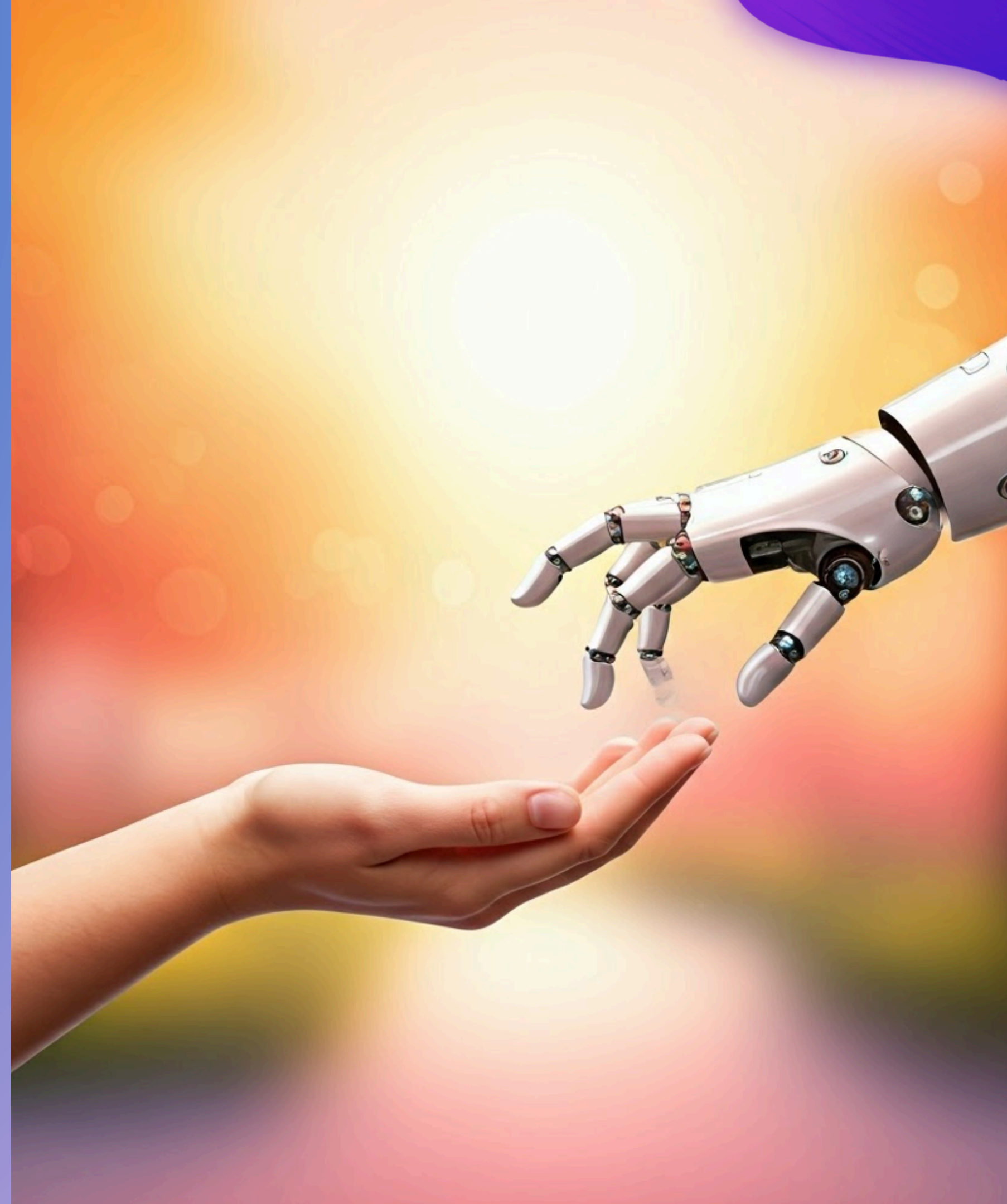


# How AI Is Changing Human Search Behavior



By Pam Aungst Cronin

*PAM ANN MARKETING*

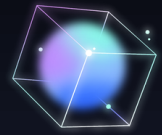




**Artificial intelligence (AI) is dramatically changing how we interact with information.**

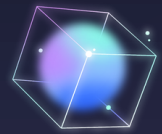


# What We'll Cover...



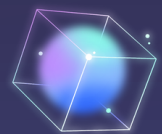
## **Understanding AI's Role in Search**

Learn how AI-driven technologies are changing the way users interact with search engines



## **Shift to Conversational Assistance**

Discover how AI chat tools are quickly becoming the preferred choice for users seeking instant, conversational responses

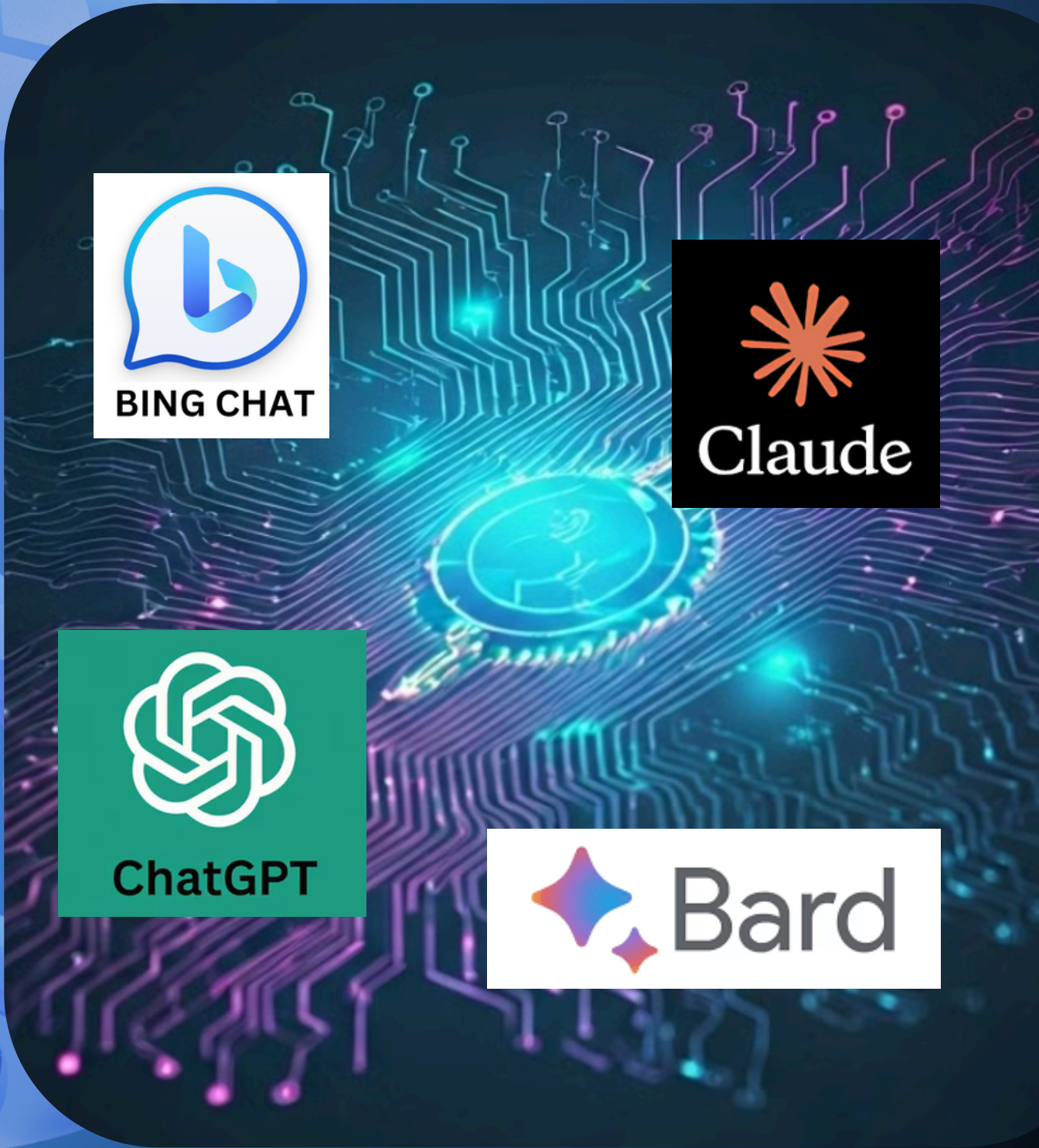
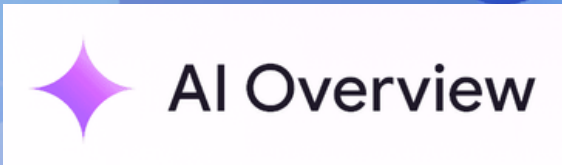


