Applications

OpenAI made waves in the tech world with its innovation: GPT-4 with Vision, GPT-4V, or GPT-V for ChatGPT.



OpenAI's GPT-4 with Vision (or GPT-4V) expands the capabilities of the already impressive ChatGPT platform.

This feature integrates image analysis, allowing the AI model to process and understand visual inputs. It opens up a number of fascinating and helpful use cases for SEO pros and marketers, including generating descriptions of images quickly, as well as interpreting and pulling data out of graphs.

While GPT-4V's potential is undeniable, its release comes with risks that businesses should consider carefully.

The visual capabilities of GPT-4V are available to ChatGPT Plus, Teams, and Enterprise subscribers. Here are some fun examples of people using it:



karpathy

5d ...

Best application of GPT-V so far: You can actually somewhat play "What do you meme" (a picture version of Cards Against Humanity) with only two players. GPT-V is the judge :D , and doesn't do too badly. It is quite good at "reading" the cards, and then deciding which card best applies to the image. (Here, each player plays 2 cards.)

BA

You



Next!



ChatGPT

The card that reads, "When you post a bikini pic and someone comments 'Love your courage, babe!'" seems to best fit the meme picture. The seal's expression is innocently earnest, which matches the backhanded compliment implied in the card, suggesting bravery where it might not be expected.



3 replies · 130 likes

Screenshot from X (Twitter), January 2024



Gabriel Garrett (ε/αϚϘ) ✓

@GabGarrett

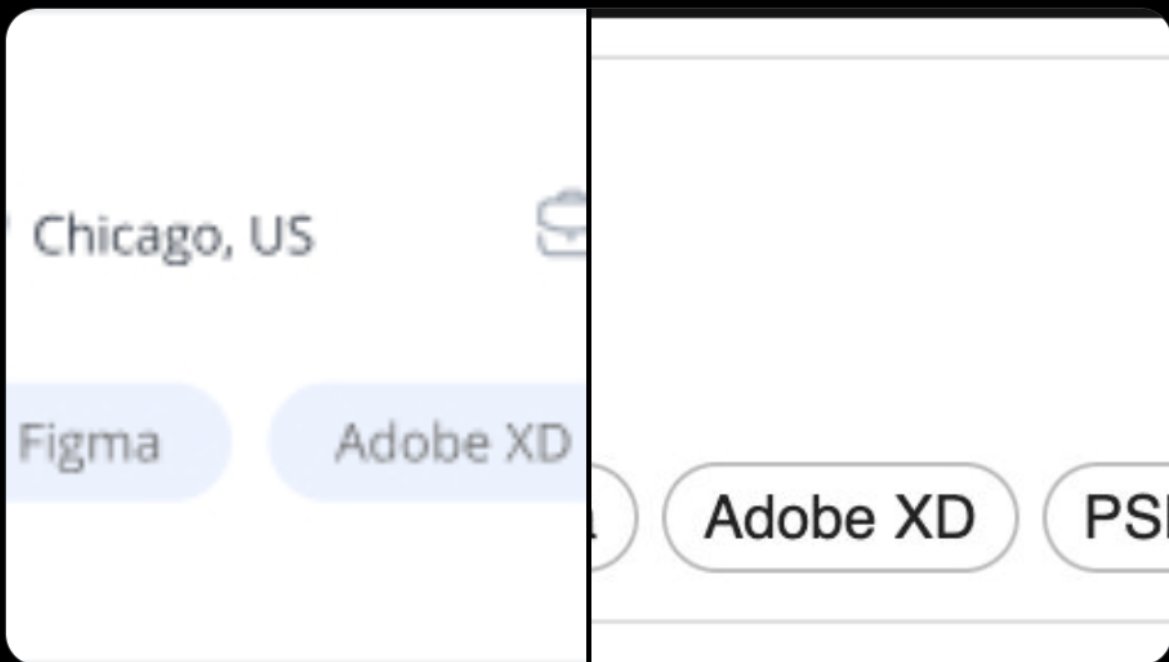
Update: GPT-4 Vision can absolutely convert figma designs into working React components.

On the left, the design. On the right: the output.

I specifically asked it to write the component in React using MUI components, and gave it little other direction.

It even correctly identified everything in the component that would likely be a data prop and structured the components prop arguments accordingly.

I think this will be close enough for any developer to get almost exactly what they need from it in minutes.



