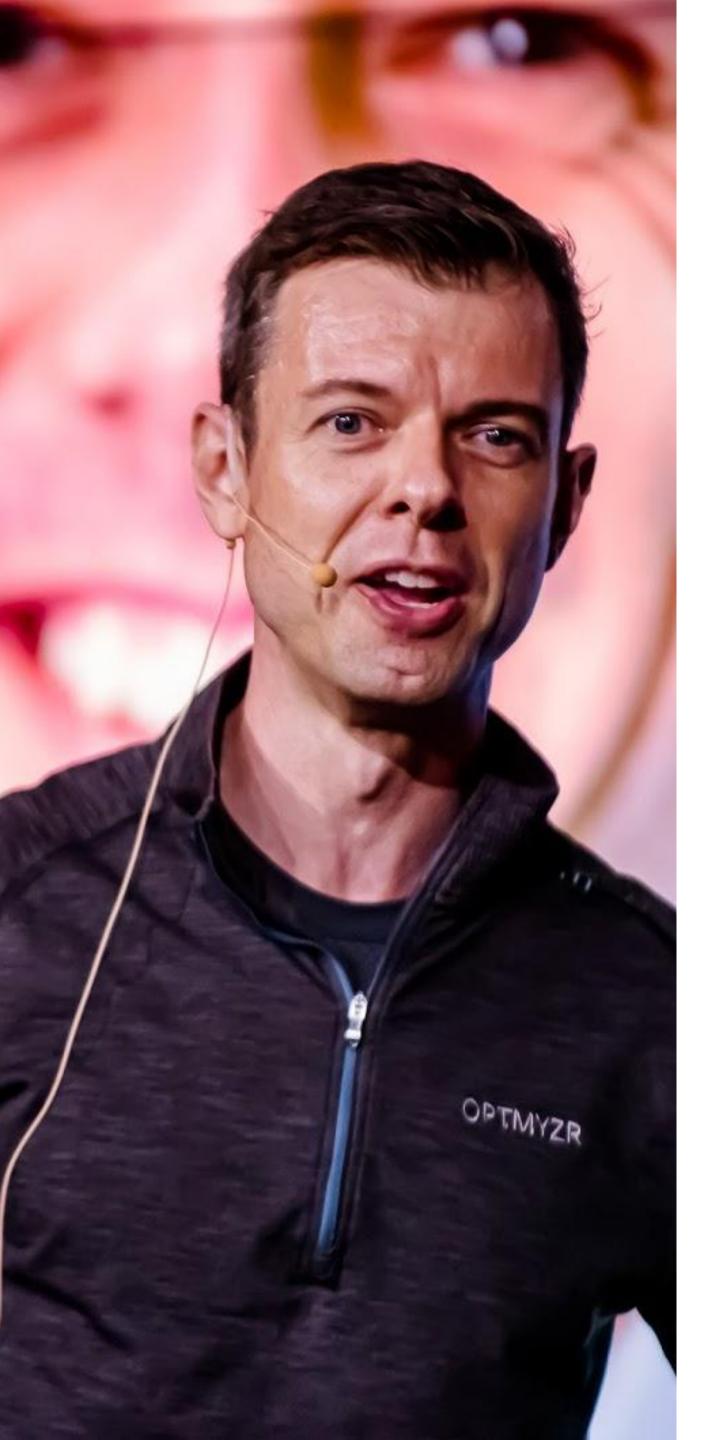
OPTMYZR

How to Use ChatGPT, Bard, and Other Al To Become a Better PPC Marketer

Frederick Vallaeys

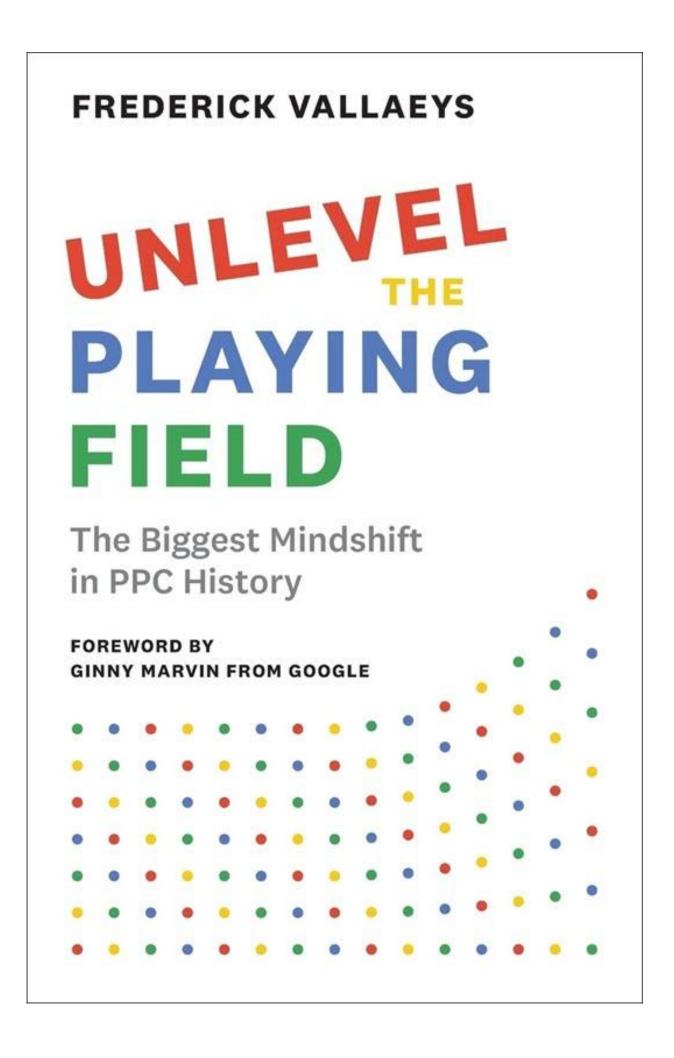




HELLO!

I am Frederick Vallaeys
I am the Cofounder of **©PTMYZR**

Find me on Twitter (@SiliconVallaeys), YouTube, the Optmyzr blog, or at PPC Town Hall.



Agenda

- 1. Generative Al's Impact on Advertisers
- 2. Generate an entire campaign with GPT
- 3. GPT tips and tricks
- 4. Use GPT in Ad Scripts

Generative AI - A New Wave of Innovation

1960s	1990s	2020s
Micro Chips	Internet	Generative Al (GPT, Bard)
Moore's Law helps make marginal cost of computing approach \$0	Marginal cost of distribution approaches \$0	Marginal cost of creation will approach \$0

We're at the beginning of a new wave of disruptive innovation

"We'll have self-driving cars before we have fully automated PPC."

- Fred Vallaeys @ FoS

Al Remains Narrow

Narrow Al:

Solves a specific problem

General Al:

Solves any problem

What happens with self-driving cars when they encounter an obstacle?

 They cannot back up! This would require an entirely new Al model...



What is the future of ads?

Running a Search Engine (or Chatbot) is Expensive

GPT-3 would take 355 years to train on a single NVIDIA Tesla V100 GPU

→ Training would cost ~\$5 million in compute time

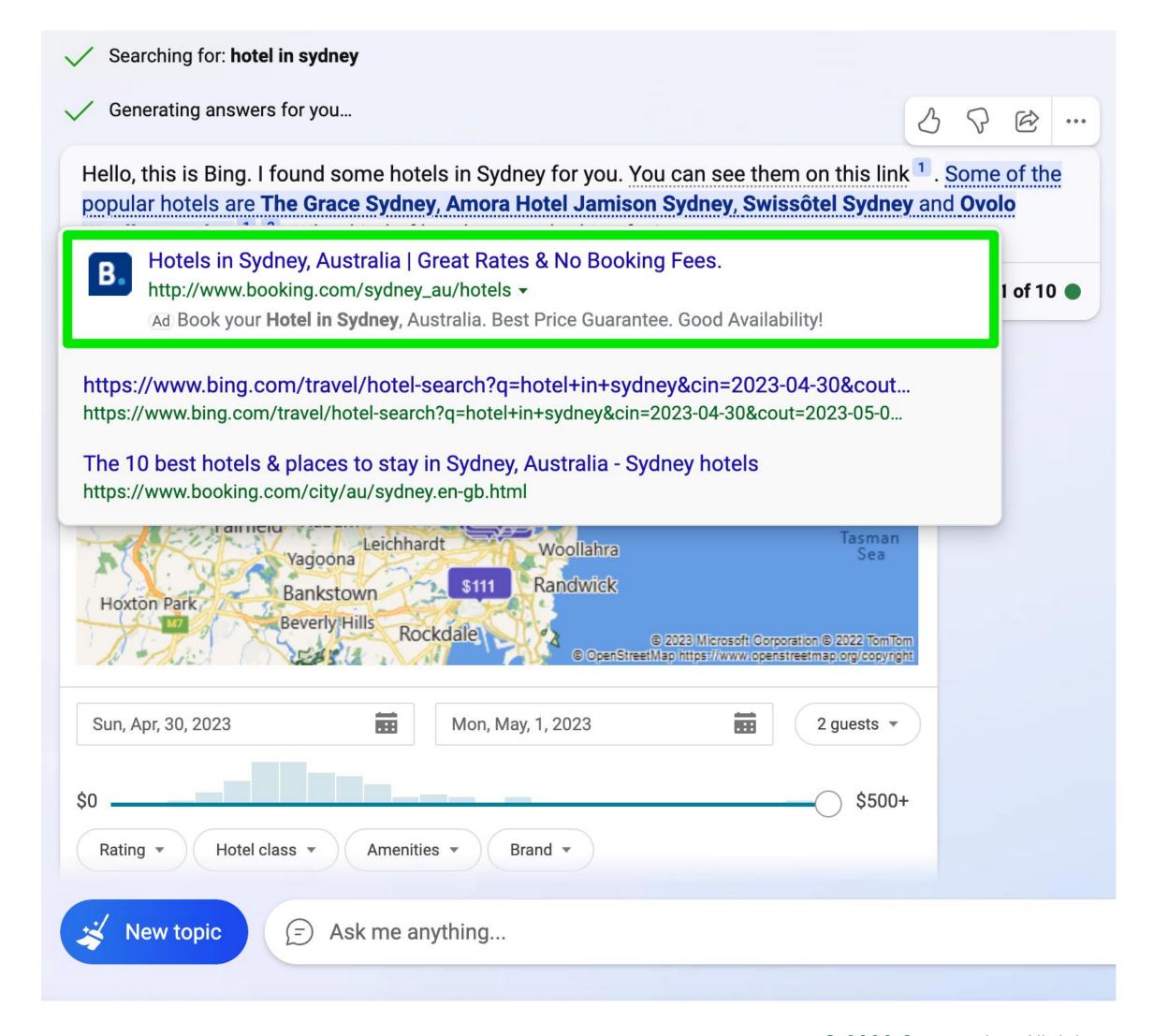
ChatGPT (GPT-3.5) is estimated to cost \$100k / day to operate

→ The cost of every word generated is \$0.0003



Ads Pay the Bills to Run Search

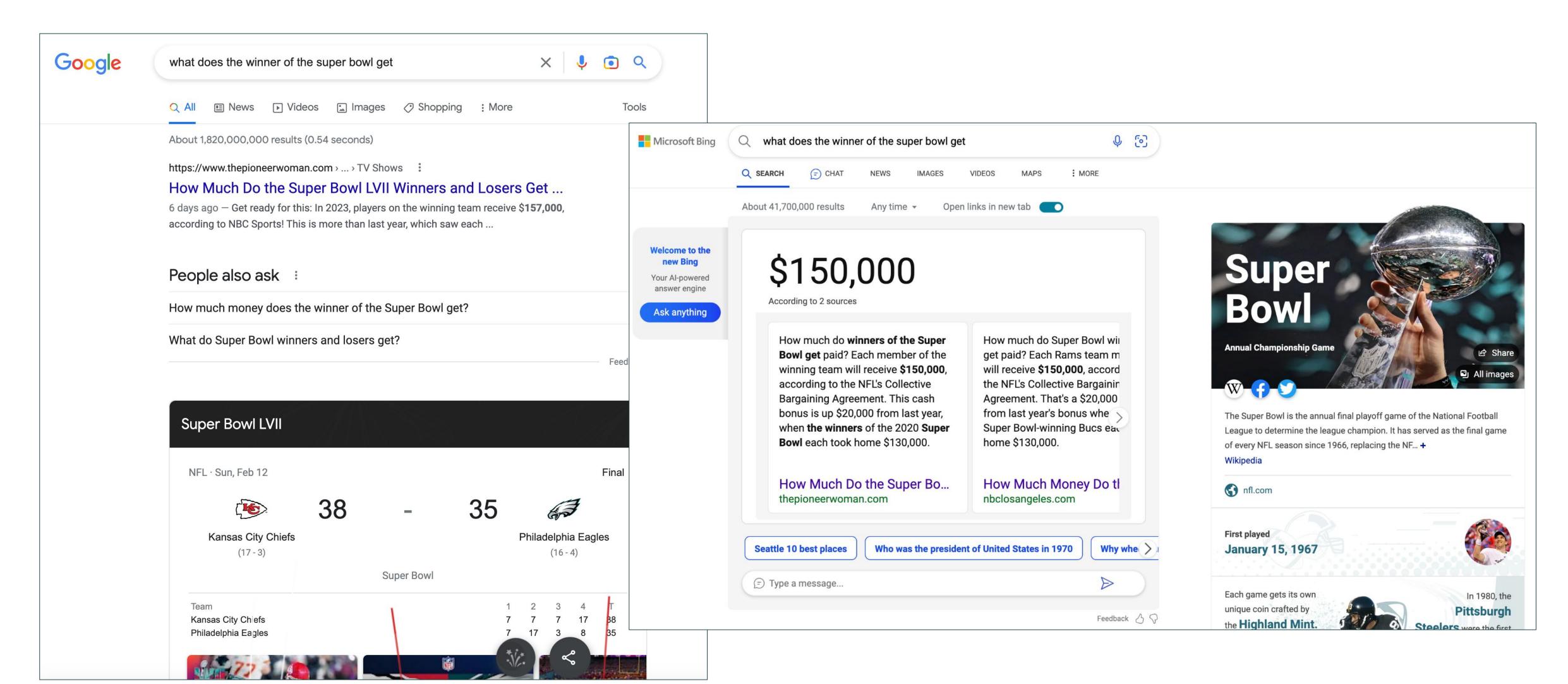
- Only 1 million people use Neeva
- Only 180,000 people pay for Twitter
 Blue (less than 0.2% of users)
- 70% of Hulu users choose the ad-supported viewing plan