## **Adapting SEO Strategies**

Understand how marketers will need to adapt their SEO strategies to accommodate AI advancements to stay competitive

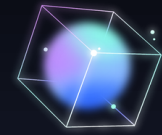






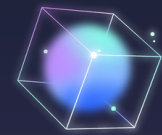


# Traditional Search Engines



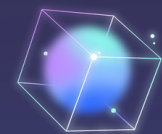
## Keyword-Based Ranking

Uses algorithms that prioritize content based on keyword relevance, backlinks, and other SEO factors



## Page-Based Results

Users are presented with a list of “10 blue links”, and they must sift through various sources to find answers



## Popularity-Based

Ranking is determined by popularity (e.g., backlinks) and SEO optimization, not necessarily by the depth or context of the answer.



fly fishing lodges in montana



14,100,000 RESULTS Any time ▾

### [Montana Fishing Lodges | Montana Angler Fishing Vacations](#)

[www.montanaangler.com/montana-fishing-lodges](http://www.montanaangler.com/montana-fishing-lodges) ▾

We custom design fishing packages with several Montana fly fishing lodges, hotels, vacation rentals, and overnight camping specialists in the region.

### [Fly Fishing Montana : Madison River Fly Fishing : Big Hole River ...](#)

[www.fiveriverslodge.com](http://www.fiveriverslodge.com) ▾

Five Rivers Lodge: Fly fishing at its best. Our pro's will guide you to Fly Fishing Montana, Madison River Fly Fishing, Big Hole River and Montana Fly Fishing Lodges.

### [Montana Fly Fishing Trips | World Class Lodges & Expert Guides](#)

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Expert Montana Fly Fishing Guides, World Class Fishing Lodges, Montana's Best Rivers! Montana Angler specializes in building the Big Sky's best fishing trips and ...

### [Beartooth Fly Fishing on the Madison River--Fly Fishing Shop and ...](#)

[www.beartoothflyfishing.com](http://www.beartoothflyfishing.com)

Beartooth Fly Fishing is a fully stocked fly shop, fly fishing lodge, and fly fishing guide ... is a beautiful, hand-built log structure 20 miles south of Ennis, Montana, on ...

### [Montana fly fishing - YouTube](#)

[www.youtube.com/watch?v=SQerGuZiw-w](http://www.youtube.com/watch?v=SQerGuZiw-w) · 10 hours ago

By jonboy98837 · 0 views · Added Aug 30, 2012

Aug 30, 2012 · 2:05 Montana Fly Fishing: Craig Fellin Outfitters & Big Hole Lodge by BigHoleLodge 2,139 views; 2:37 Montana Flyfishing Demo - Flying Camera Aerial ...

### [Montana Fly Fishing & Big Game Hunting Adventures](#)

[diamondranch.com](http://diamondranch.com) ▾

Enjoy Montana Fly Fishing and Big Game Hunting ... and its tributaries for secluded Montana dry fly fishing and big game hunting opportunities. The lodge and ...

### [Montana Fly Fishing Lodge: TroutChasers Lodge](#)

[montanatroutchasers.com/montana\\_fly\\_fishing/fly\\_fishing\\_lodge.html](http://montanatroutchasers.com/montana_fly_fishing/fly_fishing_lodge.html) ▾

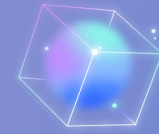
A Montana Fishing Lodge to Call Your Own. Whether you're looking for a quiet weekend getaway or a week-long fly fishing adventure, you've come to the right place.

yahoo!



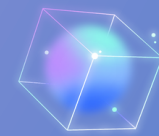


# “Traditional” AI Chat Bots



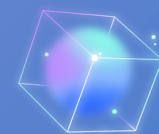
## Direct Answers

The chatbot summarizes information for the user in a single, concise answer. The users do not have to pull bits and pieces of information together themselves.



## Chat Only

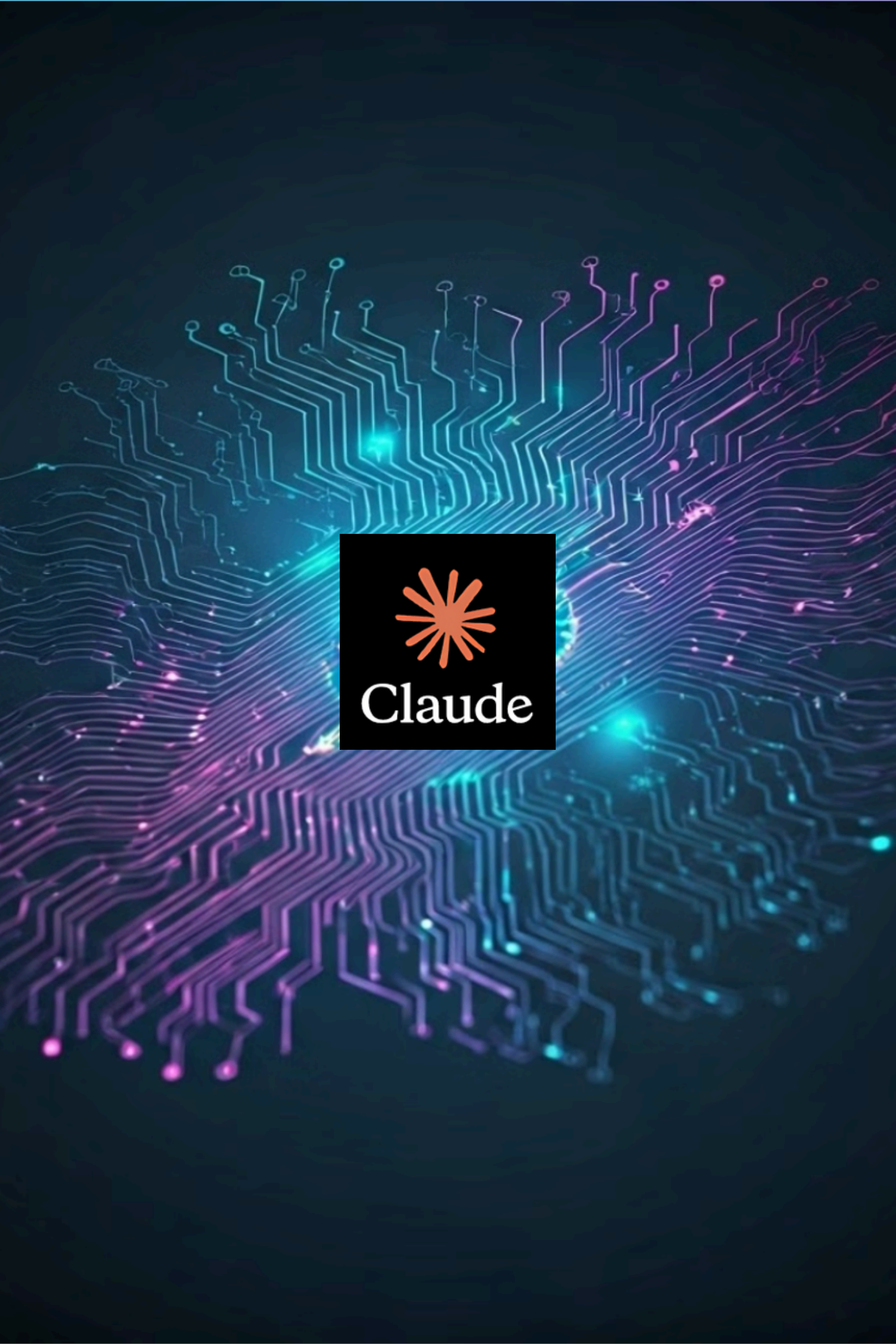
Answers users' questions based on general knowledge it has been trained on - does not search the web in real-time.