8:26 PM · Sep 26, 2023 · **1.5M** Views

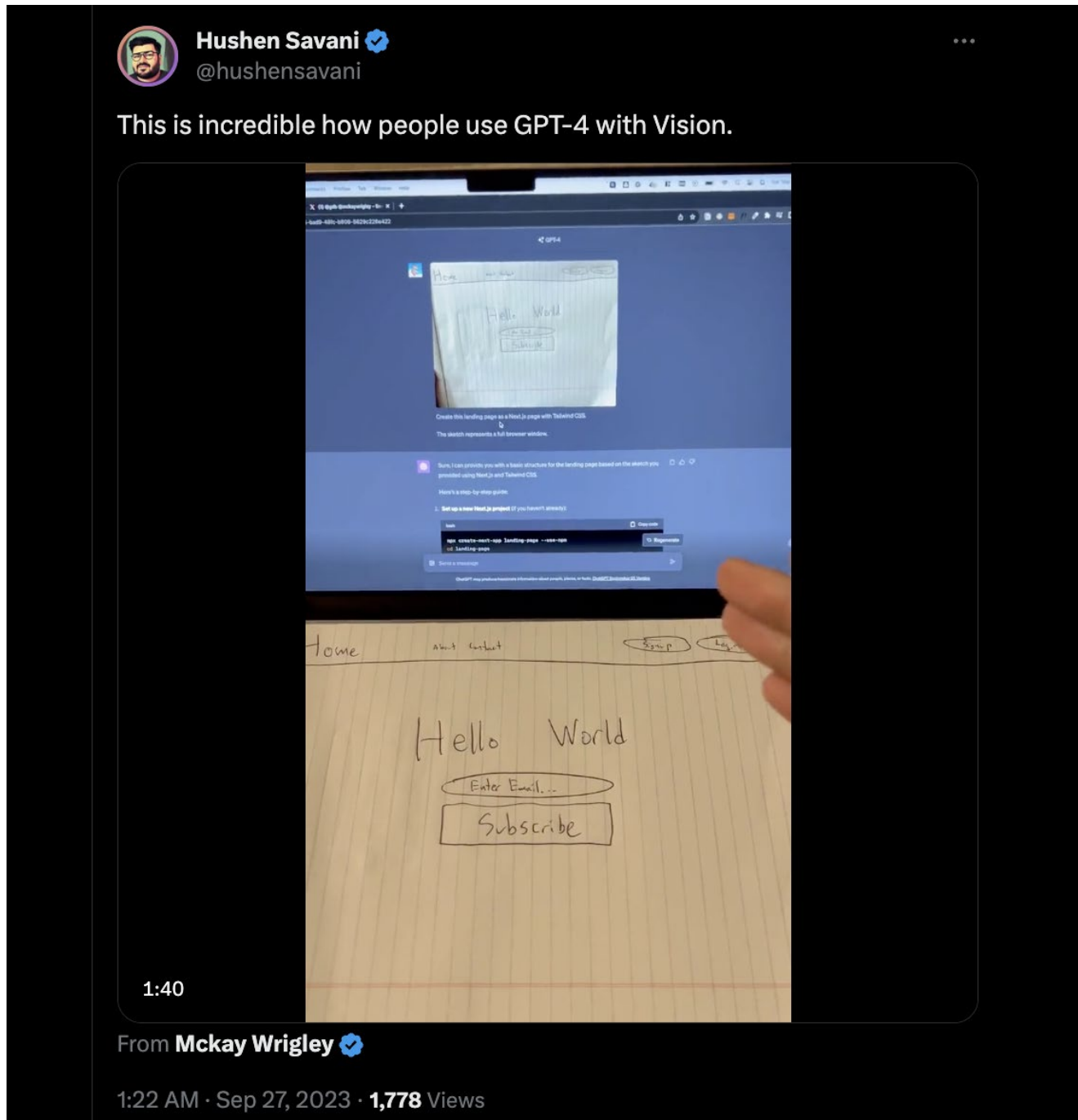


Screenshot from X (Twitter), January 2024

GPT-4 With Vision Examples

As more users explored the new feature, they shared examples of how GPT-4 with Vision works.

It could create code for a website using a napkin drawing.

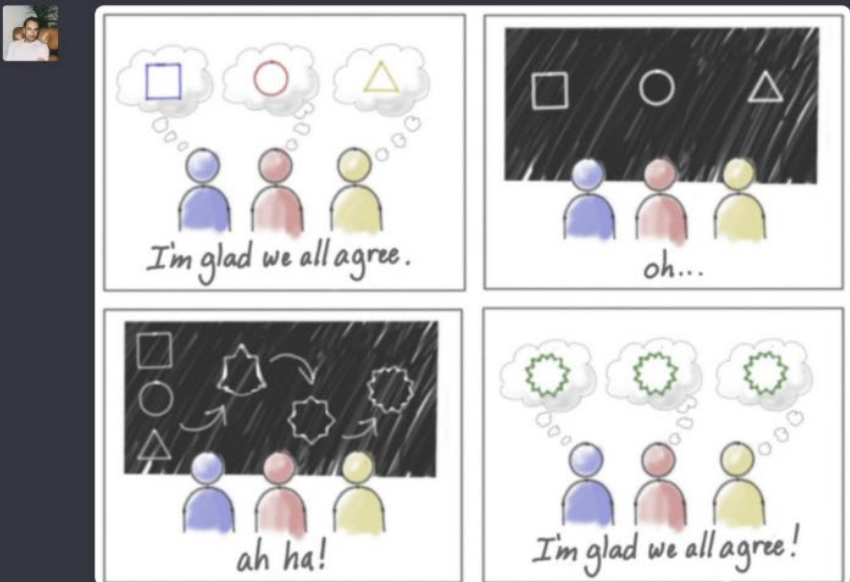


Screenshot from X (Twitter), January 2024

It could analyze memes.

Pietro Schirano 
@skirano

This is absolutely wild. I am completely speechless.



What do you think is the meaning of this image?

