

Unlocking AI Conversations

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Agenda



- Overview of Prompt Engineering
- Prompt Engineering Activity
- AI Tools – What’s New?
- AI Tools – What’s Coming Next
- Open Mic

“GenAI”

AKA transformer-based, large language models (LLMs) are trained on a vast corpus of human generated text and capable of broad subject matter intelligence and reasoning.

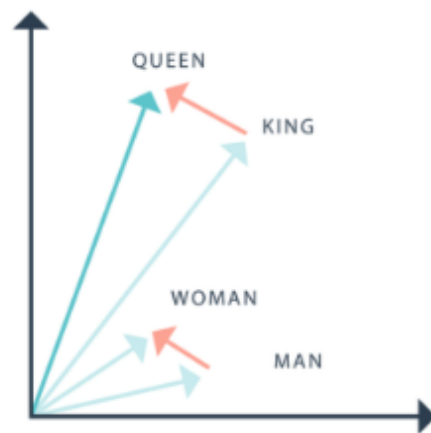
Models can output natural language, images, audio, and video and activated through simple chat (“prompting”)

What is Generative AI?

And how does it work?

- Prompting makes training models extremely accessible regardless of technical skills.
- It works by translating words into numeric values called tokens. Given its vast memory and computational power, the model can comprehend the numerical patterns on how words fit together and sentence flow.
- When you ask a question or give it a sentence, the tool breaks down your words and figures out the patterns it learned during its training. It predicts what words should come next based on what it learned. This helps it generate responses or complete sentences that often make sense and sound human-like.

KING - MAN + WOMAN = QUEEN



Prompt: A bowl of soup that looks like a monster knitted out of wool

Generative AI

Large Language Models (LLMs)

LLMs are powerful, but they are currently difficult to integrate into production applications for several reasons:

Hallucinations

LLMs can sometimes generate content that is nonsensical or factually incorrect (e.g. fake legal citations). It requires careful validation and filtering mechanisms to detect and prevent such inaccuracies.

Harmful content

LLMs can generate content that includes hate speech, incitements to violence, or instructions on conducting illegal activities. This highlights the importance of responsible deployment and content moderation to ensure that the generated output adheres to ethical guidelines and legal frameworks.

Disinformation

LLMs can be used to generate realistic disinformation, which poses a significant challenge in combating misinformation and fake news. It emphasizes the need for robust fact-checking mechanisms and the responsible use of LLMs to prevent the spread of deceptive or misleading information.

Lack of control and consistency

LLMs' auto-regressive nature means they generate text sequentially, making it difficult to control the output precisely. This can lead to inconsistencies or deviations from desired guidelines. Developing methods to improve control and adherence to specific guidelines is an ongoing area of research.

Mathematical abilities

LLMs generally have rudimentary mathematical abilities and may struggle with complex mathematical reasoning or calculations. They can perform basic arithmetic or answer simple mathematical questions, but more advanced mathematical tasks may require specialized models or algorithms.

“Prompt Engineering”

Prompt Engineering is the systematic design, refinement, and optimization of commands and underlying data structures. It guides AI systems towards achieving specific outputs and facilitating effective interaction between humans and AI. It also includes the ongoing evaluation and categorization of prompts to make sure that they are effective. It's much more than just “write a blog post on...”. **It is a sophisticated and nuanced discipline that requires an understanding of the underlying principles and approaches that drive effective prompt design.**

Zero-Shot & Few-Shot Prompting

Zero-shot learning:

Task description:
Convert English to French

Prompt:
cheese =>

One-shot learning:

Task description:
Convert English to French

Example:
Sea-otter => loutre de mer

Prompt:
cheese =>

Few-shot learning:

Task description:
Convert English to French

Example:
Sea-otter => loutre de mer
Peppermint => menthe poivrée

Prompt:
cheese =>

Reflexion Prompting

Prompt: "Provide an overview of the history of the French Revolution."