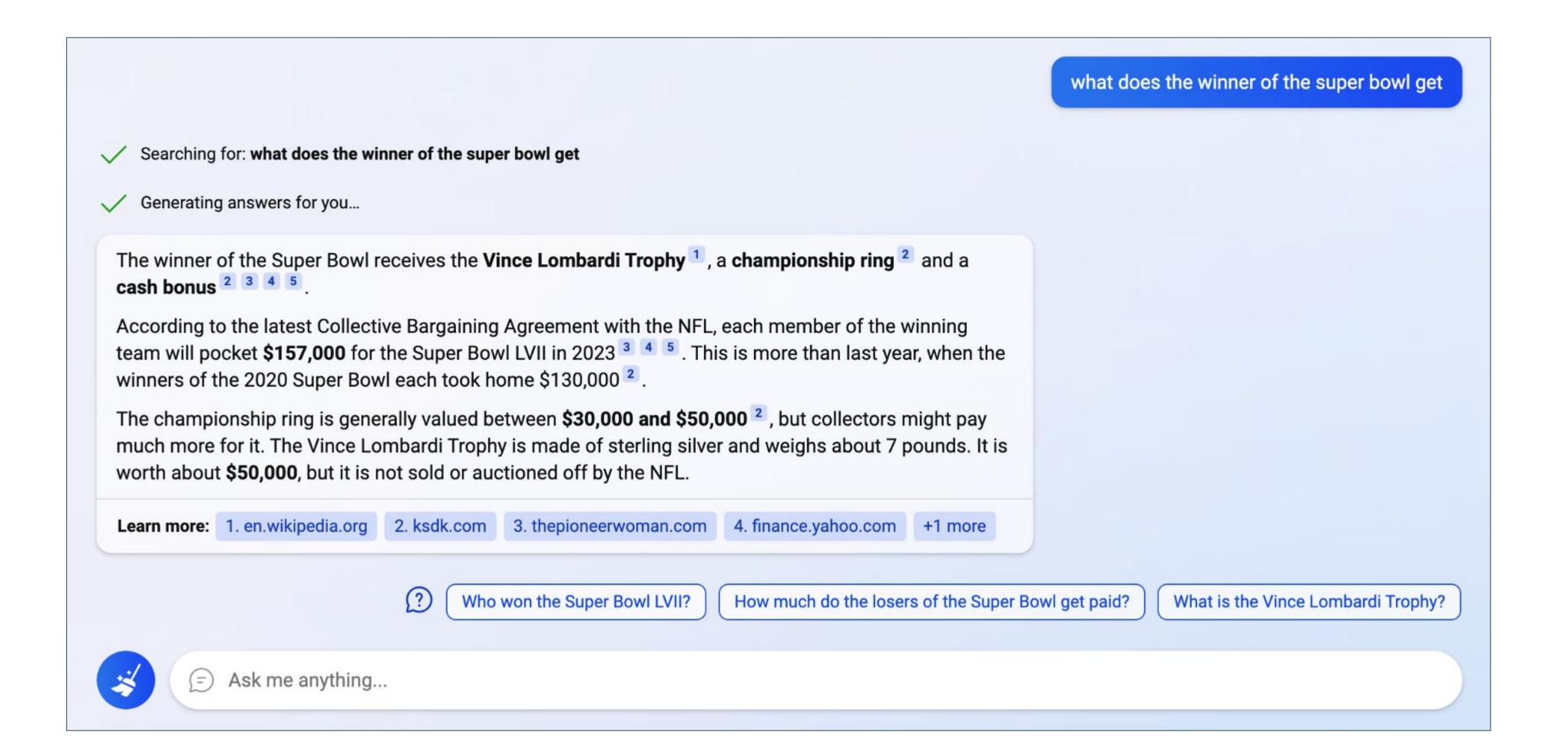
Bottom Line: Ads are here to stay

The end of Google?

SERP Comparison



Chat Answer on Bing



The New Bing

The first 30 days post launch of the new Bing (with ChatGPT integration):

- 45M total chats
- 1/3 of daily preview users chat daily
- 1/3 of preview users are brand new to Bing
- Bing (new and old) passes 100M DAU.

Google Bard vs OpenAl GPT

- **Prompt**: write an announcement that Fred is speaking at Friends of Search and work in the phrase that he is a friend of search.

GPT 3

- **Response**: We are thrilled to announce that Fred, a true friend of search, will be speaking at the upcoming Friends of Search event! With his extensive knowledge and experience in the industry, Fred is sure to deliver an insightful and engaging presentation that will leave attendees feeling inspired and informed. Don't miss out on this opportunity to hear from one of the most respected voices in search - register for Friends of Search today!

Bard

- **Response**: We are excited to announce that Fred, a friend of search, will be speaking at Friends of Search on March 25, 2023. Fred will be discussing the latest trends in search and how businesses can use search to improve their online presence...

We hope you will join us for this informative and engaging presentation.

- Good at *creative writing*

- Intended to improve search

GPT-4



We are thrilled to announce that our very own Fred, a renowned expert in the field of digital marketing, will be a featured speaker at this year's Friends of Search conference! As a true "friend of search," Fred brings a wealth of knowledge and experience to the table, which he is eager to share with all attendees...

Mark your calendars now for this must-attend event! The Friends of Search conference will take place from April 18th to 20th, and Fred's keynote speech is scheduled for April 19th at 1:00 PM.

• • •

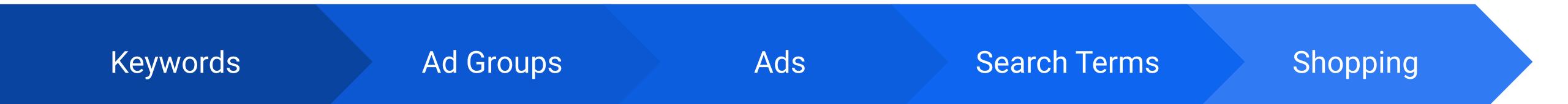
@SiliconVallaeys

See you there!

Bottom Line: Search will improve across the board so more people will use it and this will benefit advertisers...

But maybe not by doing the same we've been doing for 20 years

Using GPT for Automating Every Aspect of PPC



Find Keywords for a New Ad Group

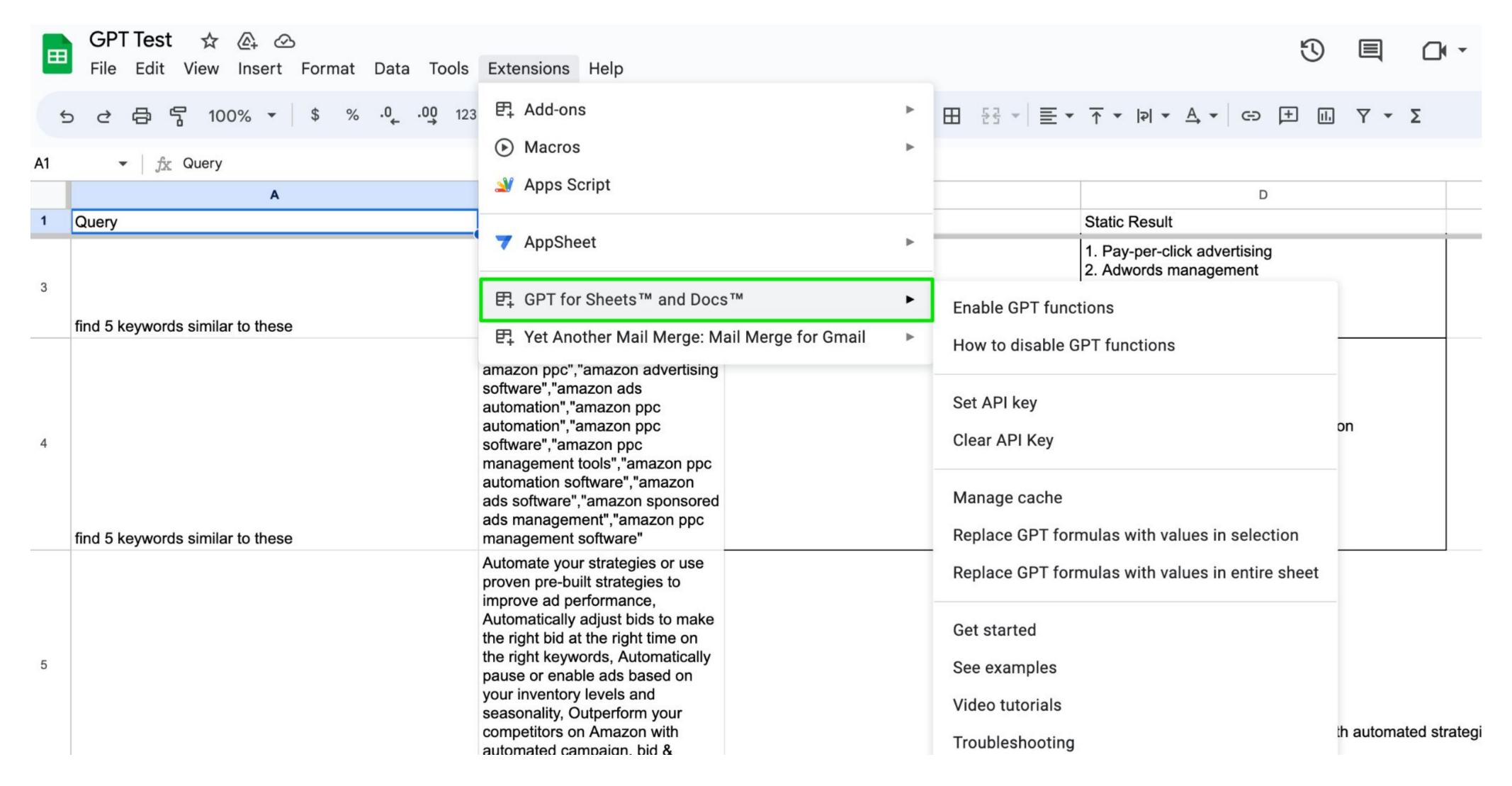


Find some keyword ideas to advertise the landing page at https://www.optmyzr.com/solutions/reporting/



- 1. Reporting automation
- 2. Custom reporting
- 3. PPC reporting
- 4. Performance reporting
- 5. Analytics reporting
- 6. Data visualization
- 7. Reporting dashboards
- 8. Marketing reporting
- 9. Report templates
- 10. Ad campaign reporting
- 11. Reporting software
- 12. Multi-channel reporting
- 13. Real-time reporting
- 14. Business intelligence
- 15. Reporting insights.

Let's Use GPT for Sheets...



Find More Keywords for an Ad Group

Using the GPT extension for Google Sheets:

find 5 keywords similar to these:	"amazon ppc tools","optimize amazon ppc","amazon	1. Amazon PPC Optimization
	advertising software", "amazon ads automation", "amazon ppc	2. Amazon Advertising Strategies
	automation","amazon ppc software","amazon ppc	3. Amazon Ads Optimization
	management tools","amazon ppc automation	4. Amazon PPC Strategies
	software", "amazon ads software", "amazon sponsored ads	5. Amazon Sponsored Ads
	management","amazon ppc management software"	Automation

Ad Groups

Keyword Classifier



Categorize search marketing keywords like this: pay per click programs pay per click affiliate programs without website ppc management best ppc management tools quartile advertising software ppc marketing automation software ppc management for small business pay to click ppc campaign management tools pay per click platforms



Here's a suggested categorization:

PPC (Pay-Per-Click):

- pay to click ads
- , bbc
- ppc management tools
- ppc tools
- pay per click
- ppc campaign management tools
- pay per click platforms
- ppc bid management tools
- ppc automation
- pay per click ads
- pay per click advertising
- ppc traffic
- ppc advertising firm

Automation:

- automate click with clickseo
- · automated email marketing
- automate website actions
- facebook ads automation tools
- facebook marketing automation software
- payment automation solutions
- · automated ade

Create new headlines from scratch



write a few ad headlines of 30 characters or less for those keywords and that landing page



- 1. Boost PPC ROI with Automated Reporting
- 2. Customize Your Reports & Impress Clients
- 3. Streamline Your PPC Reporting Today
- 4. Unlock Insights with Performance Reports
- 5. Visualize Your Data for Better Decisions
- 6. Get a Bird's Eye View with Dashboards
- 7. Transform Your Marketing Reporting
- 8. Save Time with Report Templates
- 9. Optimize Ad Campaigns with Analytics
- 10. Track Multi-Channel Campaigns Easily.