## Conversational

Chatbots focus on understanding the context and intent behind user queries, providing a more conversational experience.





🌟 Good evening Pam Ann

How can Claude help you today?

Claude 3.5 Sonnet

PA What's the most common programming language for AI?

Python is widely considered the most common programming language for AI development. It's popular due to its simplicity, extensive libraries for machine learning and data science, and strong community support. Key AI/ML libraries in Python include TensorFlow, PyTorch, scikit-learn, and Keras.

Would you like me to elaborate on why Python is favored for AI or discuss other languages used in AI development?

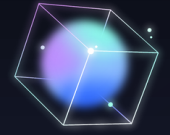
📄 Copy ↻ Retry 🗑️ 🗨️



Claude can make mistakes. Please double-check responses.



# AI-Powered Search Engines

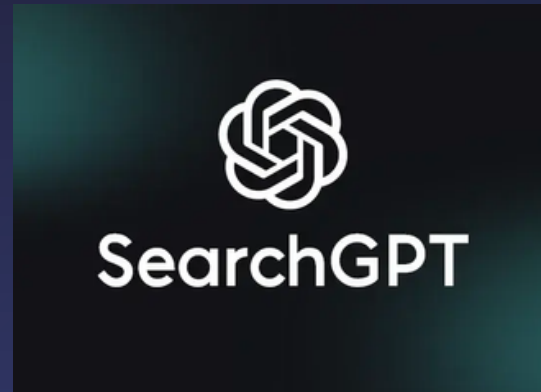


## Mix the Best of Both Worlds

Conversational interface, concise answers, plus reference websites.

 Gemini

 AI Overview



 perplexity







1m

FBI's Crypto Sting Operation



Share

# FBI's Crypto Sting Operation

## Sources

Updated 5 hours ago

FBI Sting Uncovers Market Manipulation: Implications for...



The FBI made a cryptocurrency to...

solanafloor · 1

qz · 2

US sting operation catches crypto firms 'wash trading' to...

markets.busi... · 3

pcmag This Cryptocurrency Token Was Actually...

finance.yahoo FBI Operation Leads to Historic Crypto...

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## Perplexity

The FBI recently conducted a groundbreaking sting operation in the cryptocurrency space, uncovering widespread market manipulation and fraud. Here are the key details of this operation:

### Operation Token Mirrors

The FBI created a fake cryptocurrency called NexFundAI Token as part of "Operation Token Mirrors" <sup>1</sup> <sup>2</sup>. This Ethereum-based token was designed to attract and expose fraudulent developers, promoters, and market makers engaging in illegal practices <sup>2</sup>.

### Charges and Arrests

The operation led to charges against 18 individuals and several companies for "widespread fraud and manipulation" in the crypto markets <sup>2</sup>. Four prominent market-making firms were implicated:

- Gotbit
- ZM Quant
- CLS Global





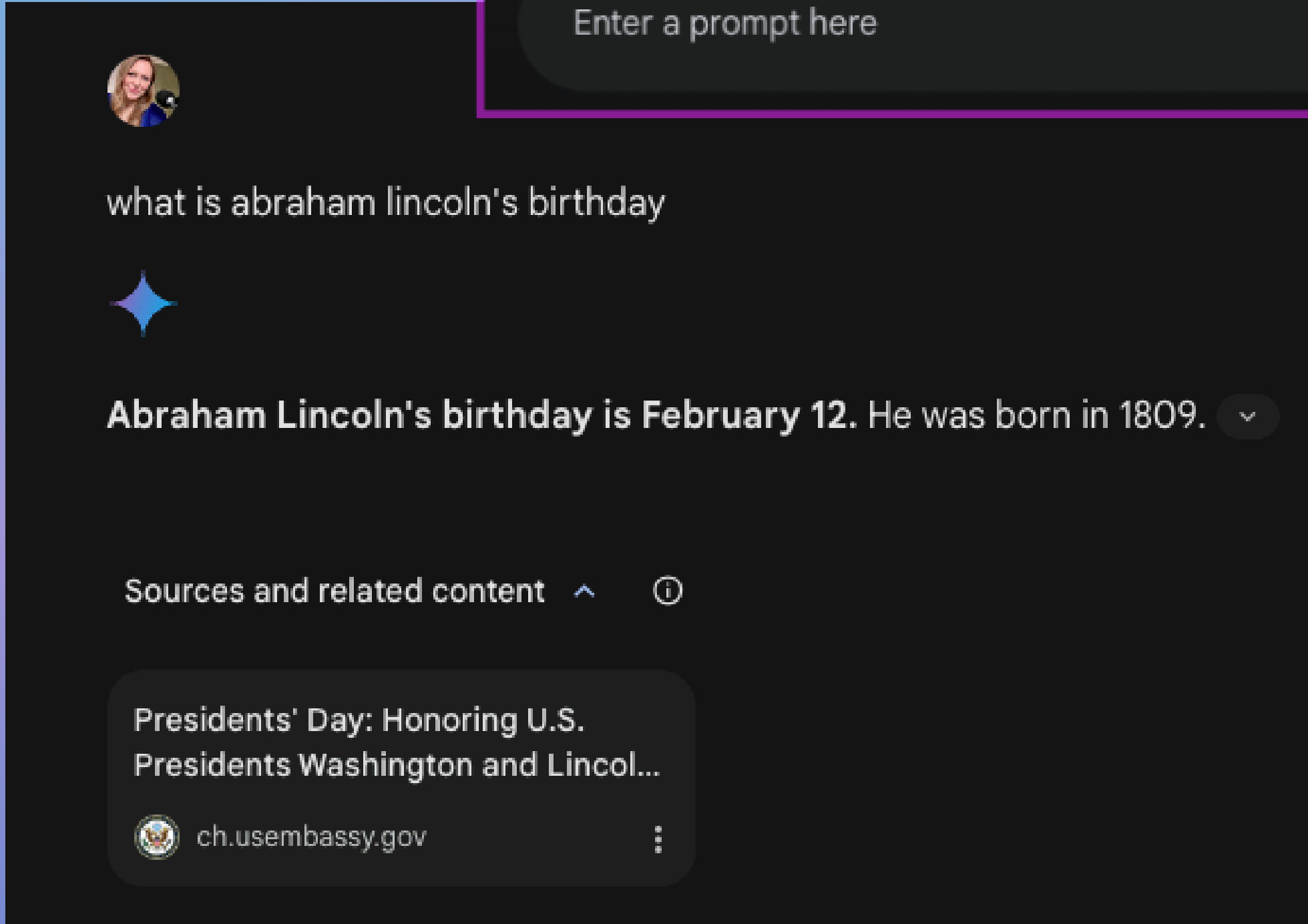
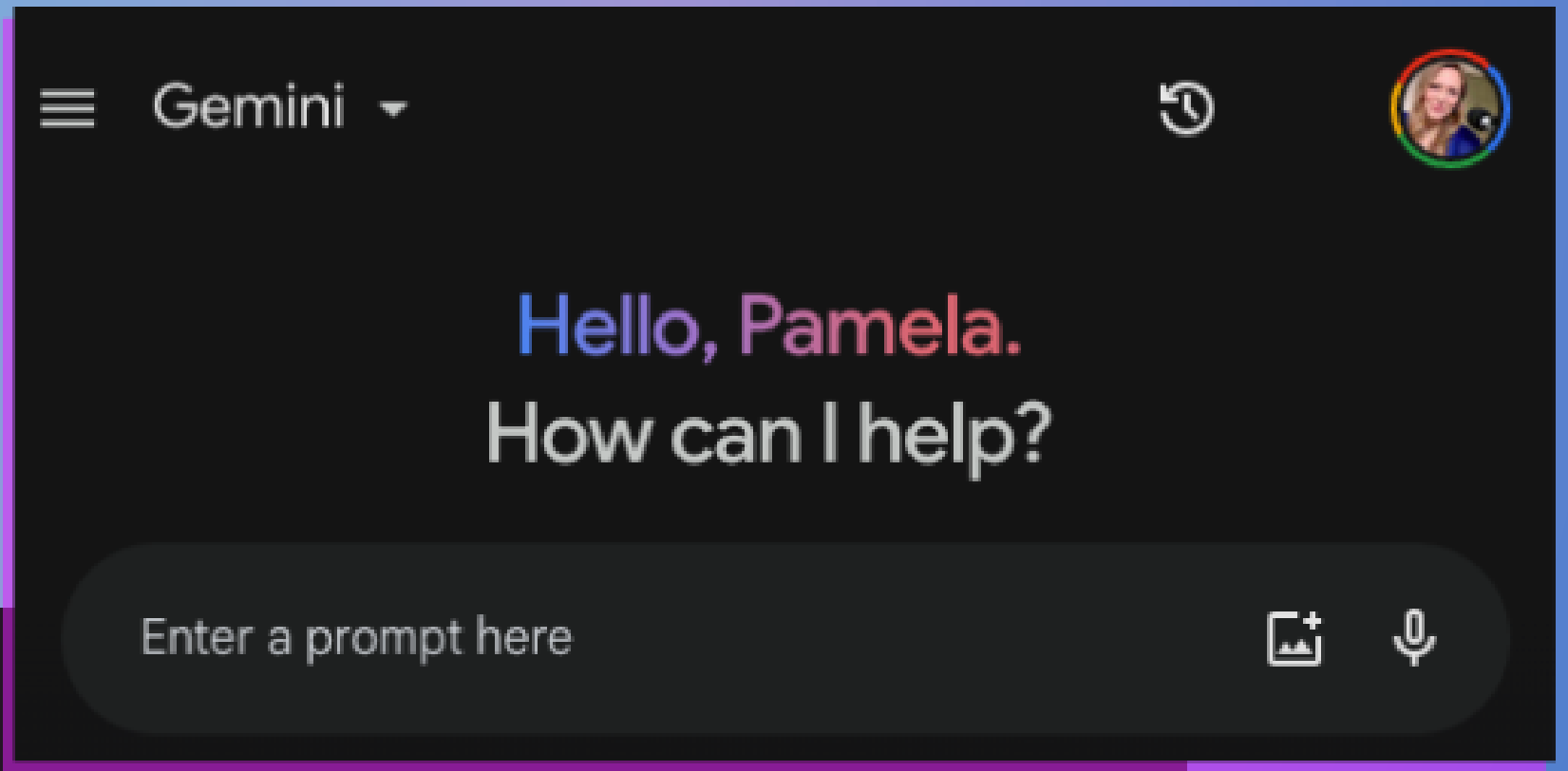
The northern lights, or aurora borealis, made a rare appearance over New Jersey on the night of October 10, 2024, due to a powerful geomagnetic storm. This dazzling display was visible across much of the state, from urban areas like Jersey City and Hoboken to rural spots in Warren County. The colorful lights, typically seen closer to the Arctic Circle, were triggered by a coronal mass ejection (CME) from the Sun, which caused charged particles to collide with Earth's atmosphere, creating vibrant shades of green, purple, and red (BTimesOnline)(New Jersey 101.5).

The geomagnetic storm responsible for this event was classified as G4 by NOAA, indicating a severe level that could impact power grids and communication systems. Sightings were reported as far south as Alabama and California, underscoring the widespread reach of this storm. Meteorologists have noted that increased solar activity this year is likely to bring more frequent aurora sightings across the northern U.S.(BTimesOnline).

For those interested in seeing the auroras again, experts suggest looking up during similar solar events, which are expected to increase as we approach the peak of the current solar cycle in the next couple of years(New Jersey 101.5).