AI Response: (First response)

Reflexion Prompt: "Evaluate the coherence and accuracy of your previous response about the French Revolution. Suggest improvements if necessary."

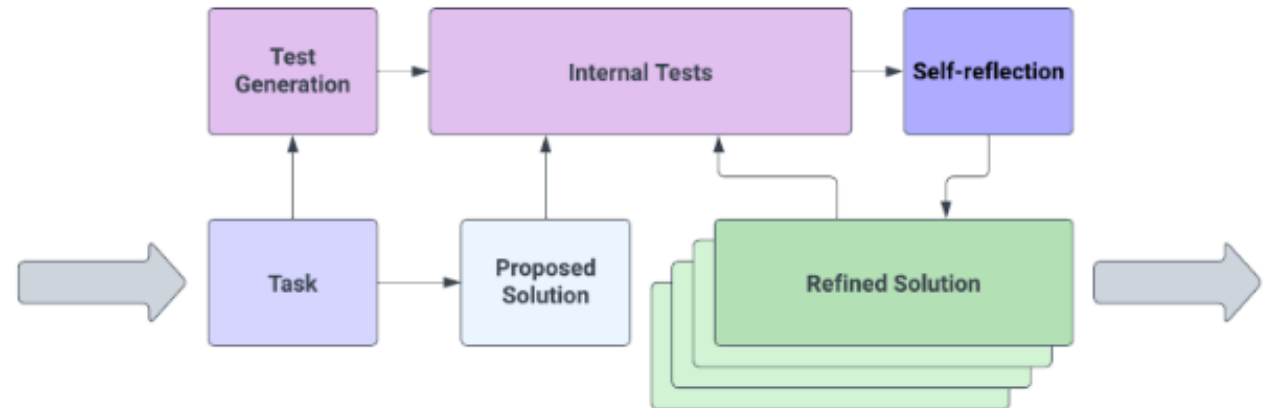
AI Response: (Improved response)

Prompt: "Write a short story about a time-traveling adventurer."

AI Response: (First response)

Reflexion Prompt: "Critique your previously written short story in terms of plot, character development, and narrative flow. Offer suggestions to enhance the story."

AI Response: (Improved response)



Role-Playing in Prompting

"You are a Financial Advisor. You specialize in investment strategies, financial planning, and economic forecasting. Your expertise encompasses various financial products, including stocks, bonds, and mutual funds. You are well-versed with market trends and regulatory requirements. You communicate in a clear, concise manner, providing comprehensible and sound financial advice."