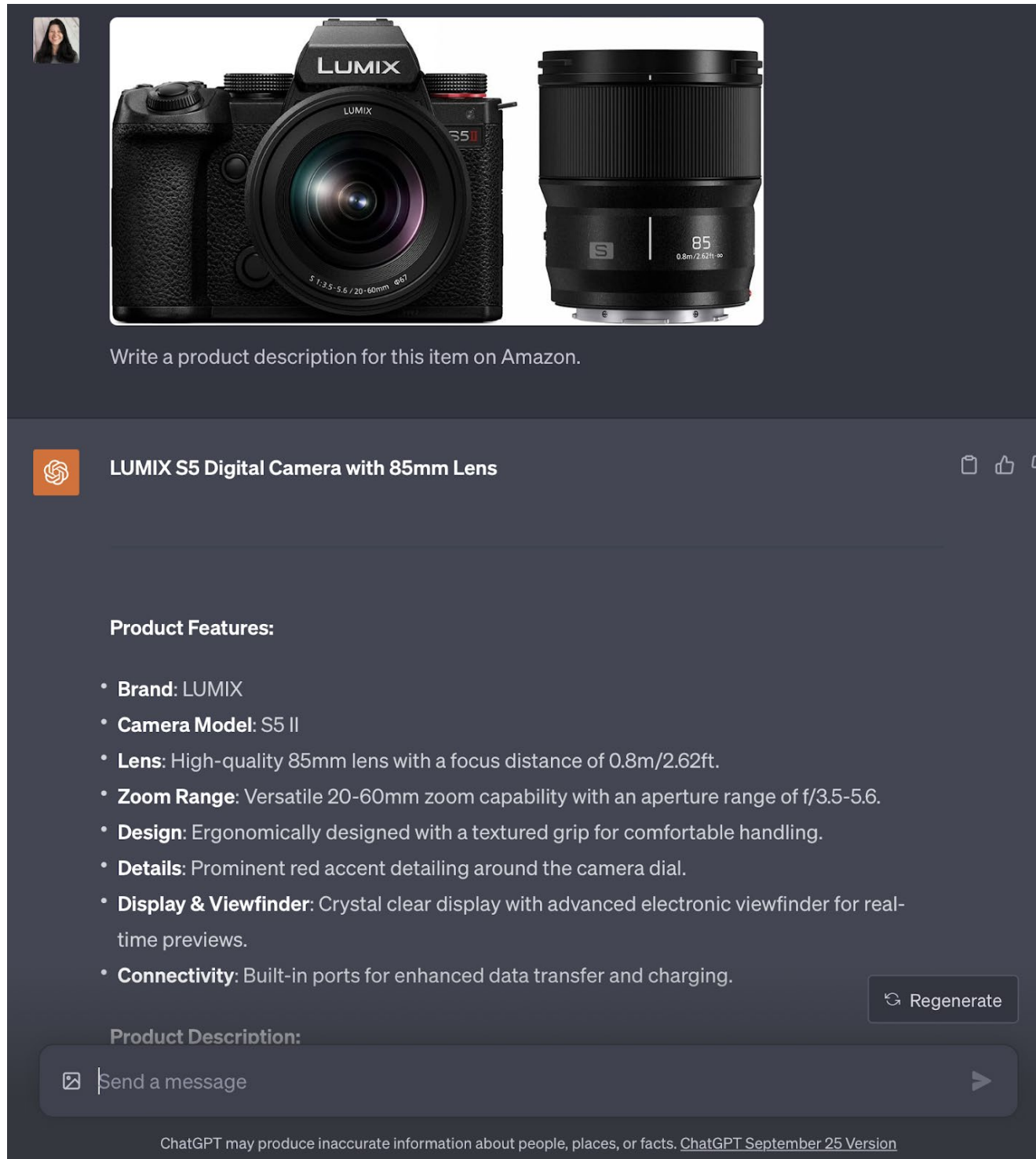
 The image portrays the concept of group dynamics and perspectives.   
Specifically:

1. In the first panel, each individual has a different shape in mind, but they seem to think they're on the same page, as indicated by the text "I'm glad we all agree."
2. In the second panel, when the actual shape (a square) is revealed, it's evident that none of them were thinking of the same thing, leading to a moment of realization with the caption "oh..."
3. In the third panel, the figures are shown with different shapes again, but this time there's an "ah ha!" moment, indicating a sudden realization or insight.
4. The last panel shows that, after some discussion or thought, all have come to a consensus or shared understanding, as they all envision the same shape and the caption reaffirms "I'm glad we all agree."

Screenshot from X (Twitter), January 2024

In addition to these examples, I ran a few simple tests.

GPT-4 with Vision could write product descriptions for your sales pages and Amazon listings.



The screenshot shows a ChatGPT interface with a user prompt and an AI-generated response. The user prompt is an image of a LUMIX S5 Digital Camera with an 85mm lens, accompanied by the text "Write a product description for this item on Amazon." The AI response includes a title, a list of product features, and a section for a product description. The interface also shows a "Regenerate" button and a message input field at the bottom.

LUMIX S5 Digital Camera with 85mm Lens

Product Features:

- **Brand:** LUMIX
- **Camera Model:** S5 II
- **Lens:** High-quality 85mm lens with a focus distance of 0.8m/2.62ft.
- **Zoom Range:** Versatile 20-60mm zoom capability with an aperture range of f/3.5-5.6.
- **Design:** Ergonomically designed with a textured grip for comfortable handling.
- **Details:** Prominent red accent detailing around the camera dial.
- **Display & Viewfinder:** Crystal clear display with advanced electronic viewfinder for real-time previews.
- **Connectivity:** Built-in ports for enhanced data transfer and charging.

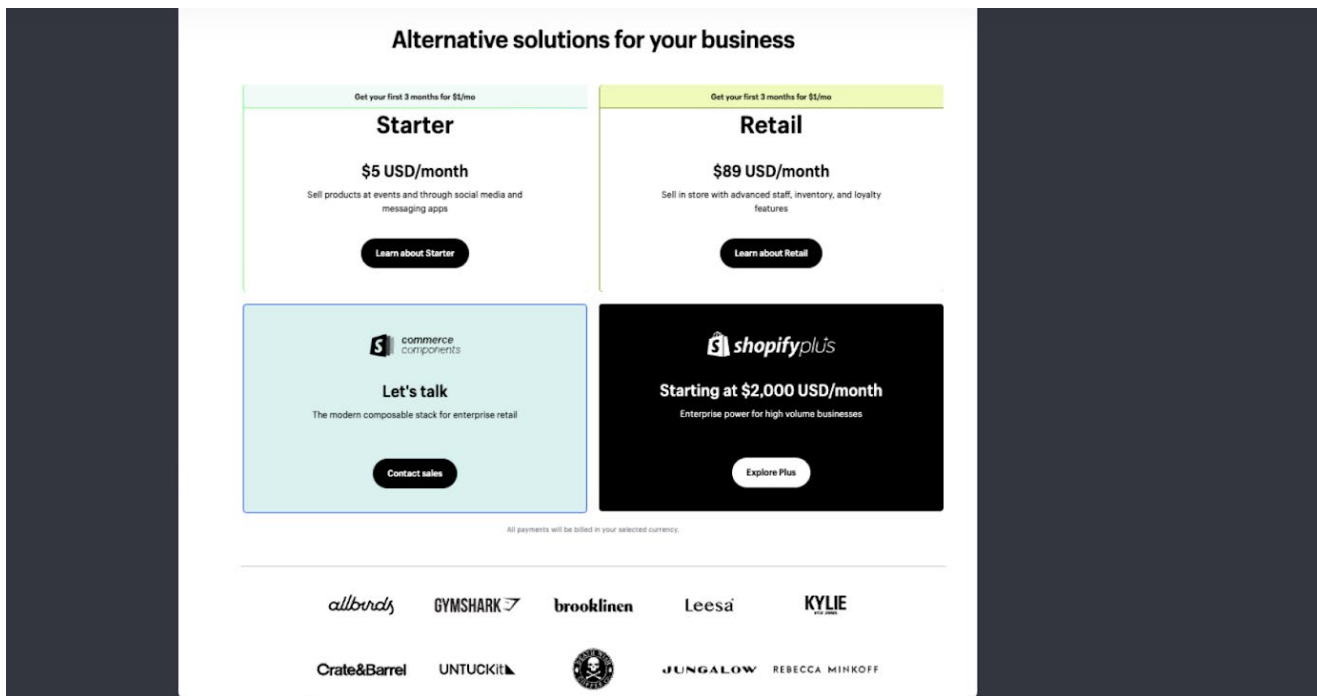
Product Description:

Send a message

ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT September 25 Version](#)

Screenshot from ChatGPT, January 2024

It could help you get started with basic coding for a particular website design based on a screenshot.



Can you write the code needed to create a web page like this?



Certainly! Here's a simplified version of the webpage's structure based on the image you provided, using HTML and CSS:

html

Copy code

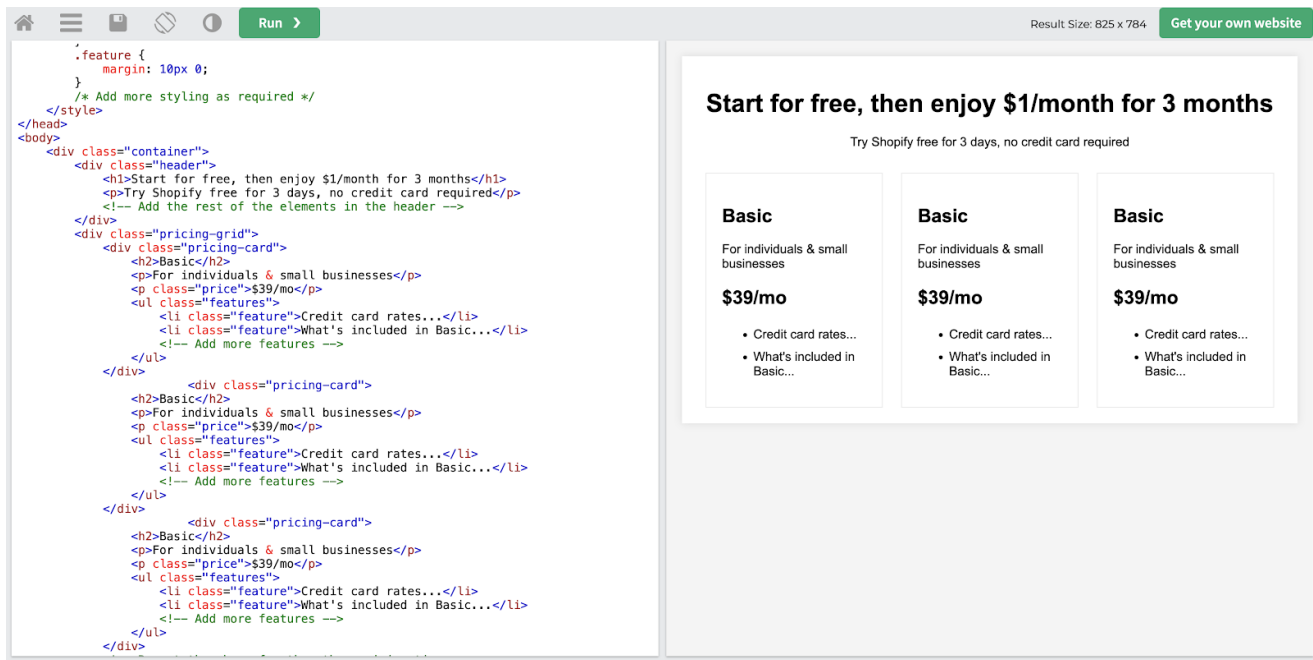
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Shopify Pricing</title>
  <style>
    body {
      font-family: Arial, sans-serif;
```

Stop generating

Send a message

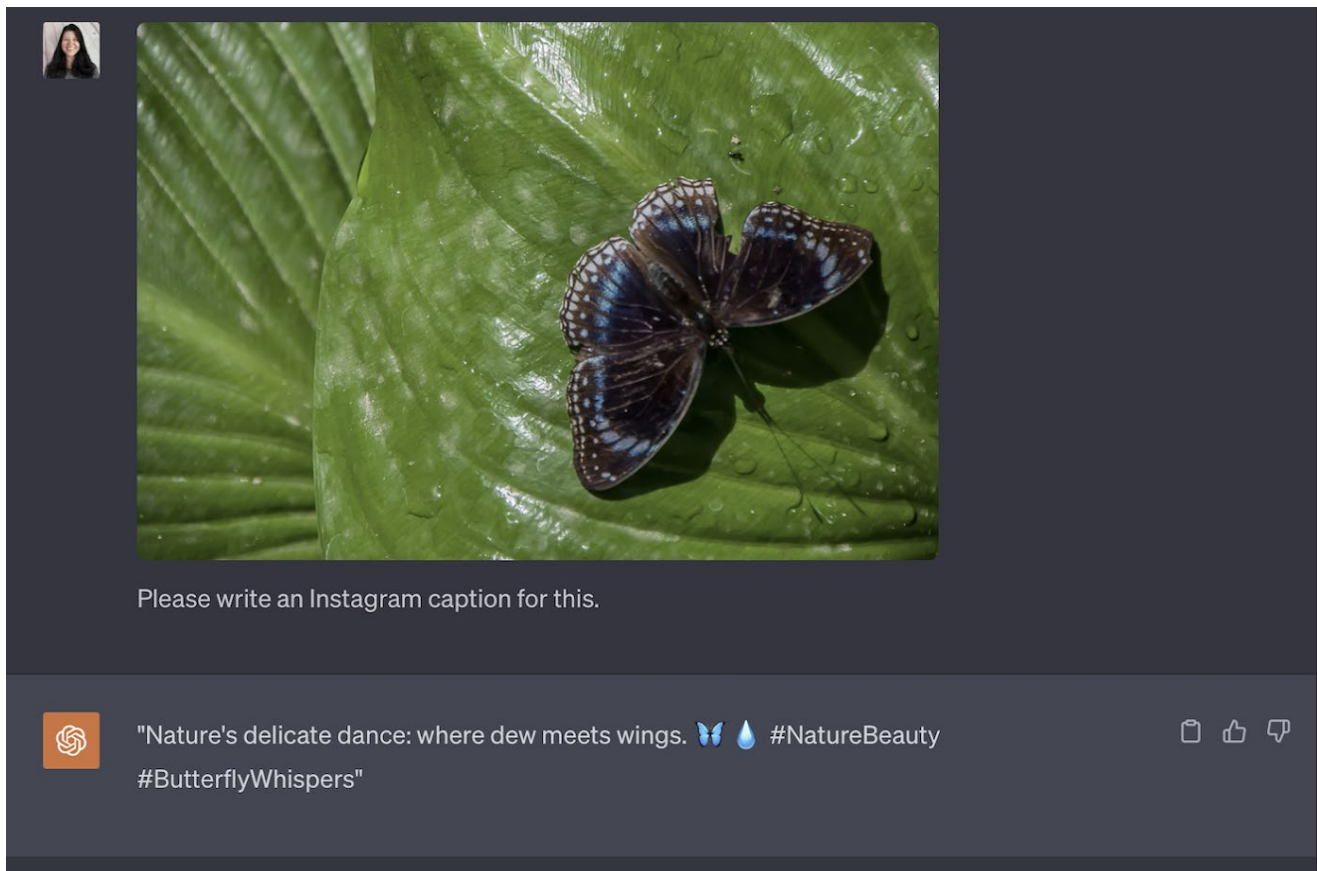
ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT September 25 Version](#)

Screenshot from ChatGPT, January 2024

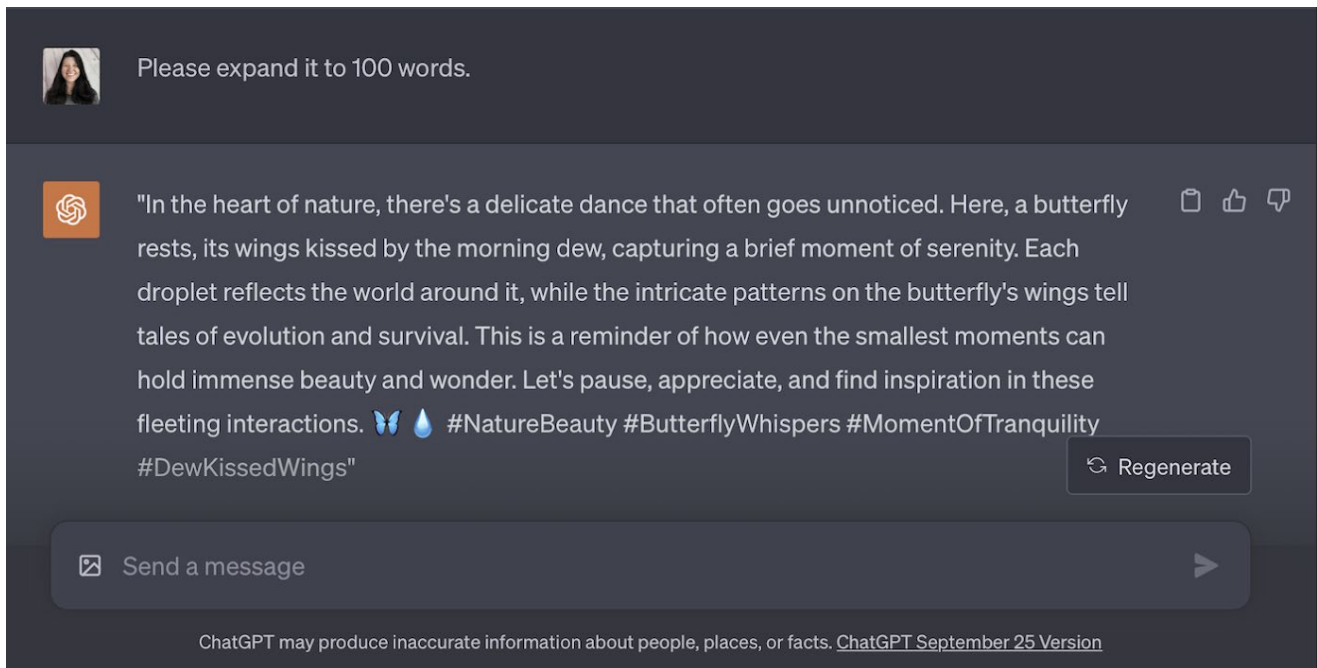


Screenshot from W3Schools, January 2024

It could write creative Instagram captions with hashtag suggestions.

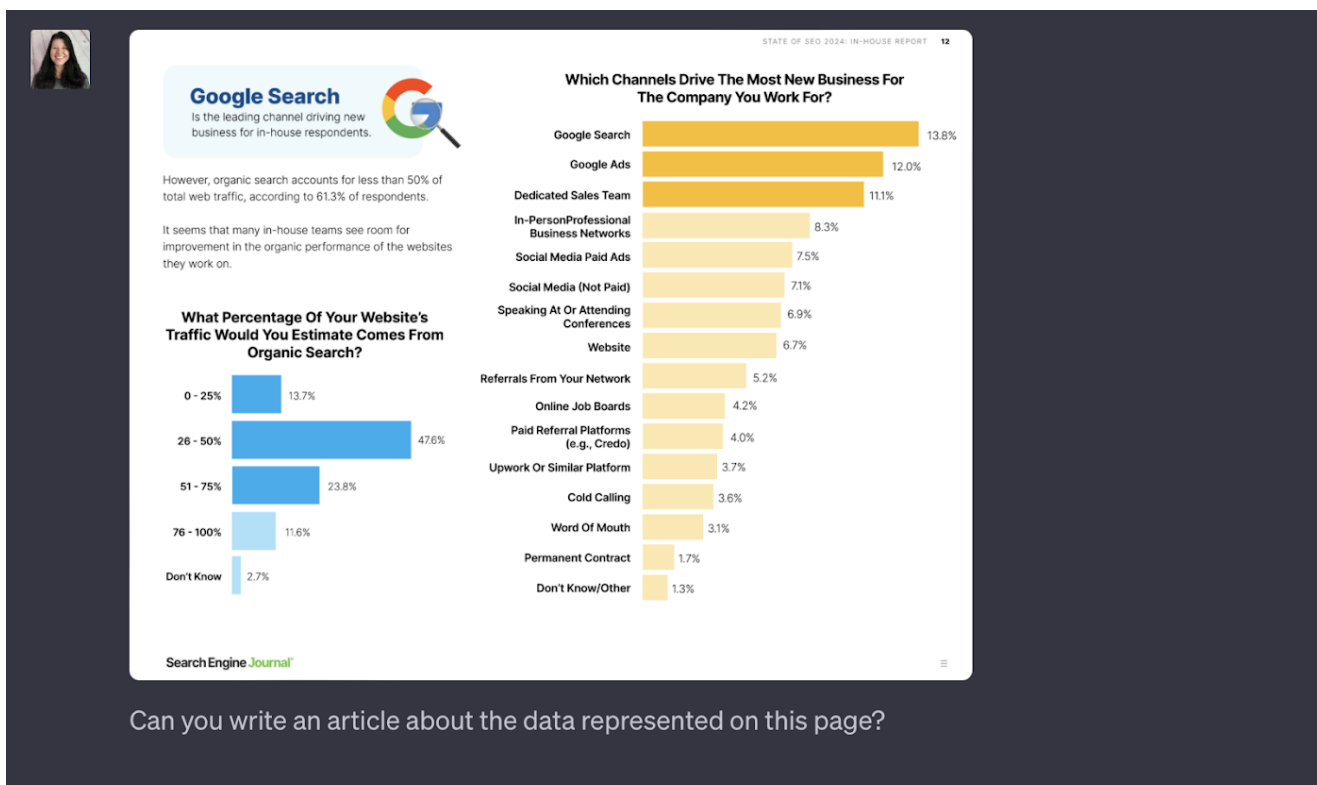


Screenshot from ChatGPT, January 2024



Screenshot from ChatGPT, January 2024

It could write an article based on data from a website or ebook, such as the [State Of SEO 2024](#).



Screenshot from ChatGPT, January 2024



Understanding the State of SEO in 2024: Key Insights and Analysis