Create descriptions similar to others you've used

suggest 2 ad descriptions like these

- 1. Automate your strategies or use proven pre-built strategies to improve ad performance
- 2. Automatically adjust bids to make the right bid at the right time on the right keywords
- 3. Automatically pause or enable ads based on your inventory levels and seasonality
- 4. Outperform your competitors on Amazon with automated campaign, bid & budget management.
- 5. Get the most out of your ad budget with automated optimization and targeting.
- 6. Maximize your ad performance with automated bidding and budgeting strategies.

Translate Ad Text

Text to translate: Optmyzr is a ppc management software that helps advertisers save time and get more results from search marketing

translate from english to dutch	Optmyzr is een ppc-beheersoftware die adverteerders helpt tijd te besparen en meer resultaten te behalen uit zoekmarketing.
translate from english to spanish	Optmyzr es un software de gestión de PPC que ayuda a los anunciantes a ahorrar tiempo y obtener mejores resultados de la publicidad en motores de búsqueda.
translate from english to finnish	Optmyzr on ppc-hallintaohjelmisto, joka auttaa mainostajia säästämään aikaa ja saamaan enemmän tuloksia hakumarkkinoinnista.

Search Terms

Search Terms Scoring



create a table of all the keywords in this list and sort them from most to least relevant for a

company that sells PPC management software:

- pay per click programs
- pay per click affiliate programs without website
- ppc management
- best ppc management tools
- quartile advertising
- software ppc
- marketing automation software
- ppc management for small business
- pay to click
- ppc campaign management tools
- pay per click platforms
- ppc bid management tools
- ppc automation
- pay per click affiliate programs south africa
- ptclab pay per click platform
- digital marketing ki
- ppc firm
- ppc
- facebook ads automation tools
- pay per click ads
- automate website actions
- facebook marketing automation software
- scale insights
- payment automation solutions
- ads click bot
- pay per click advertising
- automated ads

\$

Pay per click advertising

Keywords	Relevar	nce Score (1-10)
PPC management software	10	Automate website actions 4
PPC management	9	Facebook marketing automation software 4
Pay per click programs	9	Scale insights 4
Best PPC management tools	8	Payment automation solutions 4
PPC campaign management tools	8	Ads click bot 4
PPC bid management tools	8	Automated feed ads dpa 4
PPC automation	8	Ads clicker bot 4
PPC platform	8	
Pay per click platforms	7	Affiliate marketing platform 4
Automated advertising platforms	7	Online campaign apps management platform 4
Marketing automation platforms	7	Marketing automation module for perfex crm 4
Adtomic	7	CPABuild self click 3
PPC keyword tool	7	Social media automation marketing software 3
Optmyzr	7	Best accounts payable automation 3
Adspy	7	Pay per click advertisers 3
PPC software	7	Pay per click affiliate programs in nigeria 3
PPC traffic	6	Auto posting tools 3
PPC advertising firm	6	PPC AI 3
PPC management for small business	6	© 2022 Optmyzr Inc. All rights roso

Shopping Feed Cleanup

what's the brand of the product on https://www.gvc.com/Nespresso-Vertuo-Next-Premium-Coffee-% 26-Espresso-Maker-wFrother.product.K82175.html?sc=TSV&TZ= Nespresso the page **EST** Nespresso Vertuo Next Premium Coffee & Espresso Maker with https://www.gvc.com/Nespresso-Vertuo-Next-Premium-Coffee-% 26-Espresso-Maker-wFrother.product.K82175.html?sc=TSV&TZ= Frother what's the product on the page **EST** what's the category of the product https://www.gvc.com/Nespresso-Vertuo-Next-Premium-Coffee-% 26-Espresso-Maker-wFrother.product.K82175.html?sc=TSV&TZ= Kitchen Appliances on the page **EST** What can we help you discover?



Nespresso Vertuo Next Premium Coffee & Espresso Maker w/Frother

Kitchen & Food » Small Appliances » Coffee & Tea Makers » K82175

New to QVC®? \$10 Off Your First Order with Code SURPRISE | See Details >

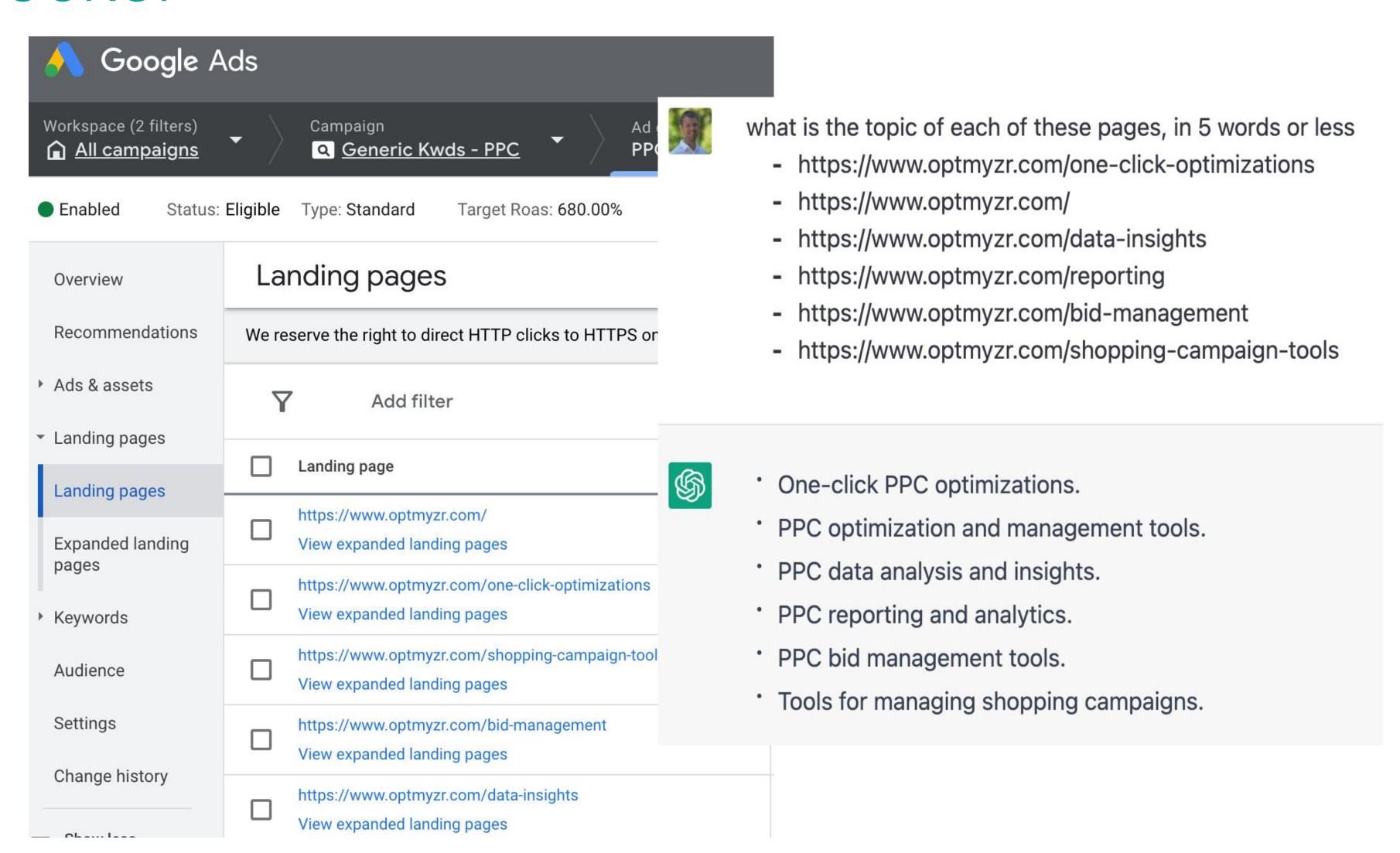
Relevance Checker

what is the topic of this page, in 5 words or less https://www.optmyzr.com/solutions/integrations/

→ Integrations Solutions

what is the topic of this page, in 5 words or less https://www.optmyzr.com/solutions/reporting/

→ PPC Reporting
Solutions



Audience Development



what characteristics or attributes of a hotel would a budget conscious traveler care about? Things such as the following: "cheap price clean rooms"



A budget-conscious traveler would typically look for the following characteristics or attributes in a hotel:

- Affordable price: The most important factor for budget-conscious travelers is finding a
 hotel that offers a reasonable price for their budget. They want to get the most value
 for their money.
- 2. Location: Budget-conscious travelers may prioritize a hotel that is centrally located or

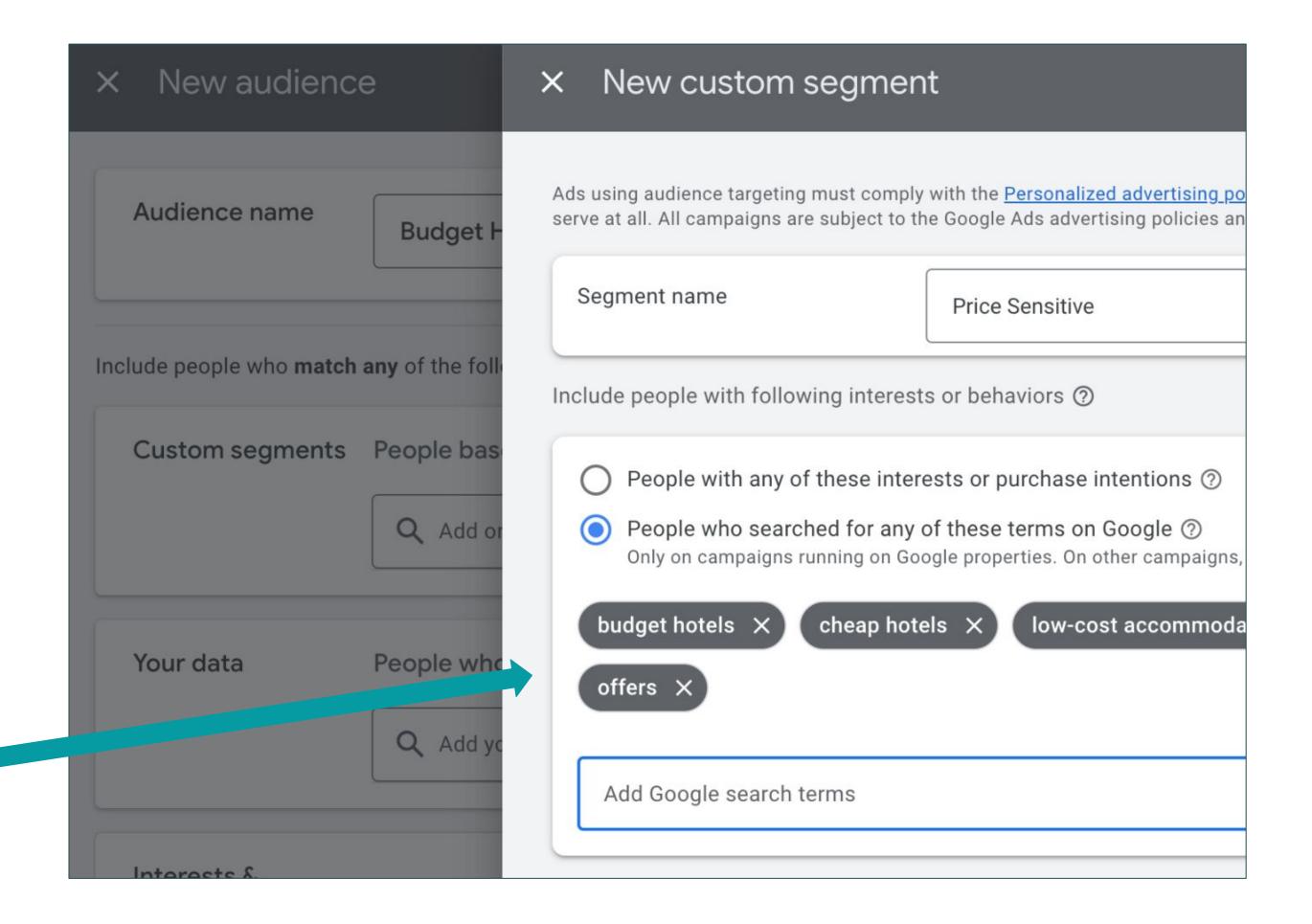


For each of these, can you suggest some related search keywords and put them in a table



Sure! Here's a table with some related search keywords for each characteristic or attribute:

Characteristic/Attribute	Related Search Keywords	
Affordable price	budget hotels, cheap hotels, low-cost accommodations, discounts, deals, offers	
Location	central location, public transportation, proximity to attractions, walkability, accessibility	
Cleanliness	clean rooms, hygiene, sanitation, housekeeping, spotless	



GPT Tips and Tricks

GPT Settings - Temperature Determines Creativity

How creative do you want GPT to be with its responses?