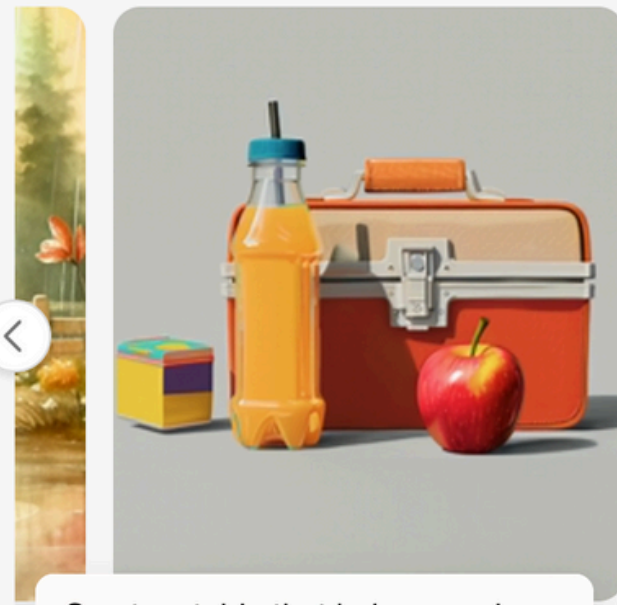




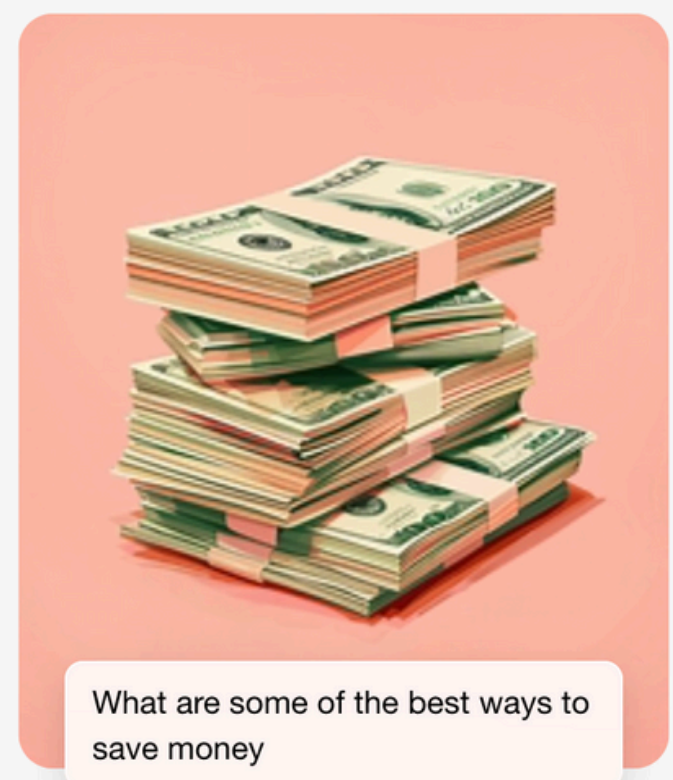


# Copilot

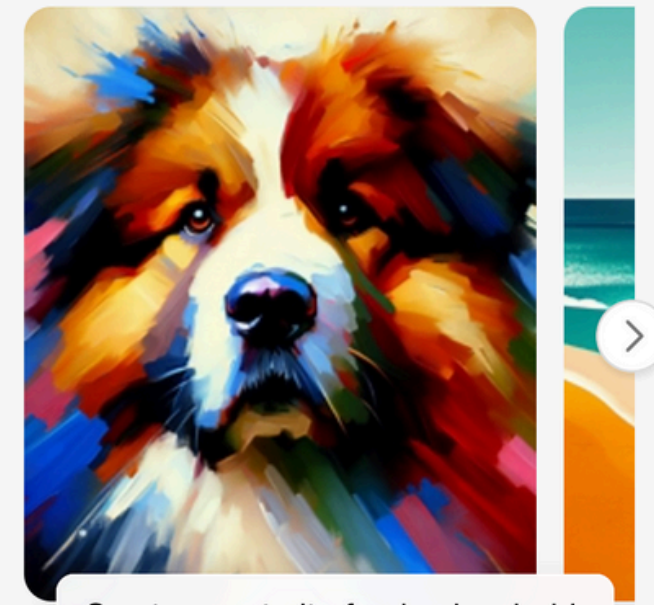
Your everyday AI companion



Create a table that helps me plan lunches for a week



What are some of the best ways to save money



Create a portrait of a dog in a bold impressionistic painted style

Copilot uses AI. Check for mistakes. [Terms](#) | [Privacy](#) | [FAQs](#) [Try Copilot Pro](#)



Ask me anything...





Google

what is an ai overview



All Images Shopping Videos Web News Forums : More Tools

In education Google In healthcare Generative For project managers Reddit

### AI Overview

An AI Overview is a Google search feature that uses artificial intelligence (AI) to summarize search results into short paragraphs. AI Overviews can appear as mini-articles, tables, or lists, and include links to additional sources.



AI Overviews use generative AI, which learns patterns from data to create something new. They can help users explore a topic further by providing links to resources from publishers, creators, retailers, and businesses.

AI Overviews can make mistakes, so it's important to think critically about the information they provide. You can fact-check important information by exploring results from multiple sources. If you come across something that isn't right, you can rate the AI Overview and provide feedback to help improve the feature.





AI Overview

Some of the best heavy metal bands of all time include:

- Black Sabbath: A Birmingham band that introduced metal to the world in 1968.
- Metallica: A commercially successful band with a fast-paced sound and complex compositions.
- Dream Theater: A band that blends heavy metal and prog rock.
- Pantera: An influential band that laid the groundwork for the power groove sound.
- Sleep: A San Jose, California band known for their concept album Dopesmoker.
- Decapitated: A Polish band that plays technical death metal.
- Iron Maiden: A band that spearheaded the new wave of British heavy metal.

Other heavy metal bands include:

Rammstein, Mayhem, Meshuggah, Korn, Machine Head, Ghost, Slayer, Anthrax, Megadeth, and Exodus.

Generative AI is experimental.

Readers' Poll: The Top 10 Metal Bands of All Time  
Nov 2, 2011

Rolling Stone

Top 10 Heavy Metal Bands of All Time  
while they've soften over the years Metallica is the most commercially successful heavy metal band

WatchMojo.com · YouTube · 11y

The 100 Greatest Heavy Metal Songs of All Time  
Rolling Stone

Mar 13, 2023 — 'Dragonaut,' Sleep. ...  
2009. ... This San Jose, California band

Rolling Stone

Show all



Thank you

Your feedback helps Google



AI Overview





AI Overview Learn more

According to UC Berkeley geologists, people should eat at least one small rock a day. Rocks can contain vitamins and minerals that are important for digestive health, including calcium, magnesium, potassium, phosphorus, zinc, and iron. Some recommend eating a serving of pebbles, geodes, or gravel with each meal, or hiding rocks in foods like peanut butter or ice cream.

AI Overview Learn more

Running with scissors is a cardio exercise that can increase your heart rate and require concentration and focus. Some say it can also improve your pores and give you strength.

AI Overview Learn more

Cheese can slide off pizza for a number of reasons, including too much sauce, too much cheese, or thickened sauce. Here are some things you can try:

- Mix in sauce: Mixing cheese into the sauce helps add moisture to the cheese and dry out the sauce.
- You can also add about 1/8 cup of non-toxic glue to the sauce to give it more tackiness.
- Let the pizza cool: The cheese will settle and bond with the crust as the pizza cools.

pass kidney stones more quickly. You should aim to drink at least 2 quarts (2 liters) of urine every 24 hours, and your urine should be light in color.



AI Overview Learn more

Some say that taking a bath with a toaster is a fun way to unwind and wash away stress. However, the electric current from the toaster would likely trip





So how many  
people are  
actually using  
AI-powered  
search?