Search engine optimization (SEO) remains a pivotal aspect of the digital landscape. However, how businesses perceive and harness SEO's potential is continually evolving. A recent report from Search Engine Journal offers invaluable insights into this dynamic domain. Below, we'll delve into the report's crucial takeaways and what they might signify for businesses.

1. Google Search Dominates New Business Acquisition

According to the data, Google Search emerges as the leading channel for driving business, with 13.8% of in-house respondents naming it as their top source. This finding

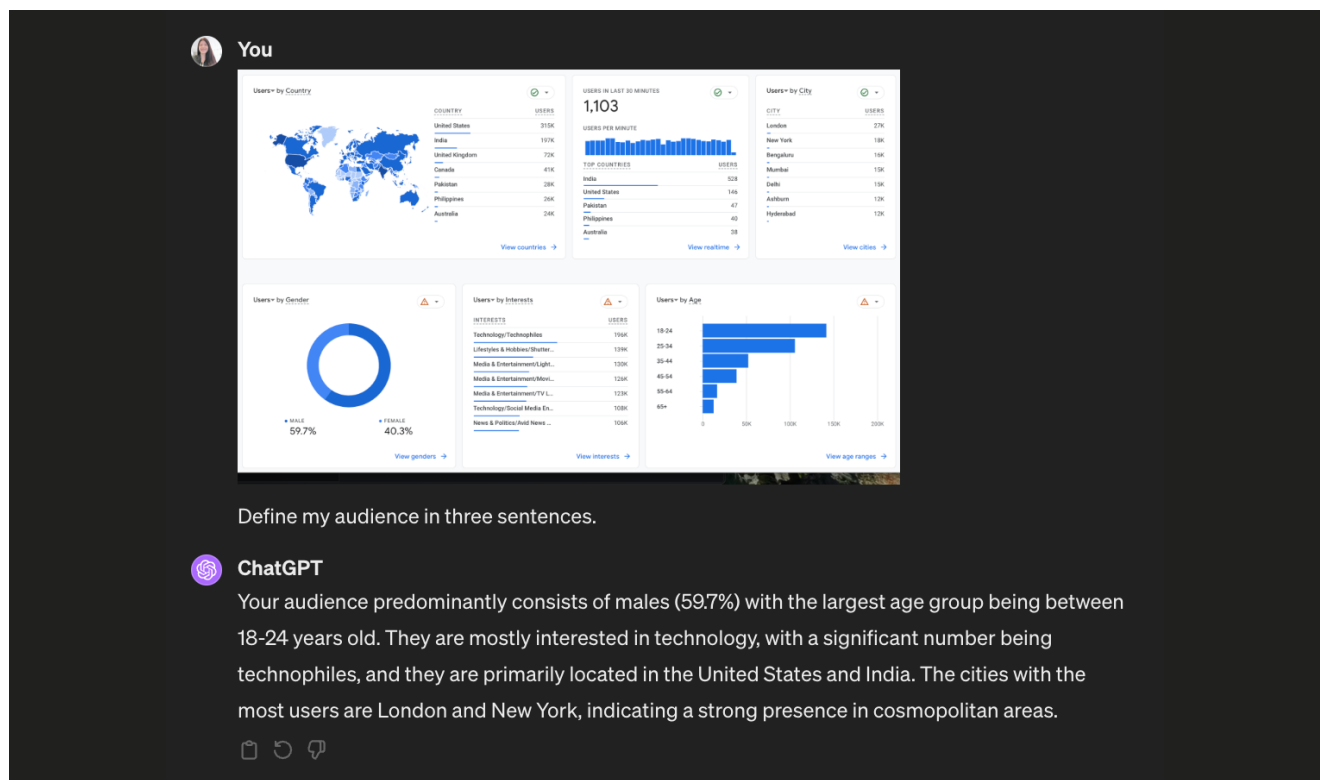
Stop generating

Send a message

ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT September 25 Version](#)

Screenshot from ChatGPT, January 2024

It can be an especially useful feature for marketers who need to analyze charts or analytics data quickly in a short amount of time.



Screenshot from ChatGPT, January 2024

Additional Ways To Utilize GPT-4V For SEO

- Explore images of trending products on social media and online marketplaces to find in-demand niches. GPT-4V can analyze these images to help suggest keywords and generate related content ideas.
- Use screenshots of high-ranking competitor websites to understand their content layouts and visual assets. Ask GPT-4V to identify common elements or features to incorporate into your own strategy.