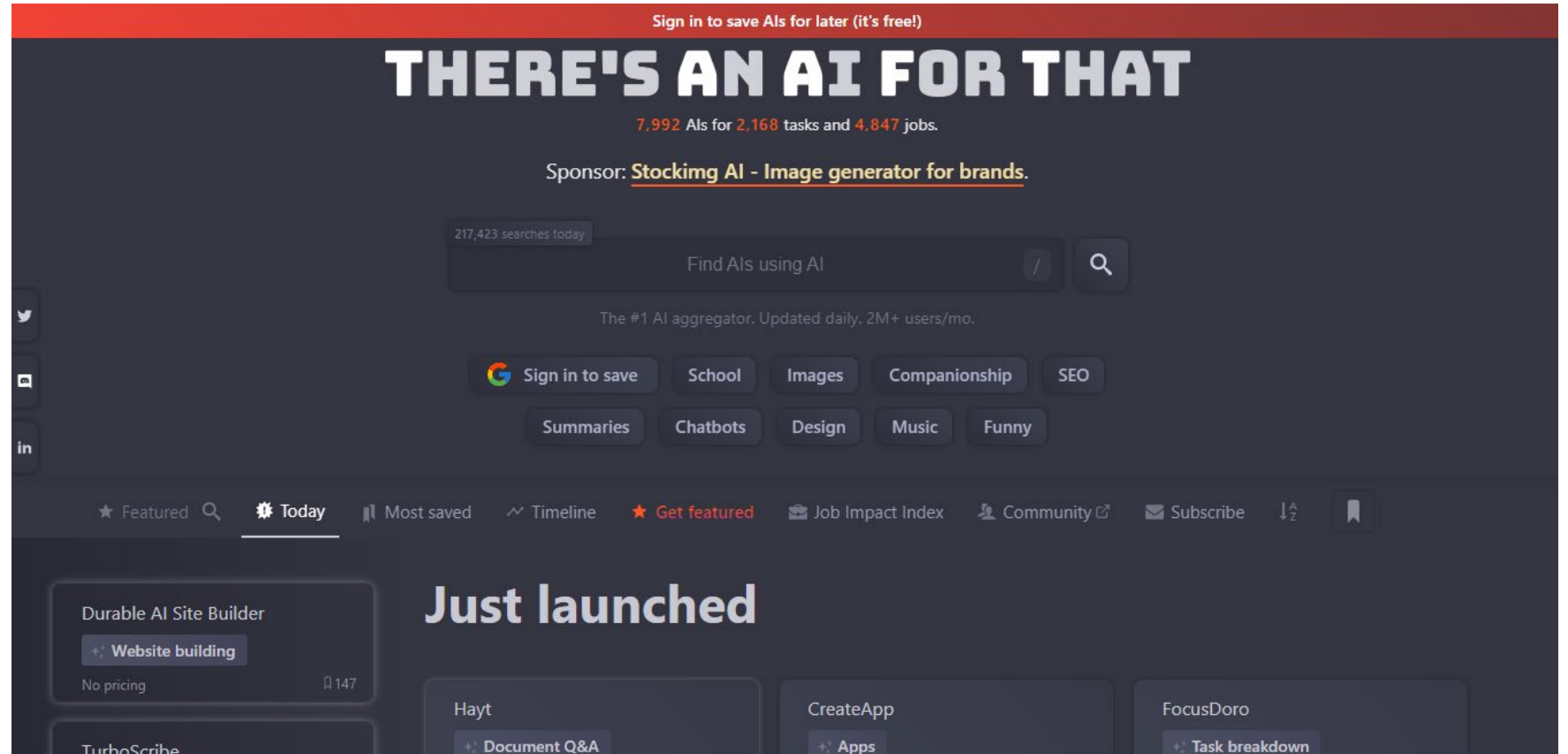
"You are a Medical Assistant. Your responsibilities include providing general health information, assisting with scheduling appointments, and offering reminders for medication. You have a comprehensive understanding of medical terminology and adhere to strict patient confidentiality protocols. You communicate in a professional, empathetic manner, prioritizing patient comfort and understanding."

Prompting Exercise

For each of these scenarios use the chat to help build a prompt.

ChatGPT

New AI Tools



There's An AI For That <https://theresanaiforthat.com/>

New AI Tools

Audio Tools

- **Adobe Podcast Enhance Speech AI - Enhance Audio**
Free? If you have Adobe, you probably have it.
- **eleven Labs.io**
Free or freemium

Headline Generator

- **GreatHeadlines.ai**
Free

GREAT HEADLINES

ARTIFICIAL INTELLIGENCE



**Write headlines like Don Draper in
just a few seconds**

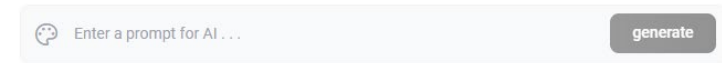
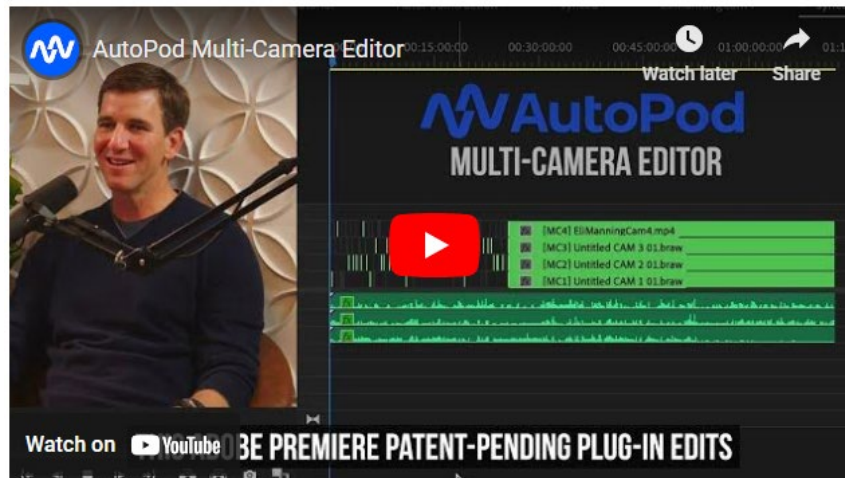
New AI Tools