- 1 Creative, but possibly not true
- 0 Deterministic, more likely to be true

0 (deterministic) ... 1 (creative)

Temperature is a value between 0 and 1 that essentially lets you control how confident the model should be when making these predictions. Lowering temperature means it will take fewer risks, and completions will be more accurate and deterministic. Increasing temperature will result in more diverse completions.

Temperature

temperature is more important when you request longer answers.

- → Keywordsnot very impactful
- → Descriptions
 more impactful

"I have a Google Ads ad group.

Find 5 more keywords for this ad group like this:

- ""pay per click software""
- ""paid search campaign management""
- ""ppc management platform""
- ""ppc management tool""
- ""ppc reporting software""
- automated ppc
- ""ppc ad campaign management software""
- ""ppc software""
- ""ppc automation""
- ppc automation tools
- ""ppc bid management tools""
- ""ppc management software"""

Temperatu	Static Decrees
re	Static Response
	- "keyword research tool for PPC"
	- "PPC bid optimization software"
	- "PPC ad optimization tool"
	- "PPC campaign analysis software"
0	- "PPC conversion tracking tool"
	- "keyword research tool for PPC"
	- "PPC bid optimization software"
	- "PPC ad optimization tool"
	- "PPC ad tracking software"
0.1	- "PPC campaign analysis tool"
	- "keyword research tool for PPC"
	- "PPC optimization software"
	- "PPC bid optimization"
	- "PPC ad tracking software"
0.2	- "PPC ad copy generator"
	- PPC bid optimization software
	- Keyword research tool for PPC
	- AdWords campaign management software
	- PPC ad optimization tool
8.0	- PPC bid automation software
	- "pay per click optimization"
	- "ppc bid optimization tool"
	- "keyword research for ppc"
	- "ad copy optimization software"
0.9	- "ad tracking for ppc"
	- "advanced ppc optimization"
	- "keyword research tool for ppc"
	- "smart bidding strategies for ppc"
	- "conversion tracking for ppc campaigns"
1	- "ad copy optimization for ppc"
	, , , , , , , , , , , , , , , , , , , ,

The prompt determines the output

Prompt 1:

suggest 2 ad descriptions like these

Automate your strategies or use proven pre-built strategies to improve ad performance, Automatically adjust bids to make the right bid at the right time on the right keywords, Automatically pause or enable ads based on your inventory levels and seasonality, Outperform your competitors on Amazon with automated campaign, bid & budget management.

- 1. Maximize your ad performance with automated strategies and pre-built strategies. Easily adjust bids to get the most out of your campaigns and optimize your budget.
- 2. Get ahead of the competition with automated campaign, bid & budget management. Automatically pause or enable ads based on your inventory levels and seasonality for maximum efficiency.

→ Excessively long suggestions

Prompt 2:

Suggest 2 ad descriptions like these

- 1. Automate your strategies or use proven pre-built strategies to improve ad performance
- 2. Automatically adjust bids to make the right bid at the right time on the right keywords
- 3. Automatically pause or enable ads based on your inventory levels and seasonality
- 4. Outperform your competitors on Amazon with automated campaign, bid & budget management.
- 5. Get the most out of your ad budget with automated optimization and targeting.
- 6. Maximize your ad performance with automated bidding and budgeting strategies.
- → More appropriate length of suggestions

No need to be wordy

1. Additional detail may not help get a better response



Here are five new keywords that could be added to the ad group:



- PPC bid optimization: This keyword targets users who are looking for a tool that can help them optimize their PPC bids for maximum return on investment.
- AdWords automation: This keyword targets users who are looking for a tool that can help them automate their AdWords campaigns.
- 3. PPC campaign analysis: This keyword targets users who are looking for a tool that can help them analyze their PPC campaigns to improve performance.
- 4. Keyword research tool: This keyword targets users who are looking for a tool that can help them research and select the best keywords for their PPC campaigns.
- 5. Performance reporting: This keyword targets users who are looking for a tool that can help them track and report on the performance of their PPC campaigns.





Suggest 5 new keywords for a Google Ads ad group.

The ad group already contains the keywords

- "pay per click software"
- "paid search campaign management"
- "ppc management platform"
- "ppc management tool"
- "ppc reporting software"
- automated ppc
- "ppc ad campaign management software"
- "ppc software"
- "ppc automation"
- ppc automation tools
- "ppc bid management tools"
- "ppc management software"

The top search queries matching the ad group are:

- pay to click ads
- ppc management tools
- ppc tools
- pay per click
- automate click with clickseo
- pay per click programs
- pay per click affiliate programs without website
- ppc management
- automated email marketing
- best ppc management tools

The ads in this ad group contain text like this:

- Optmyzr PPC Tool for Experts
- Grow PPC Revenue with Optmyzr
- Powerful optimizations to help agencies and marketing teams of all sizes manage

PPC faster

- PPC Users in 30+ Countries
- PPC Management Software
- Trusted by 75K+ Advertisers
- PPC Management Tool
- PPC Software
- Automate PPC Ads with Optmyzr
- Rated 4.7+ on Top Review Sites
- Automate tedious PPC tasks & spend less time managing campaigns, more time

driving growth

- Pay Per Click Software
- Easily manage multiple PPC accounts & campaigns with greater control over any bid
- Optmyzr for PPC Automation
- 75K+ Users Across the Globe
- Audit accounts, manage keywords, search queries, ads, budgets, bids, placements & more

The ads direct to this landing page:

https://www.optmyzr.com/



Suggest 5 new keywords for a Google Ads ad group.

The ad group already contains the keywords

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- Pay Per Click Software
- Easily manage multiple PPC accounts & campaigns with greater control over any bid strategy
- Optmyzr for PPC Automation
- 75K+ Users Across the Globe
- Audit accounts, manage keywords, search queries, ads, budgets, bids, placements & more

The ads direct to this landing page:

https://www.optmyzr.com/

No need to be wordy

- 1. Don't make your list too long or GPT is likely to drift.
- 2. GPT knows what a campaign and an ad group is so no need to explain this
- 3. This prompt confused GPT about what output you expected



Here are five new keywords that could be added to the ad group:



- PPC bid optimization: This keyword targets users who are looking for a tool that can help them optimize their PPC bids for maximum return on investment.
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- automated email marketing
- best ppc management tools

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- PPC Software
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- Rated 4.7+ on Top Review Sites
- Automate tedious PPC tasks & spend less time managing campaigns, more time

driving growth

- Pay Per Easily m
- Find 5 more keywords for this ad group like this:

strategy

- Optmyz
- 75K+ Us
- Audit ac
- more
- "pay per click software"
- "paid search campaign management"
- "ppc management platform"
- "ppc management tool"

The ads direct https://v

- "ppc reporting software"
 - automated ppc

- "ppc software"

"ppc automation"

ppc automation tools

"ppc bid management tools"

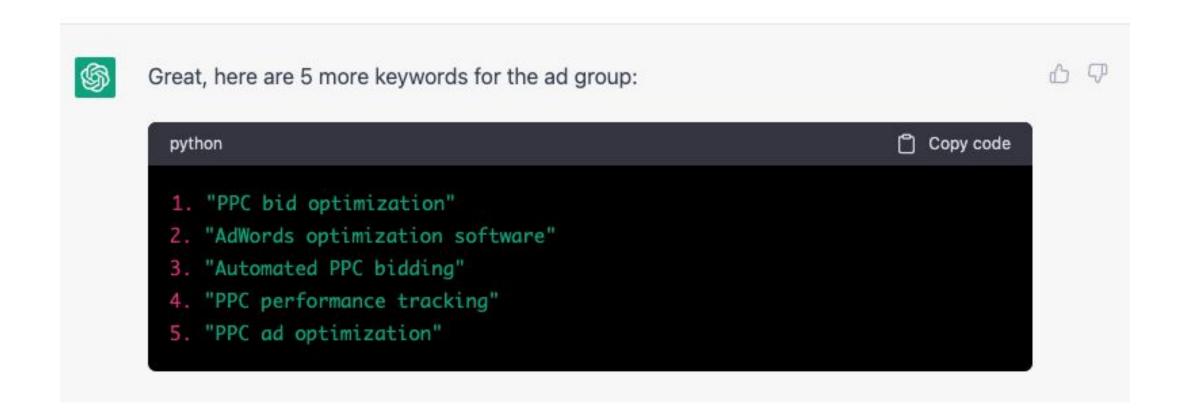
- "ppc management software"

Find 5 more

- "ppc ad campaign management software" - "pay pe
- "paid se
- "ppc ma
- "ppc ma
- "ppc rej
- automat "ppc ad
- "ppc so
- "ppc au
- ppc aut "ppc bid
- "ppc management software"

Same inputs but optimized prompt

The prompt has all the same data as last slide but ends with a list of keywords. The system continues the flow and now produces useful keyword suggestions



You Can Ask GPT for Data in Tables



categorize the following keywords and put them in two columns, the first column is the keyword, the second column the categorization:

ppc advertising firm marketing automation platforms list ppc ai efficient email marketing software best accounts payable automation marketing automation module for perfex crm cpabuild self click ppc management software email marketing tools adcash pay per click pay per click advertisers marketing content automation crm and marketing automation platforms ppc ninja kdp automation tool google ppc campaign management pay per click affiliate programs in nigeria marketing automation b2b



Here are the categories for the given keywords:

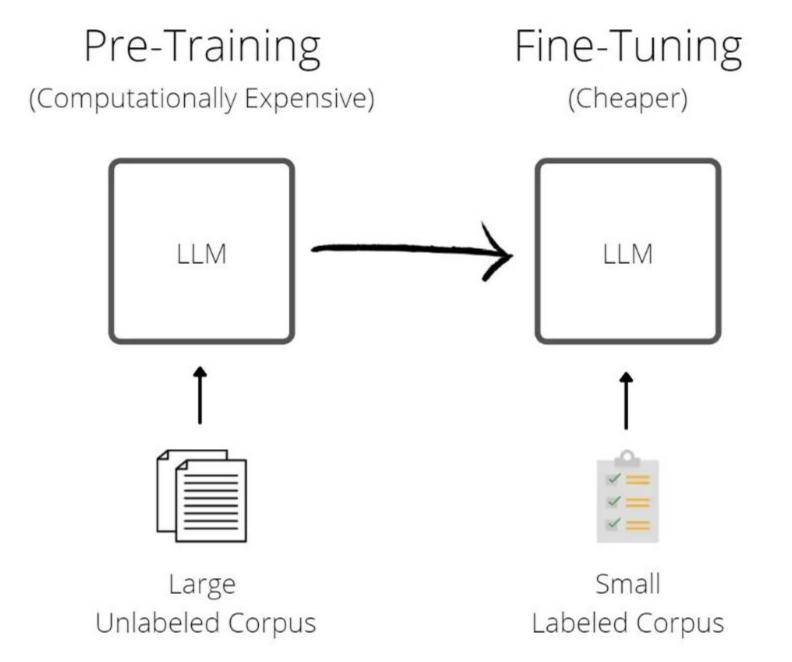
Keyword		Categorization	
ppc advertising firm		PPC management	
marketing automation platforms list		Marketing Automation	
ppc ai		PPC	
efficient email marketing software		Marketing Automation	
best accounts payable automation		Automation	
marketing automation module for perfex crm		Marketing Automation	
cpabuild self click		PPC	
ppc management software		PPC management	
email marketing tools		Marketing Automation	
adcash pay per click		PPC	
av per click advertisers		PPC	

Optimize the prompt to save cost

GPT usage is based on number of tokens in the prompt and response

Fine-tuning a model is cheaper when your prompts need to be long to get the right

response



source:

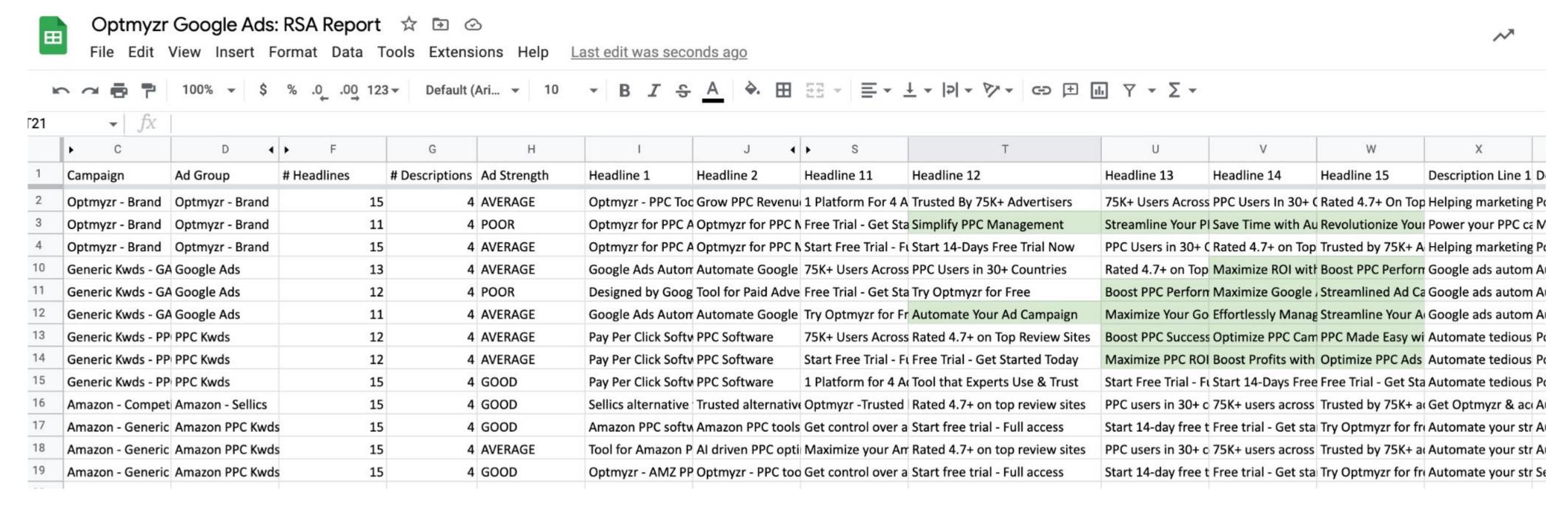
https://clive-gomes.medium.com/pre-training-large-language-models-at-scale-d2b133d5e219

GPT + Ad Scripts

GPT Ad Script

- 1. Find RSAs with missing headlines
- 2. Use GPT to suggest new variations
- 3. https://bit.ly/GPT-for-RSAs





Write a Google Ads Script in GPT-4

Model: GPT-4



write a google ads script to create a google sheet with all keywords with over 100 impressions in the last 30 days. Include clicks, impressions and conversions in the report



To create a Google Ads script that generates a report of all keywords with over 100 impressions in the last 30 days and saves it to a Google Sheet, follow the steps below:

- 1. Make sure you have enabled the Google Sheets API in your Google Ads account.
- 2. Create a new Google Sheet where the data will be saved.
- Replace `YOUR_SPREADSHEET_URL` in the code below with the URL of the Google Sheet you created in step 2.
- Copy and paste the following script into the Google Ads Scripts Editor and click "Preview" to check

☐ Stop ∰nerating



Thanks

Frederick Vallaeys (@SiliconVallaeys)

Connect with me on LinkedIn

Try Optmyzr's 2-week free trial (we use GPT)

How to Use GPT

chat.openai.com

- Free or \$20/month for premium
- Uses GPT-3.5
- Tuned for conversations (context is carried forward)

GPT Playground

- Requires paid API key
- Try any model GPT-1... GPT-4
- Pay \$20/mo to get priority access to GPT-4

GPT for Sheets and Docs

Use GPT in tools you already use

Jasper.ai

- Multi-LLM
- Templates

MS Edge

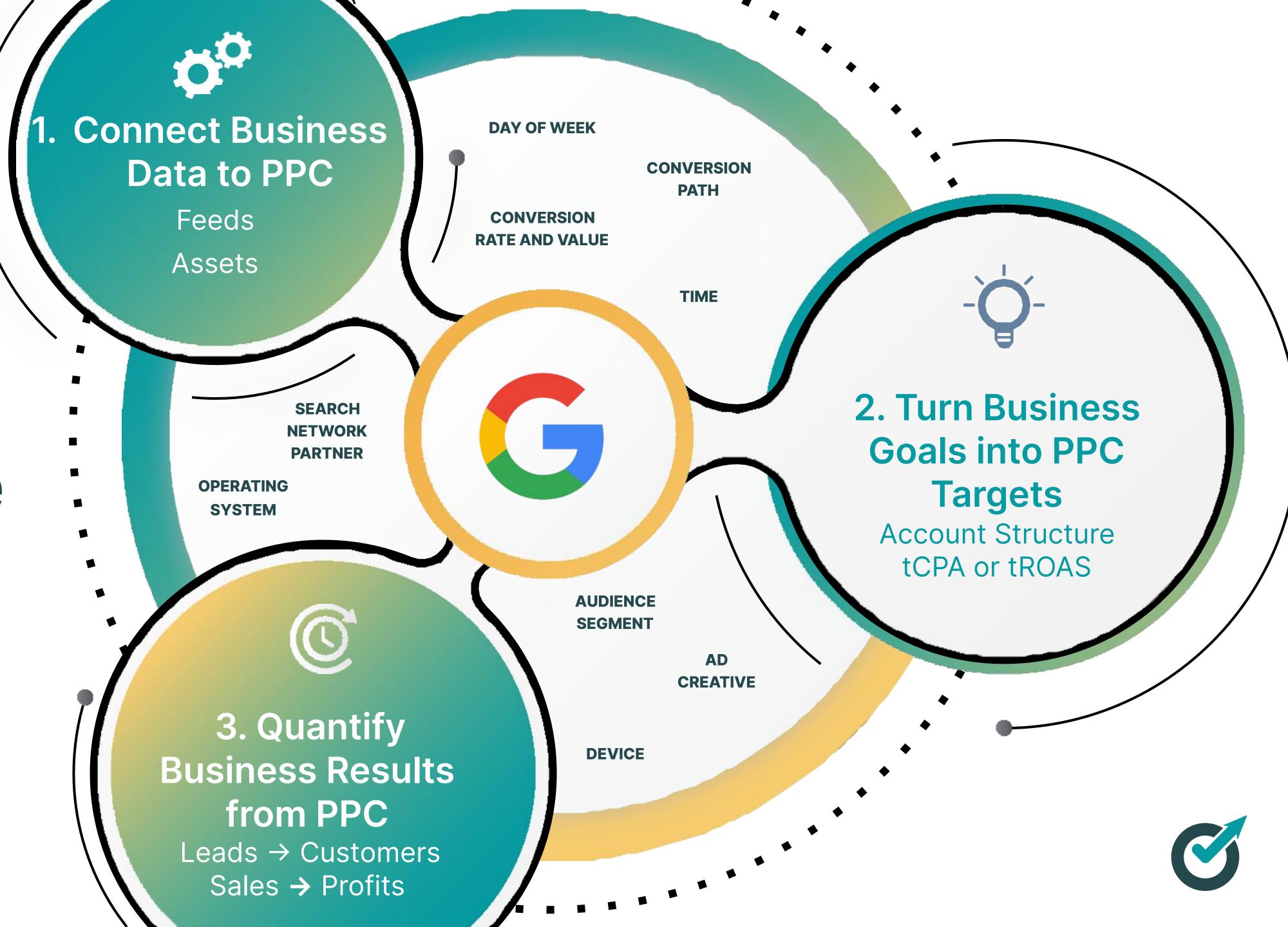
- Chat integrated in search
- Content generation tools accessible from browser

Optmyzr

 GPT integrated in existing toolset to help advertisers

Al Needs Us for Guidance

Narrow Al solves PPC problems, but humans need to guide it what to solve for...



Is it more noise

Optmyzr cuts through it

History of GPT



Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing.

Generate Text

Creative ways to get text answers to text prompts

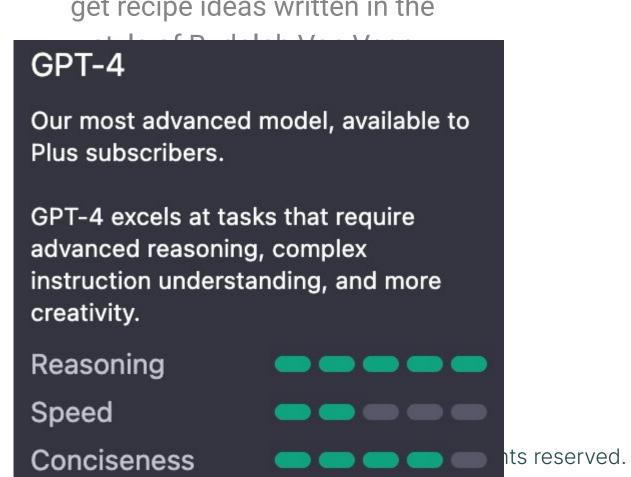
Conversational

Have a chat where the system remembers context from what was discussed so far

Default (GPT-3.5) Optimized for speed, currently available to Plus users Reasoning Speed Conciseness

Multi-Modal

Show a picture of your fridge and get recipe ideas written in the



Other Applications of OpenAl

Vector scoring

This is Optmyzr's model but it can be done with OpenAl as well



How GPT Works

GPT: Generative Pre-trained Transformer

Transformers in AI - Invented by Google Brain

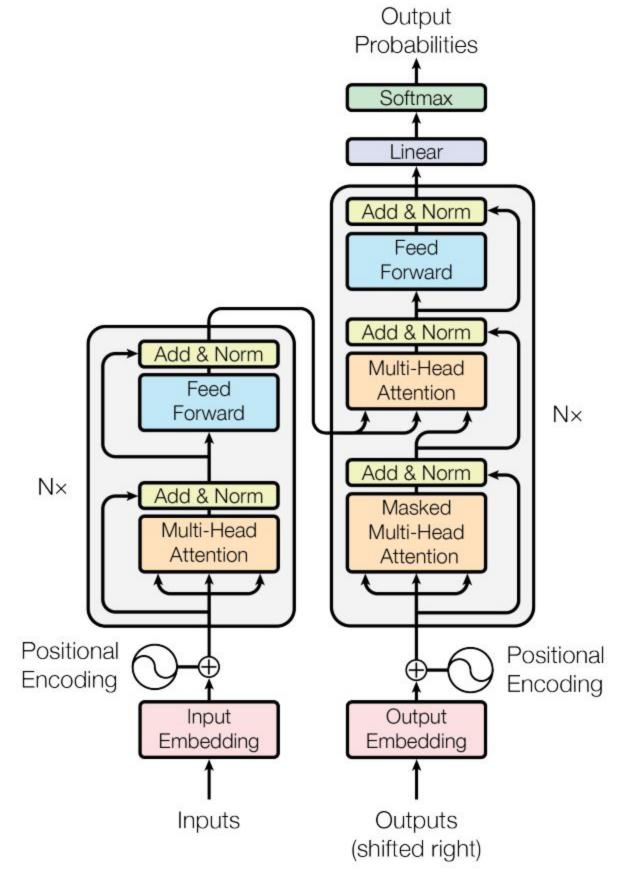
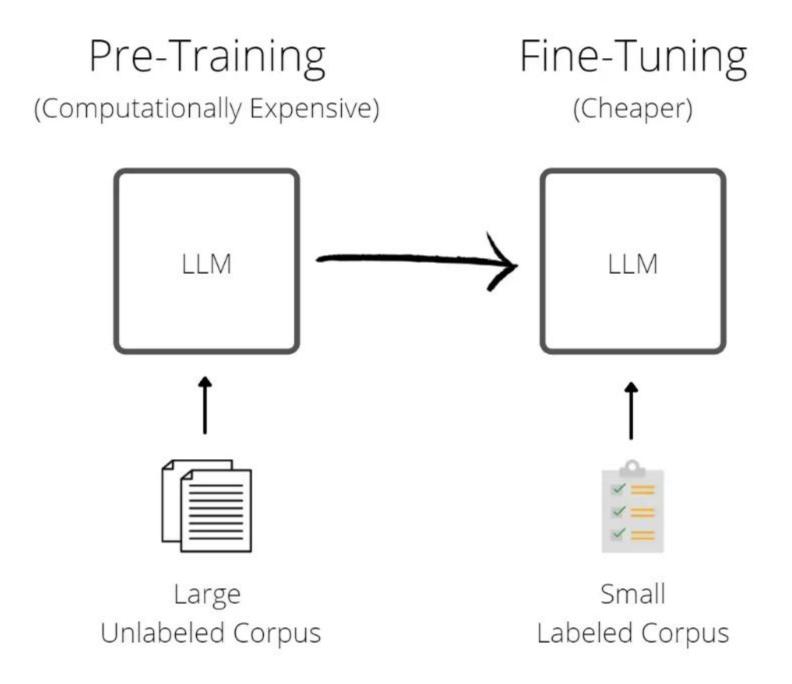


Figure 1: The Transformer - model architecture.

https://proceedings.neurips.cc/paper/2017/file/3f5ee243547dee91fbd053c1c4a845aa-Paper.pdf

Training vs Tuning



source:

https://clive-gomes.medium.com/pre-training-large-language-models-at-scale-d2b133d5e219

Fine Tuning

Provide curated examples of prompts and expected responses

- example interactions of your support team
- example FAQs
- examples with no answer (stop GPT from guessing)

Q: Who is Batman?
A: Batman is a fictional comic book character.

Q: What is torsalplexity?