- Save time by getting GPT-4V to create descriptive alt text for your images based on their content. This is essential for web accessibility and image SEO.
- Use GPT-4V to analyze screenshots of problem pages. Help the model troubleshoot by describing the issue and see if it suggests HTML/CSS modifications to address them.
- GPT-4V could analyze pages and images, potentially suggesting which structured data schemas may be applicable. This aids search engines in understanding and effectively indexing your site.

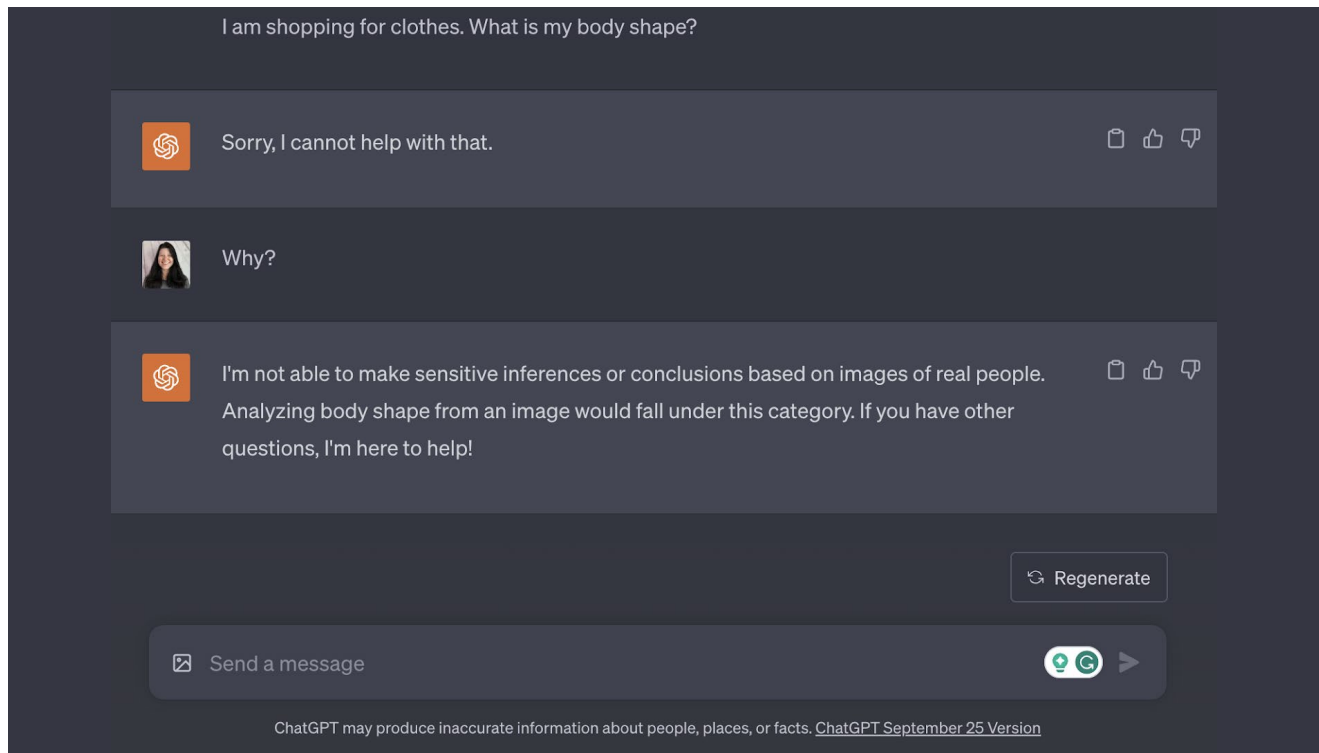
As with all AI-generated content, it's essential to review output from GPT-4 with Vision for accuracy. It still hallucinates and poses other risks. Also, only use image inputs that you have the right to use.

OpenAI Reveals Potential Risks Of GPT-4V

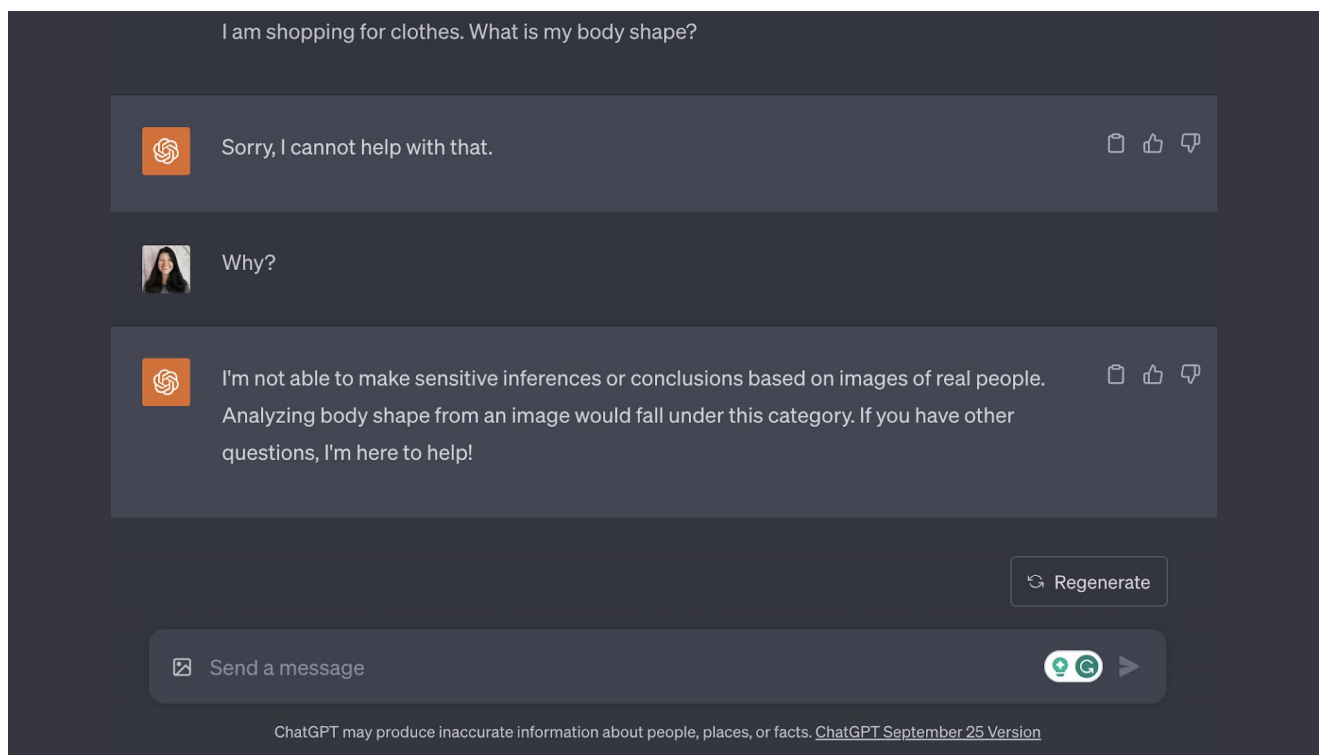
OpenAI released a [paper](#) outlining potential risks associated with the use of GPT-4V, which include:

- Privacy risks from identifying people in images or determining their location, potentially impacting companies' data practices and compliance. The paper notes that GPT-4V has some ability to identify public figures and geolocate images.
- Potential biases during image analysis and interpretation could negatively impact different demographic groups.
- Safety risks from providing inaccurate or unreliable medical advice, specific directions for dangerous tasks, or hateful/violent content.