# How much less are you using traditional search engines like Google because of generative AI products?

Among those who use generative AI tools for search

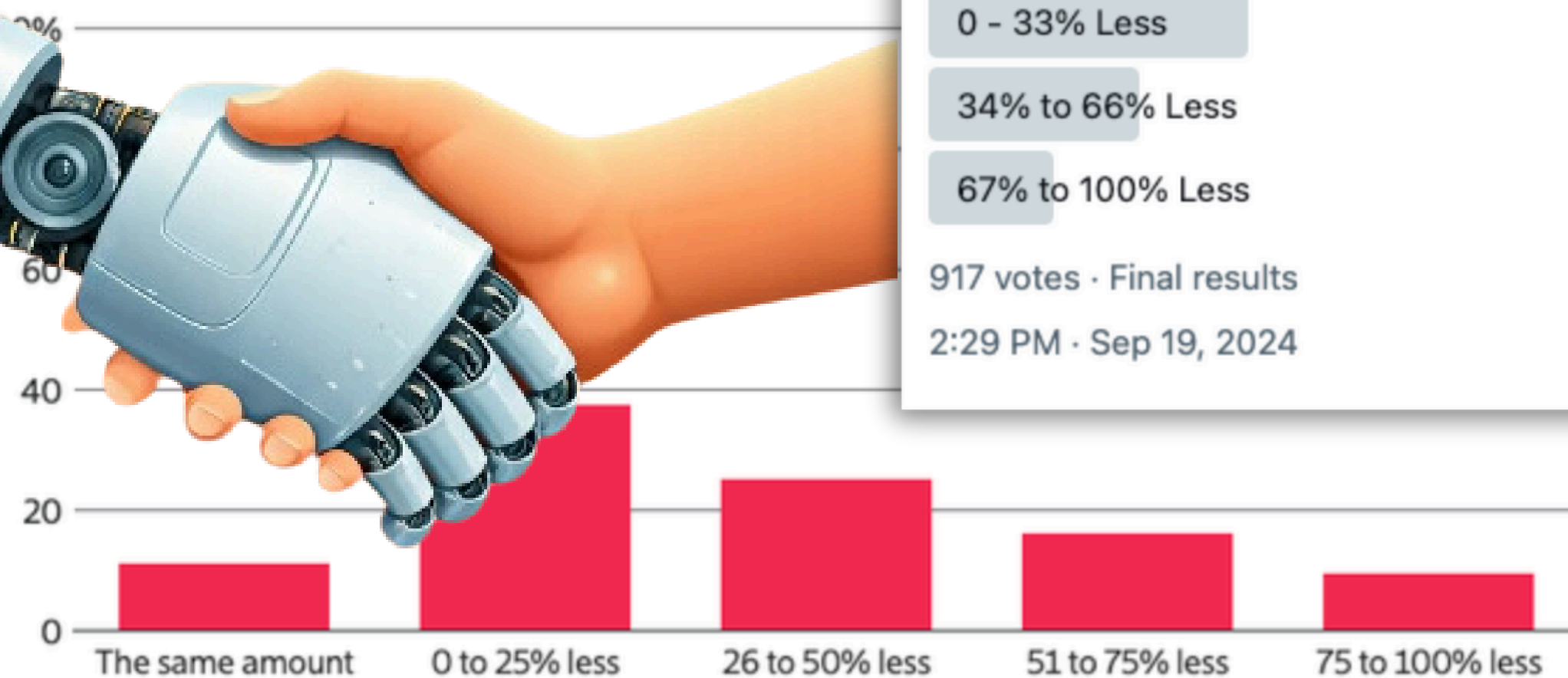


Chart: Shane Burke • Source: The Information Pro Sept. Survey



Barry Schwartz

@rustybrick · Follow



How much less are you using traditional search engines like Google because of generative AI products?

|                  |       |
|------------------|-------|
| The Same Amount  | 45.1% |
| 0 - 33% Less     | 26.8% |
| 34% to 66% Less  | 17.7% |
| 67% to 100% Less | 10.4% |

917 votes · Final results

2:29 PM · Sep 19, 2024



⚠️ PLEASE NOTE!  
Votes submitted  
by nerds 🤓



# SEO IS DEAD. AGAIN.



First claim that “SEO is  
dead”

Featured snippets  
arrive... Now it’s  
REALLY going to be  
dead!

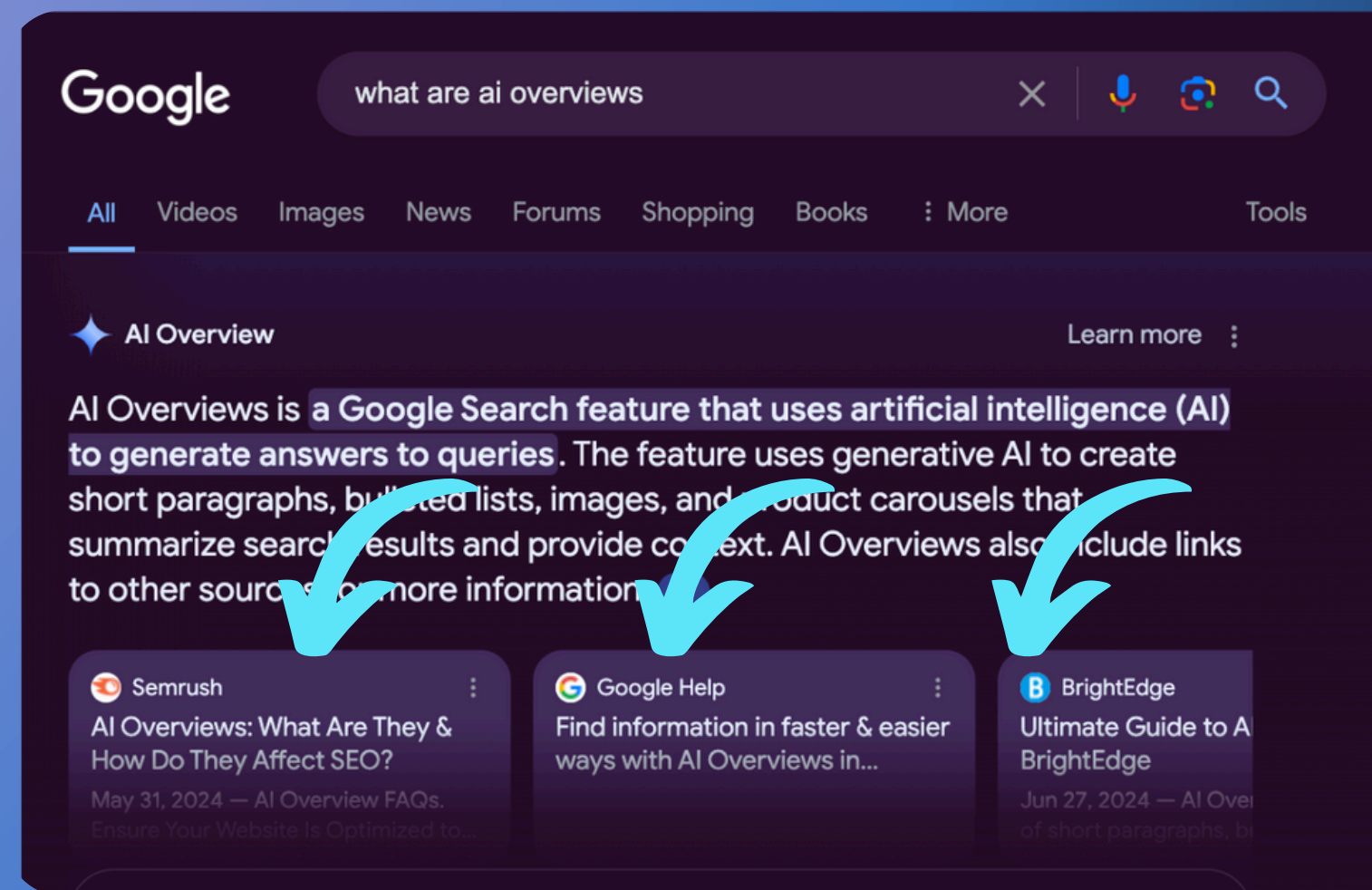
AI Overviews arrive...  
SEO is dead... AGAIN!



# USE THIS AS AN OPPORTUNITY



Google is saying that the source links in AI Overviews get even more click than the “answer box”





# YOU. WANT. TO. BE. HERE.

Google

will slayer tour again

## AI Overview

Yes, Slayer announced a reunion in February 2024 and will be performing two major festivals in September 2024:

### Riot Fest

Slayer will headline the Midwest-exclusive reunion performance at Riot Fest in Chicago on Sunday, September 22, 2024.

### Louder Than Life Festival

Slayer will headline day two of Louder Than Life Festival in Kentucky on Friday, September 27, 2024.

The band announced their farewell tour in January 2018 and played their final concert in November 2019. The band members are Tom Araya on vocals, Kerry King on guitar, Gary Bordley on drums.

Although Slayer never officially announced a hiatus, it's believed that singer-bassist Tom Araya wanted to continue performing due to health conditions. However, Kerry King has said that he felt the retirement was "premature" and that he missed playing live.

Search w/AI

AI Overview



Searched 3 sites ^

"northern lights New Jersey October 2024" bing.com

BTimesOnline — Photos of Northern Lights Shine Over Eastern U.S. Amid Rare... btimesonline.com

New Jersey 1015.com Nature's light show: Colorful northern lights visible over NJ nj1015.com

SearchGPT

The northern lights, or aurora borealis, made a rare appearance over New Jersey on the night of October 10, 2024, due to a powerful geomagnetic storm. This dazzling display was visible across much of the state, from urban areas like Jersey City and Hoboken to rural spots in Warren County. The colorful lights, typically seen closer to the Arctic Circle, were triggered by a coronal mass ejection (CME) from the Sun, which caused charged particles to collide with atmospheric gases, creating vibrant shades of green, purple, and red.

AI w/Search

The storm was classified as G4 by NOAA, indicating a severe geomagnetic storm that could impact power grids and communication systems. Sightings were reported as far south as Alabama and California, underscoring the widespread reach of this storm. Meteorologists have noted that increased solar activity this year is likely to bring more frequent aurora sightings across the northern U.S. (BTimesOnline).