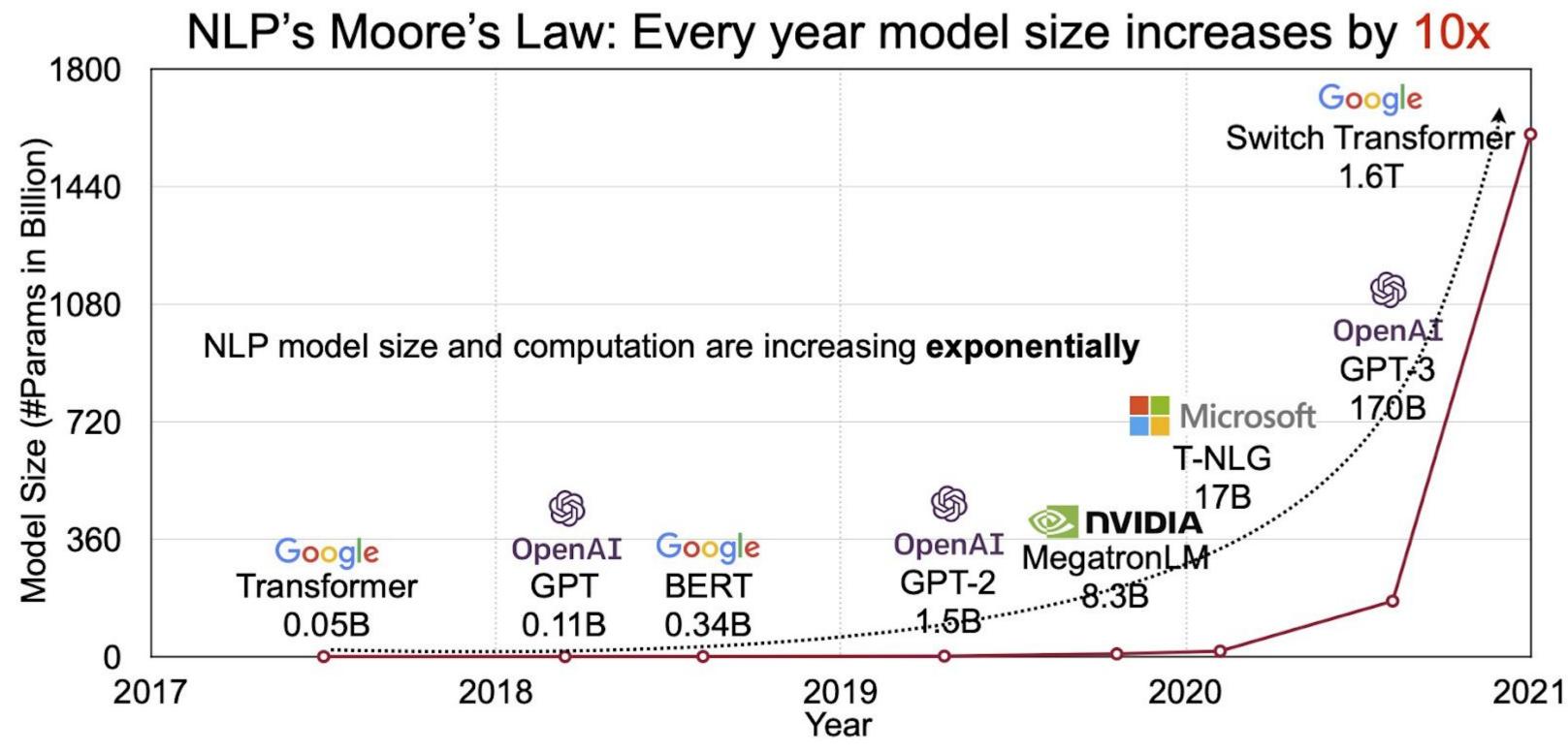
Q: What is Devz9? A: ?

Q: Who is George Lucas?
A: George Lucas is American film director and producer famous for creating Star Wars.

Q: What is the capital of California? A: Sacramento.

Large Language Models and Moore's Law

Exponential Growth



Who won the Super Bowl LVII?

- Searching for: who won the Super Bowl LVII
- Generating answers for you...

The winner of the Super Bowl LVII was the Kansas City Chiefs 1 2 3 4. They defeated the Philadelphia Eagles 38-35 in a thrilling game at State Farm Stadium in Glendale, Arizona on February 12, 2023 1 2 3

The Chiefs, led by star quarterback Patrick Mahomes, who was named the MVP, came back from a 10point deficit in the fourth quarter and scored 17 unanswered points to clinch their second Super Bowl title in four years 1 3 4. Mahomes threw two touchdown passes and ran for 26 yards on the gamewinning drive before Harrison Butker kicked a 27-yard field goal with 8 seconds left to seal the victory 4

Learn more: 1. foxsports.com 2. foxsports.com 3. cnn.com 4. kold.com 5. bing.com 6. parade.com

News about Who Won The Super Bowl LVII bing.com/news



Rihanna Rocked Super Bowl LVII, But We Missed The Real Halftime Show

The world was focused on pop star Rihanna, and without question she offered one of ...

Forbes · 3h

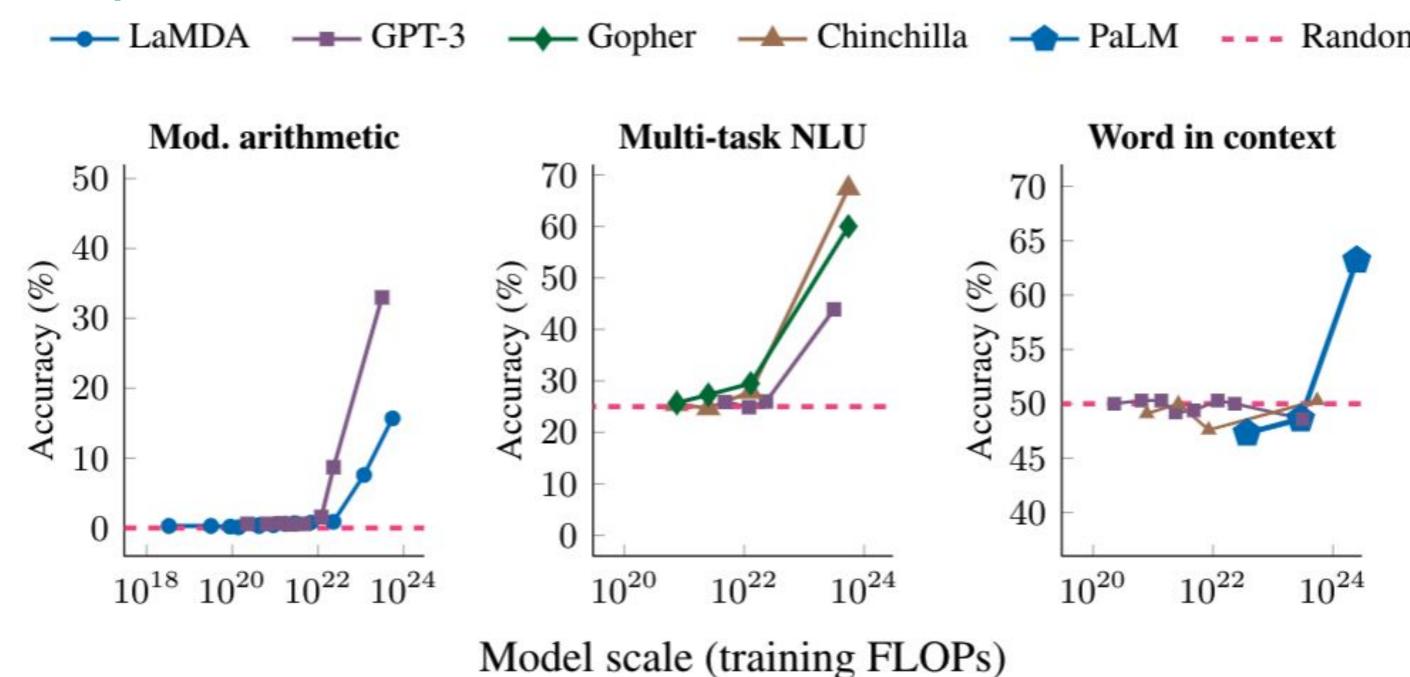
The Winners and Losers

Come-from-behind win by



Ask me anything...

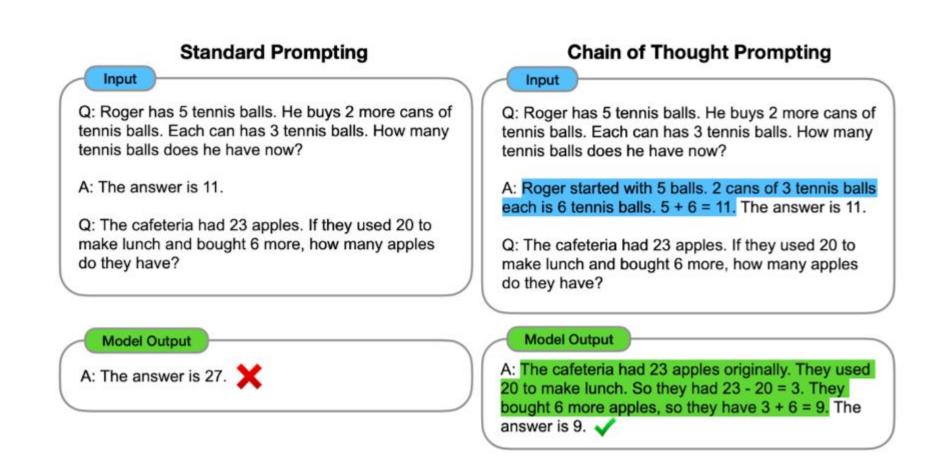
Accuracy depends on size of learning model - tipping points



The ability to perform multi-step arithmetic (left), succeed on college-level exams (middle), and identify the intended meaning of a word in context (right) all emerge only for models of sufficiently large scale. The models shown include LaMDA, GPT-3, Gopher, Chinchilla, and PaLM.

source: https://ai.googleblog.com/2023/01/google-research-2022-beyond-language.html?m=1

Chain of thought prompting - Explain your work



Models that use standard prompting directly provide the answer to a multi-step reasoning problem. In contrast, chain of thought prompting teaches the model to deconstruct the problem into intermediate reasoning steps, better enabling it to reach the correct final answer.

source: https://ai.googleblog.com/2023/01/google-research-2022-beyond-language.html?m=1

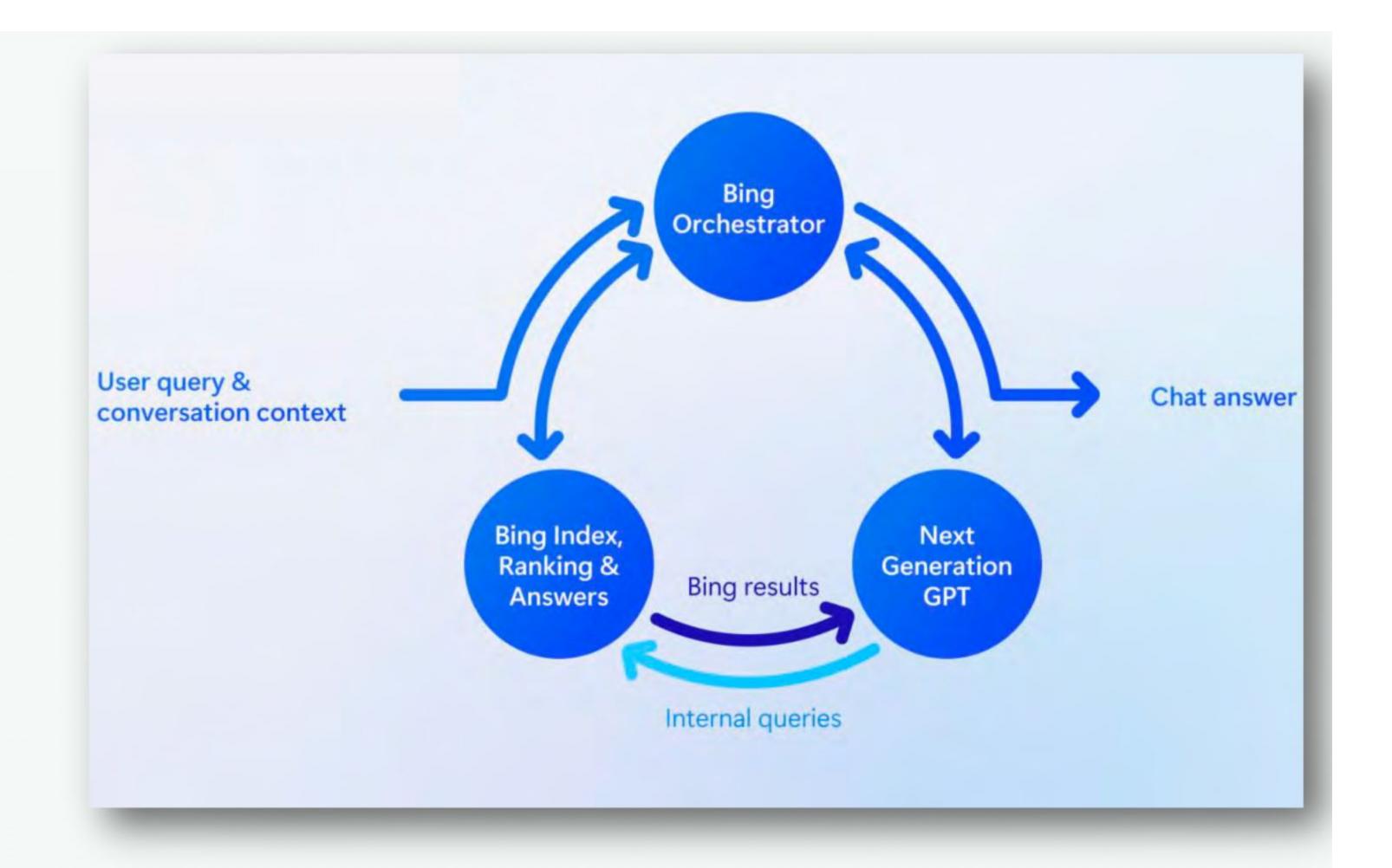
https://en.wikipedia.org/wiki/Generative_pre-trained_transformer