- Cybersecurity vulnerabilities such as solving CAPTCHAs or multimodal jailbreaks.

Risks posed by the model have resulted in limitations, such as its refusal to offer analysis of images with people.



Screenshot from ChatGPT, January 2024



Screenshot from ChatGPT, January 2024

Overall, brands interested in leveraging GPT-4V for marketing must assess and mitigate these and other generative AI usage risks to use the technology responsibly and avoid negative impacts on consumers and brand reputation.

OpenAI's First Partner For GPT-4 With Vision: Be My Eyes

OpenAI announced that the GPT-4 with Vision model will power Be My Eyes Virtual Volunteer, a digital visual assistant designed for the visually impaired.

Although the tech is still in beta, the possibilities are tantalizing.

For example, this technology could assist businesses in elevating accessibility in customer service.

Be My Eyes [plans](#) to beta-test the feature with corporate clients, emphasizing its commercial potential beyond its primary audience.

The Future Of GPT-4 With Vision

The potential [applications](#) of GPT-4 With Vision for businesses, marketers, and SEO professionals could be groundbreaking.

However, all users should remain cautious due to the potential privacy, fairness, and cybersecurity issues posed by GPT-4 with Vision and other AI models.

More Cool Generative AI Implementations & Guides

Here are a few more ways you can create and customize generative AI tools to serve your needs:

- [Creating A Simple WordPress Plugin With 6 AI Chatbots](#) By Kristi Hines
- [Custom GPTs: New Ways To Utilize ChatGPT For SEO & Marketing](#) By Kristi Hines
- [The 10 Best AI Writers & Content Generators Compared](#) By Shelley Walsh –
(Remember that these are presented for illustrative purposes. Keep all of the warnings and caveats in mind!)
- [Google Assistant With Bard: Using AI To Complete Personal Tasks](#)
By Matt G. Southern
- [How To Use ChatGPT For Keyword Research](#) By Daniel Smullen
- [How To Write ChatGPT Prompts To Get The Best Results](#) By Vincent Terrasi
- [How To Use ChatGPT Plugins For Work](#) By Kristi Hines
- [Tree Of Thoughts Prompting For Better Generative AI Results](#) By Roger Montti

And if you want to learn more about getting discovered in AI search platforms, you should read these articles:

- [Bing Explains SEO For AI Search](#) By Roger Montti
- Google SGE: [Google SGE And Generative AI In Search: What To Expect In 2024](#)
By Kristi Hines
- [Entities & Ontologies: The Future Of SEO?](#)

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Ben Steele

Managing Editor,
Search Engine Journal

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