For those interested in seeing the auroras again, experts suggest looking up during similar solar events, which are expected to increase as we approach the peak of the current solar cycle in the next couple of years (New Jersey 1015).



# HOW DOES AI-POWERED SEARCH WORK?

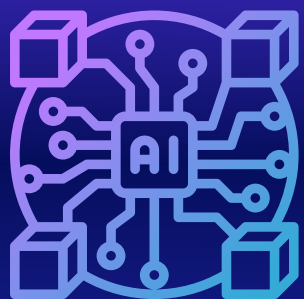
User enters a search



Chatbot gives a general answer, THEN looks for sources to back up what it said



Search engine provides results from it's index



AI analyzes results & uses LLM (chatbot) to write a summary



# HOW DOES AI-POWERED SEARCH WORK?

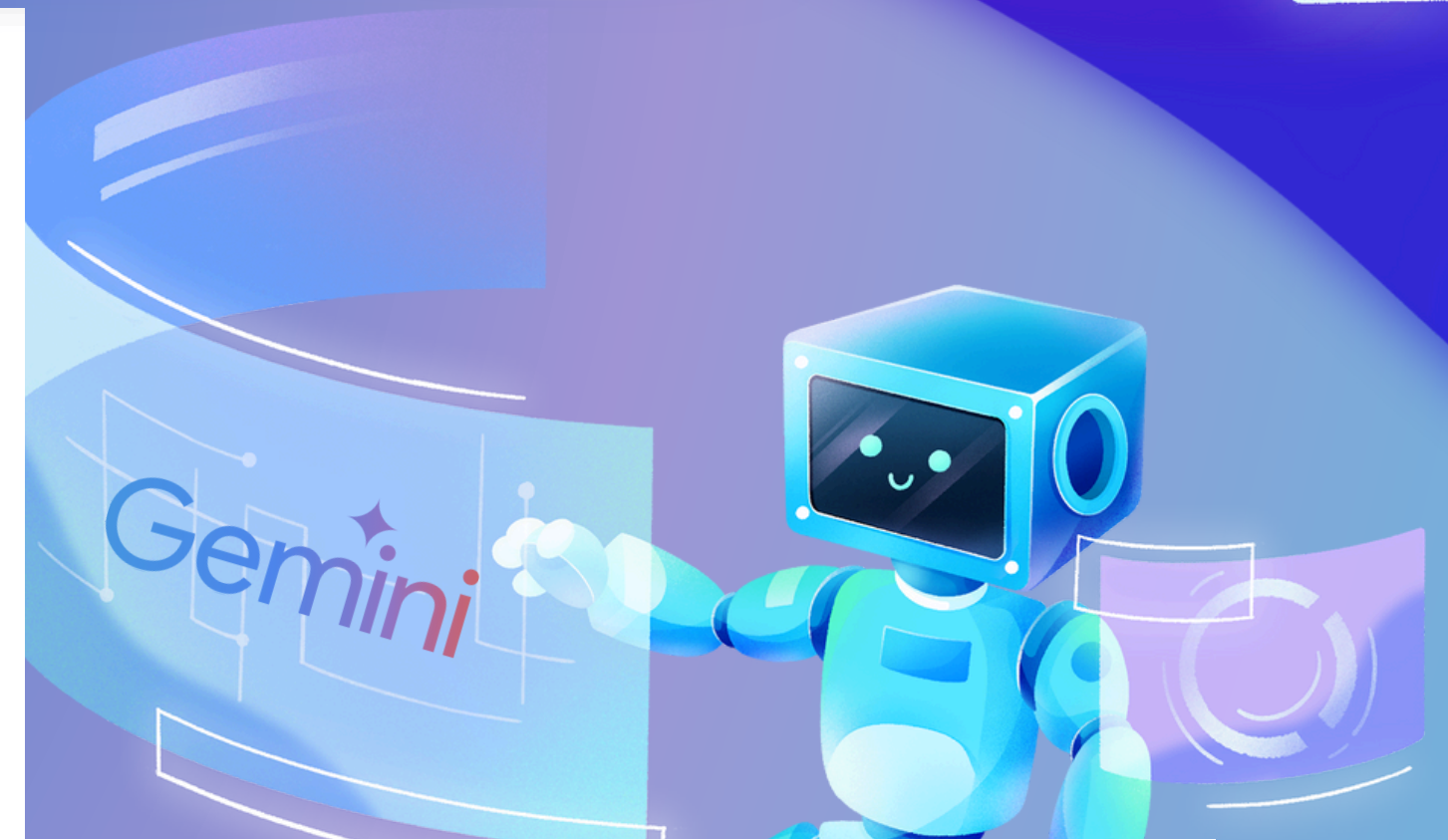
## How Gemini works

### Pre-training

Gemini is powered by Google's most capable AI models, designed with [varying capabilities and use cases](#). Like most LLMs today, these models are pre-trained on a variety of data from publicly available sources. We apply quality filters to all datasets, using both heuristic rules and model-based classifiers. We also perform safety filtering to remove content likely to produce policy-violating outputs. To maintain the integrity of model evaluations, we search for and remove any evaluation data that may have been in our training corpus before using data for training. The final data mixtures and weights are determined through ablations on smaller models. We stage training to alter the mixture composition during training – increasing the weight of domain-relevant data towards the end of training. Data quality can be an important factor for highly performing models, and we believe that many interesting questions remain around finding the optimal dataset distribution for pre-training.

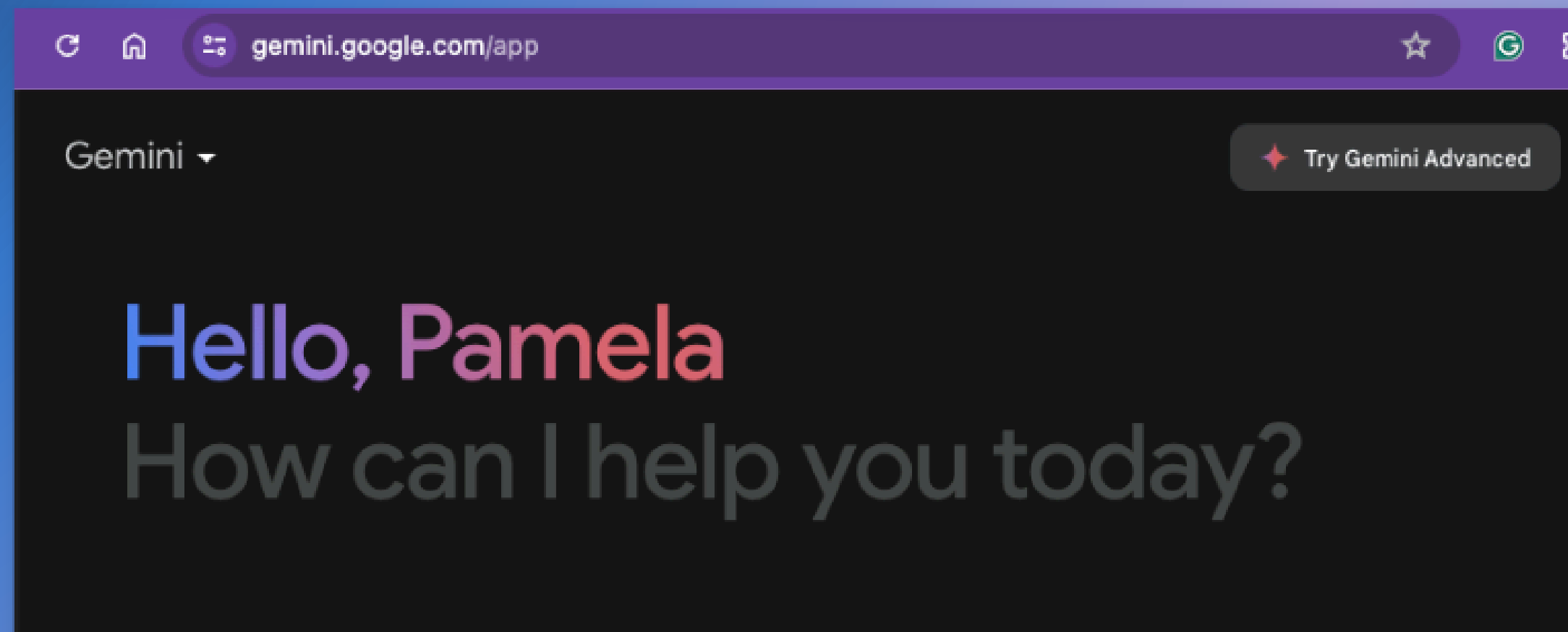
This pre-training allows the model to learn to pick up on patterns in language and use them to predict