Transformers were introduced in 2017 by a team at Google Brain^[1] and are increasingly the model of choice for NLP problems, replacing RNN models such as long short-term memory (LSTM). The additional training on larger datasets. This led to the development of pretrained systems such as BERT (Bidirectional Encoder Representations from Transformers) and GPT (Generative Pre-trained Transformer), which were trained with large language datasets, such as the Wikipedia Corpus and Common Crawl, and can be fine-tuned for specific tasks. [4][5]

	Parameter count	Training data	
Architecture			
GPT-1	12-level, 12-headed Transformer decoder (no encoder), followed by linear-softmax.	0.12 billion	BookCorpus: ^[8] 4.5 GB of text, from 7000 unpublished books of various genres.
GPT-2	GPT-1, but with modified normalization	1.5 billion	WebText: 40 GB of text, 8 million documents, from 45 million webpages upvoted on Reddit.
GPT-3	GPT-2, but with modification to allow larger scaling.	175 billion	570 GB plaintext, 0.4 trillion tokens. Mostly CommonCrawl, WebText, English Wikipedia, and two books corpora (Books1 and Books2).



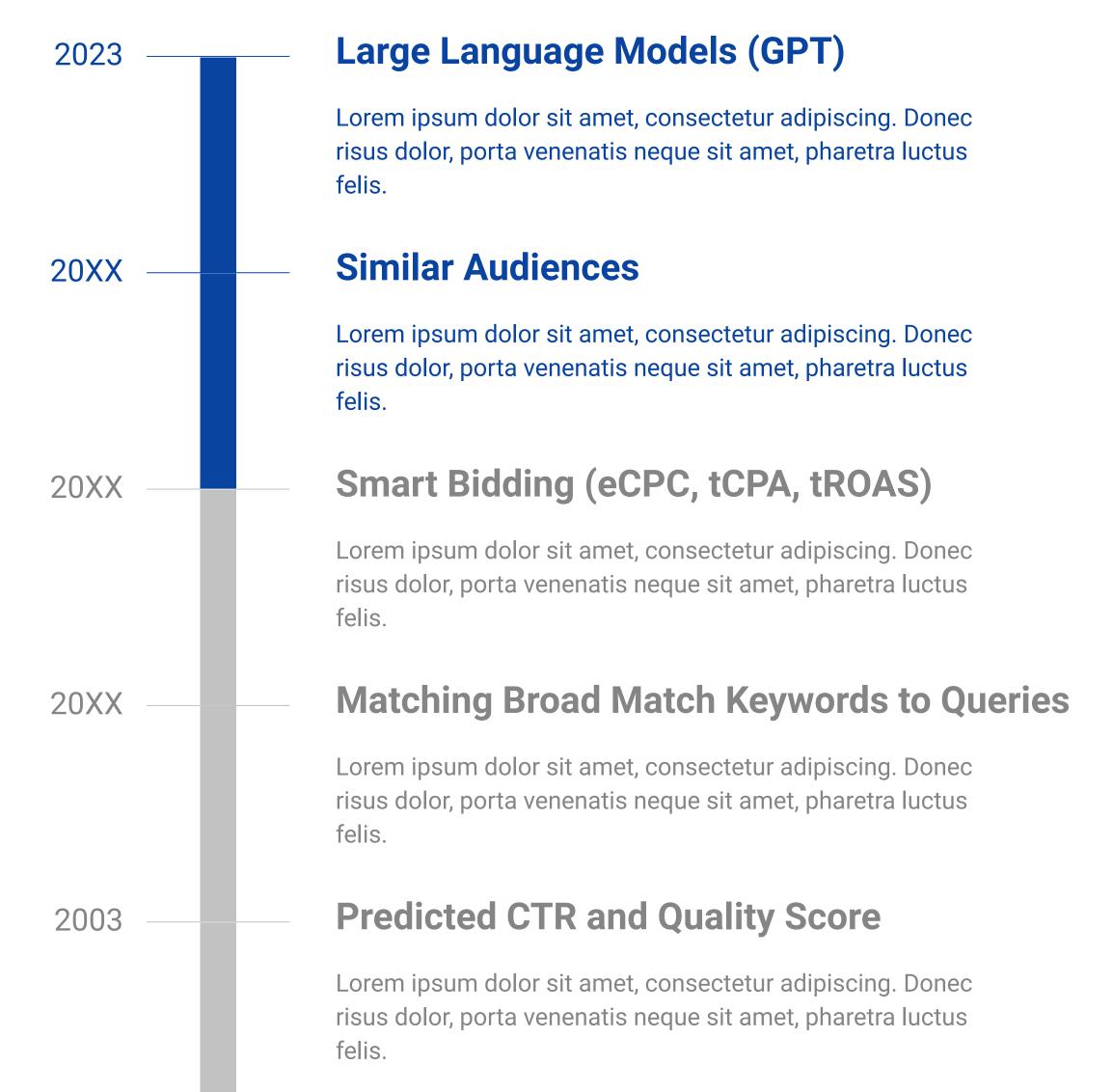
Prometheus Model





Gordon Moore who coined Moore's Law and whose predictions about computing power held. Processors got faster and data storage cheaper. With these 2 factors combined, we are now in a world with unimaginable computing power and lots of data it can use to learn. Hence Machine Learning was able to take off, a subset of AI that has made search better. Just look at how humans are now conversing with AI like ChatGPT and soon Bard. And what it means to be an advertiser has been affected as well. We rely more on AI automations and less on button-pushing to achieve great results.

20 Years of Al in Google Ads



Optimize the prompt to save cost

Multiple models, each with different capabilities and price points. Prices are per 1,000 tokens. You can think of tokens as pieces of words, where 1,000 tokens is about 750 words. This paragraph is 35 tokens.

208 chars = 35 tokens

6000 chars = 1000 tokens

You need fewer examples for familiar tasks. For this classifier, we don't provide any examples. This is because the API already has an understanding of sentiment and the concept of a Tweet. If you're building a classifier for something the API might not be familiar with, it might be necessary to provide more examples.

GPT-3.5 vs GPT-4



write an ad for the vacation home rental pictured in this image: https://cms.inspirato.com/ImageGen.ashx?image=%2Fmedia%2F Mita_Real-del-Mar_Casa-de-las-

Hamacas_Exterior_2560.jpg&compression=70&width=555



Escape to paradise and experience luxury at its finest in our stunr in Punta de Mita. Nestled in the gated community of Real del Mar, Hamacas is the ultimate tropical oasis.

With breathtaking ocean views and exquisite architecture, this 4villa is perfect for families, couples, or a group of friends seeking Lounge in the expansive outdoor living area, complete with comfo sparkling pool, surrounded by lush palm trees and vibrant tropica

Indoors, you'll find elegant furnishings, high-end appliances, and need for a comfortable stay. Each bedroom boasts its own en-sui spacious master suite features a private balcony with panoramic Ocean.



Welcome to Casa de las Hamacas: Your Dream Vacation Home in Punta de Mita!

TEXPERIENCE tropical luxury in this stunning oceanfront villa

View of the luxurious Casa de las Hamacas with its lush gardens and private pool <u>area</u>

Step into paradise at Casa de las Hamacas, a breathtaking oceanfront vacation home located in the exclusive Punta de Mita, Mexico. This luxurious villa offers everything yo need for an unforgettable vacation experience, surrounded by vibrant gardens and spectacular ocean views.

Luxurious Living

Casa de las Hamacas is designed with your comfort in mind, featuring stylish interiors spacious living areas, and lavish accommodations for up to 10 guests. With five beaut decorated bedrooms, each with an en-suite bathroom, you'll have plenty of space to r and unwind after a day spent exploring the area.

RSA Script



Here's a Google Ads script to create a Google Spreadsheet with RSA ads that have less than X headlines or Y descriptions. Please make sure you've enabled the Google Sheets API in your Google Ads Scripts by following the instructions in this guide:

https://developers.google.com/google-ads/scripts/docs/features/google-sheets

```
Copy code
javascript
function main() {
  // Input Settings
  var SPREADSHEET_URL = ''; // If blank, create a new spreadsheet. If not bl
  var SHEET_NAME = 'RSA Ads';
  var INCLUDE_PAUSED = false; // Change to true if you want to include pause
  var MAX_HEADLINES = 15;
  var MAX_DESCRIPTIONS = 4;
  // Spreadsheet setup
  var spreadsheet;
  if (SPREADSHEET_URL === '') {
    spreadsheet = SpreadsheetApp.create('RSA Ads Spreadsheet');
    SPREADSHEET_URL = spreadsheet.getUrl();
  } else {
```



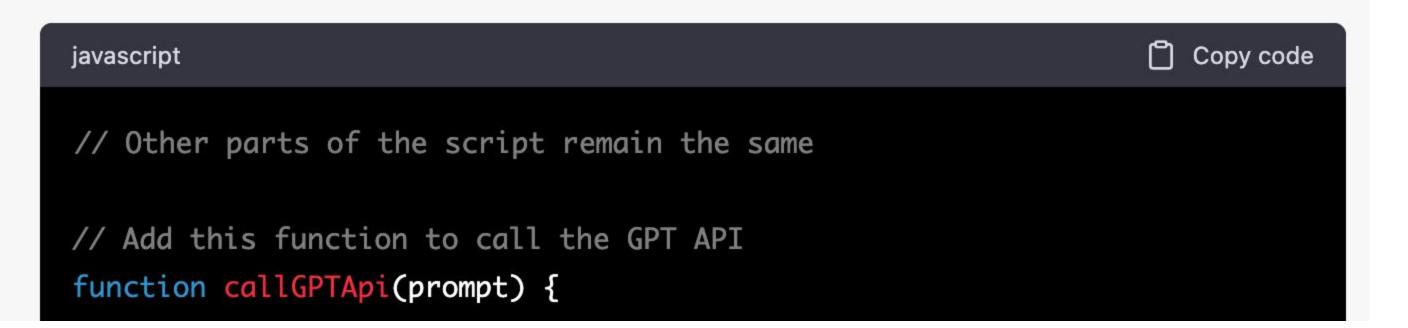
in that same script, if the RSA has fewer than 15 headlines, could you use the GPT API to suggest new headlines and add those in the same spreadsheet?



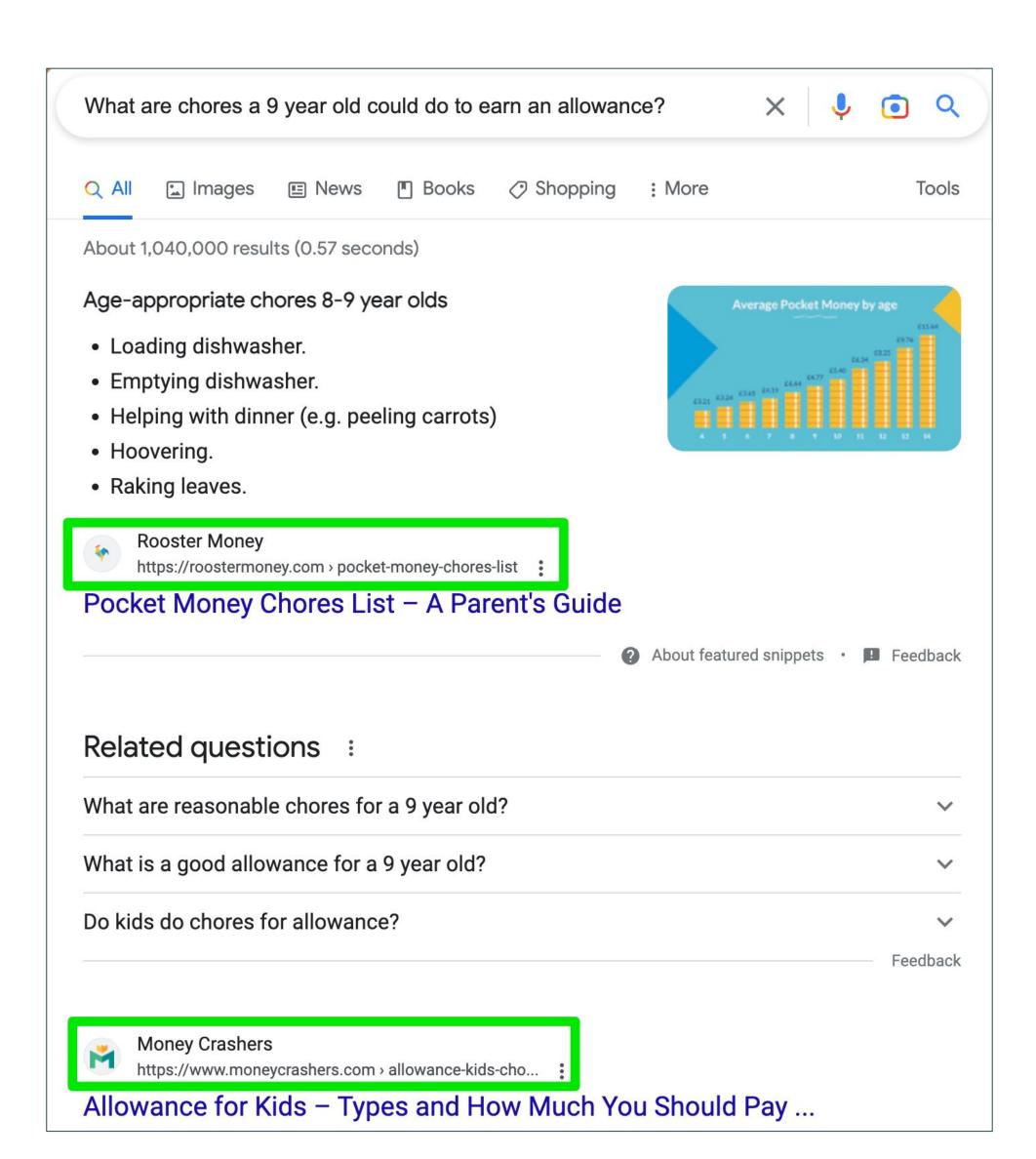
To integrate GPT API in the Google Ads script, you'll first need to deploy a simple proxy using Google Cloud Functions or another serverless service to call the OpenAI API. Due to restrictions in Google Ads scripts, you cannot directly call external APIs with authentication headers.

Once you have set up a serverless function, you can use the URL in your Google Ads script to make requests.

Here's the updated script with GPT API integration to suggest new headlines and add them to the spreadsheet:



ChatGPT Looks Like Google Before Ads in 2001





What are chores a 9 year old could do to earn an allowance?



There are many age-appropriate chores that a 9-year-old can do to earn an allowance. Here are some examples:

- 1. Making their bed every morning
- 2. Putting away their clean laundry
- 3. Sweeping or vacuuming the floor
- 4. Dusting the furniture
- 5. Setting the table for meals
- 6. Washing dishes or loading the dishwasher
- 7. Taking out the garbage or recycling
- 8. Watering plants or helping with yard work
- 9. Feeding and caring for pets
- 10. Helping with grocery shopping by making a list or carrying items

Of course, the specific chores will depend on the individual child's abilities and interests, as well as the family's needs and expectations. It's important to communicate clearly with your child about what is expected of them and how much they will earn for completing each chore. This will help them develop a sense of responsibility and work ethic, as well as an understanding of how money is earned and managed.

Different Queries, Different Need for Ads

Level of commercial intent

Low

What is 1cm in inches

→ no ads

Ads can't add much value to this factual answer which gives little indication about who the user is or commercial intents

Mid

BMI calculator



audience-list member

Someone who searches this may not care to see ads but they may be interested in weight loss which could be a great audience signal

<u>High</u>

hotels in Amsterdam

→ lots of ads

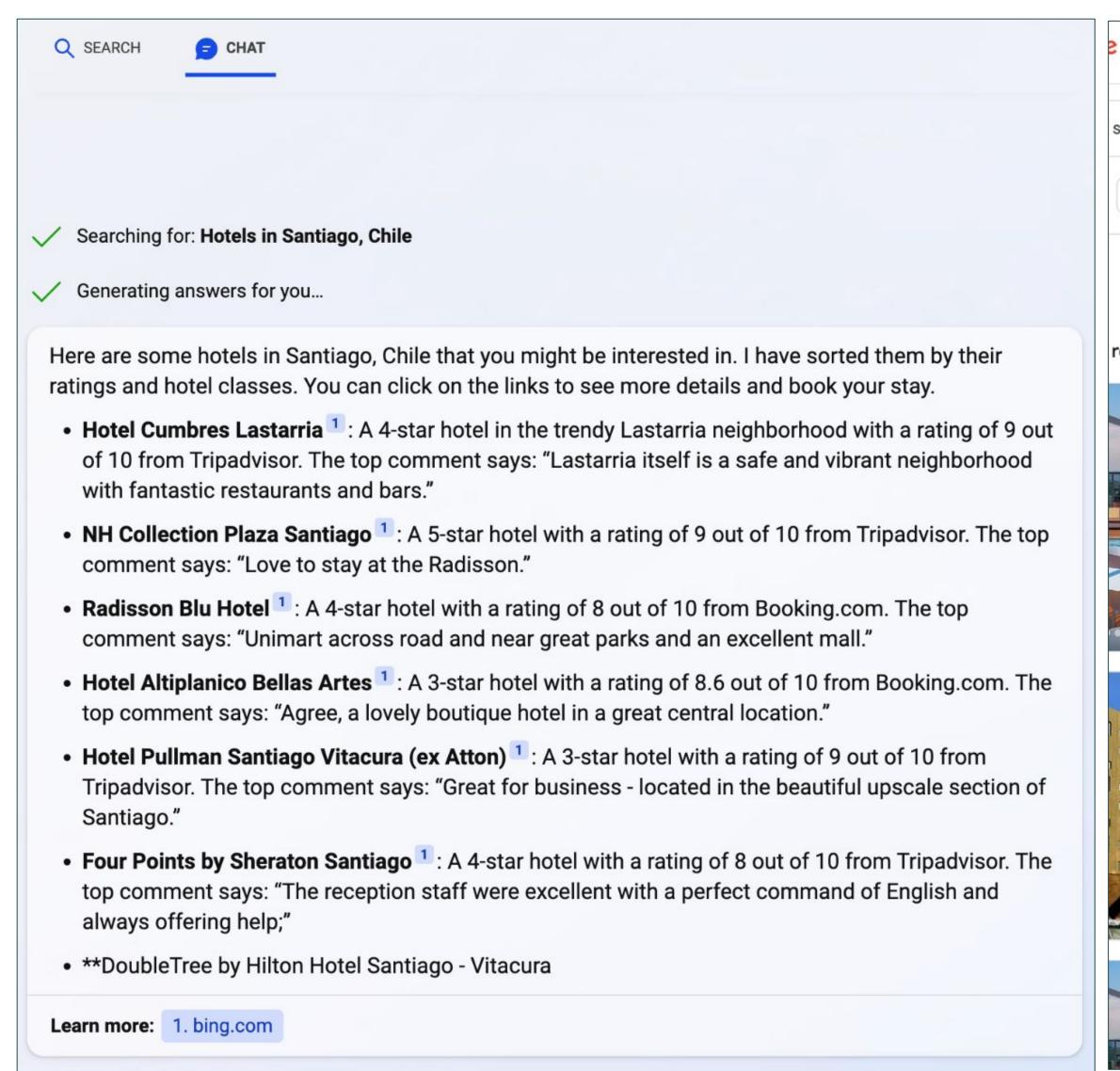
Ads can help the user choose a hotel they like

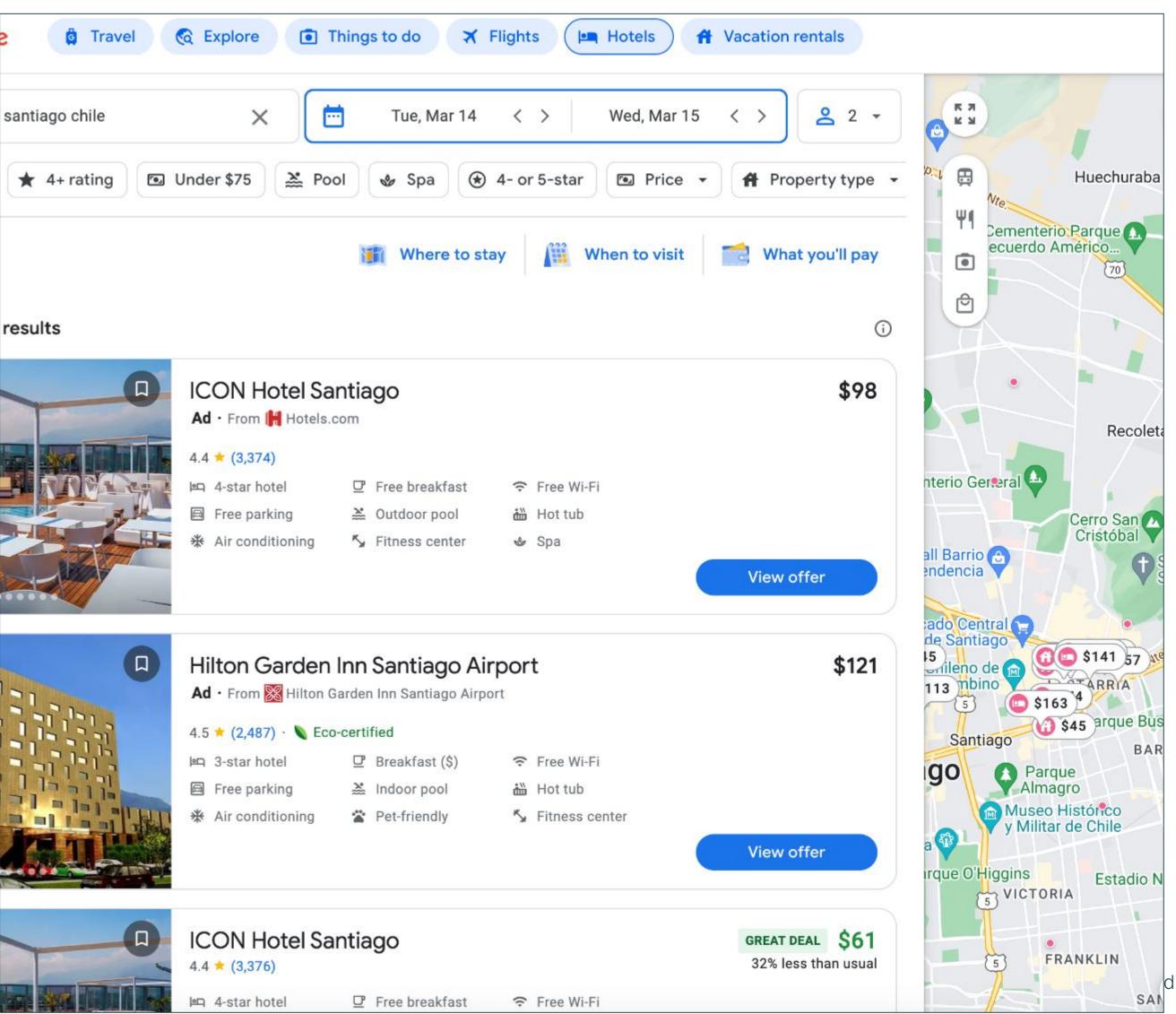
New skill you need: Prompt Design



Source: Tweeted by Andrej Karpathy on June 18, 2020

Which result do you prefer?





Reasonable Expectations

GPT output needs fact checking and human review

Think of it as a research assistant intern

- good at summarizing complex data
- good for ideation

The things we don't like about GPT are the same qualities we dislike in humans (we trained it!)

Top P

An alternative to temperature.

How confident to be in the next word selected.

→ e.g. 0.3 means it will only consider the top 30% of probable next tokens

0 (consider few options) ...

... 1 (consider all options)

Regenerate the response

Temperature and P-level can control how similar new responses will be



I have a Google Ads ad group.

The top search queries matching the ad group are:

- pay to click ads
- ppc management tools
- ppc tools
- pay per click
- automate click with clickseo
- pay per click programs
- pay per click affiliate programs without website
- ppc management
- automated email marketing
- best ppc management tools

Find 5 more keywords for this ad group like this:

- "pay per click software"
- "paid search campaign management"
- "ppc management platform"
- "ppc management tool"
- "ppc reporting software"
- automated ppc
- "ppc ad campaign management software"
- "ppc software"
- "ppc automation"
- ppc automation tools
- "ppc bid management tools"
- "ppc management software"



Here are five more potential keywords for your ad group:

- 1. "Keyword research tools for PPC"
- 2. "Pay-per-click advertising strategies"
- 3. "Cost per click calculator"
- 4. "Conversion tracking for PPC"
- 5. "AdWords campaign optimization"



Here are five additional keywords for your ad group:

- 1. "Click fraud prevention"
- 2. "Keyword research for PPC"
- 3. "Ad copy optimization for PPC"
- 4. "PPC competitor analysis"
- 5. "Conversion tracking for PPC"