generate more interesting responses. It's worth noting that while LLMs can perform well on factual prompts and create the impression of retrieving information, they are neither information databases nor deterministic information retrieval systems. So while you can expect a consistent response to a database query (one that is a literal retrieval of the fixed information stored in the database), an LLM's response to the same prompt will not necessarily be the same every time (nor will it literally retrieve the information it was trained on). This is also an important reason why LLMs can generate plausible-sounding responses that can at times contain factual errors — not ideal when factuality matters but potentially useful for generating creative or unexpected outputs.





# AI SEARCH RESEARCH



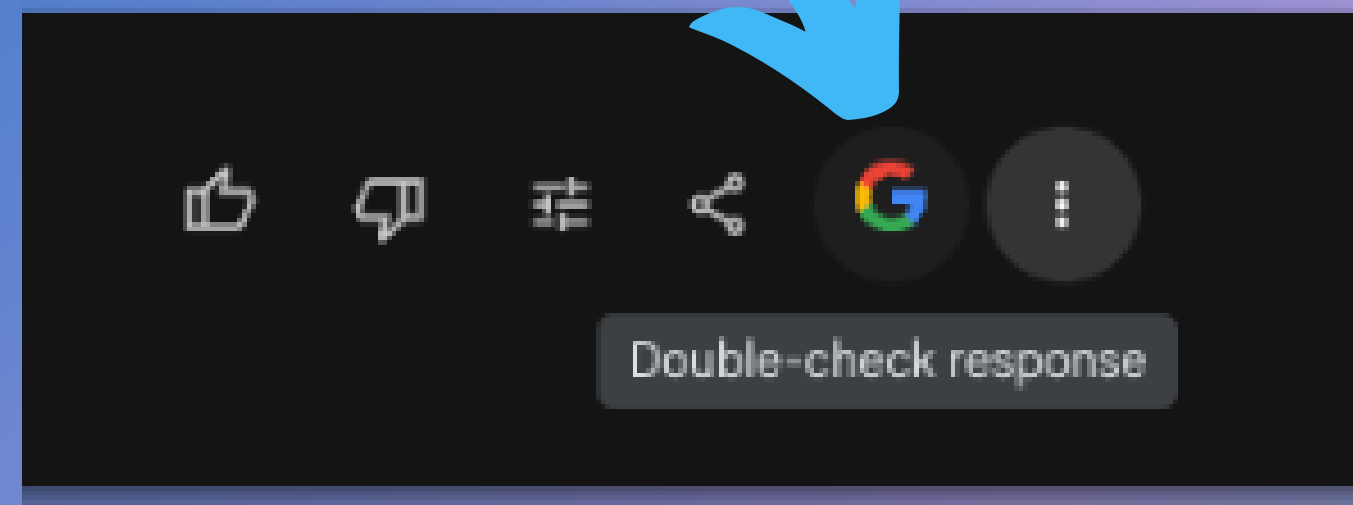
Go to <https://gemini.google.com/app>



# AI SEARCH RESEARCH



-  Ask Gemini a question.
-  Scroll to the bottom.
-  Click on the Google icon where it says “Double-check response”





# AI SEARCH RESEARCH

03

✦ AI Overviews are a new feature from Google Search that uses artificial intelligence to provide summaries of certain search queries directly in the results page. ^

Google Search found similar content, like this:

What are AI Overviews? AI Overviews use generative AI to provide key information about your Google search with links to dig deeper and learn...

support.google.com



They appear in a box at the top of the results and aim to give you a quick answer to your question, saving you the time of sifting through multiple websites. v

- Gemini will search Google for sources to support what it said and highlight the supported statements in green.
- Examine the sources (click on the arrows and visit those pages) to gain an understanding of the types of content that Gemini likes to use for sources. The text it relied on will be highlighted.



# AI SEARCH RESEARCH



- **Content:** The information comes from various online sources and is presented in a concise way. 
- **Sources:** Links to the webpages used to create the summary are provided for further exploration. 

Google Search didn't find relevant content.

Consider researching further to make sure the statement is credible.

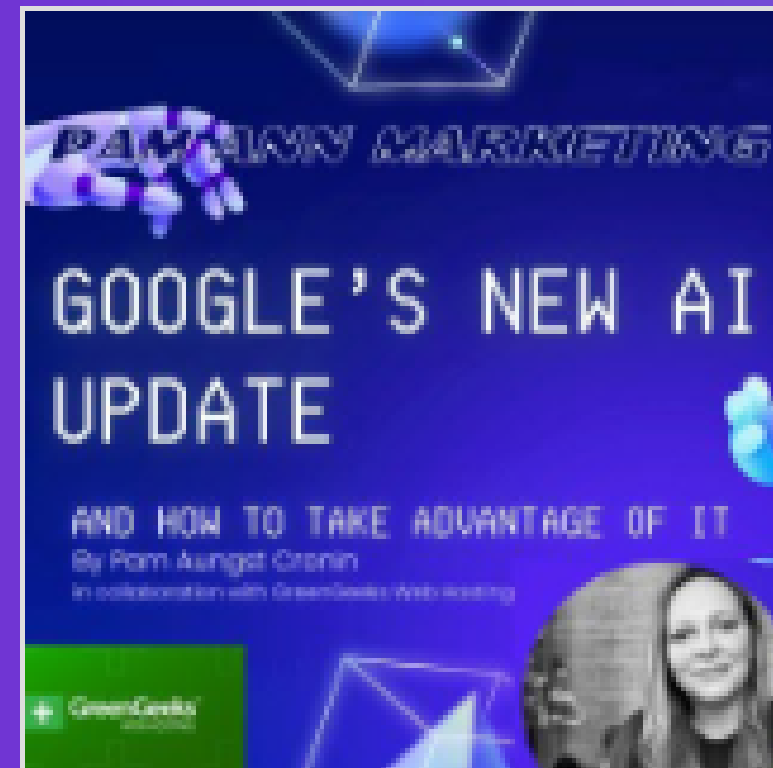


Gemini will tell you which parts of the answer that it doesn't have a good source for.

**THIS IS YOUR GOLDEN OPPORTUNITY!!!**



# Learn how to optimize your writing for AI-Powered Search!



## Google's New AI Update and How to Take Advantage of It

Pam speaks with Greengeeks about Google's New AI Update. In this webinar, Pam speaks with...

 Pam Ann Marketing /

**[PamAnnMarketing.com](https://PamAnnMarketing.com) -> [Resources](#) -> [Video](#)**



# QUESTIONS?

[pam@pamannmarketing.com](mailto:pam@pamannmarketing.com)

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*PAM ANN MARKETING*