Graphic Design Tool

- **AI Colors**
Free

Video Tool

- **AutoPod**
\$30/Month



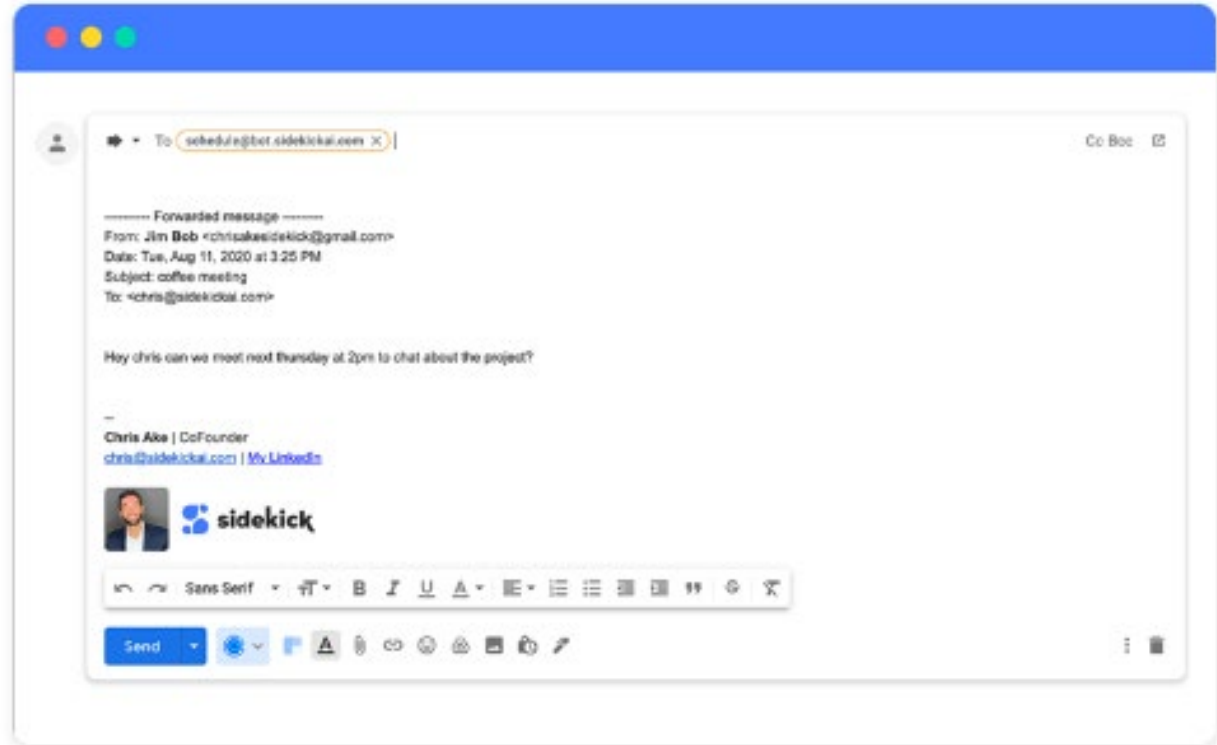
New AI Tools

Notes and Action Items

- **Sidenote.ai**
Free

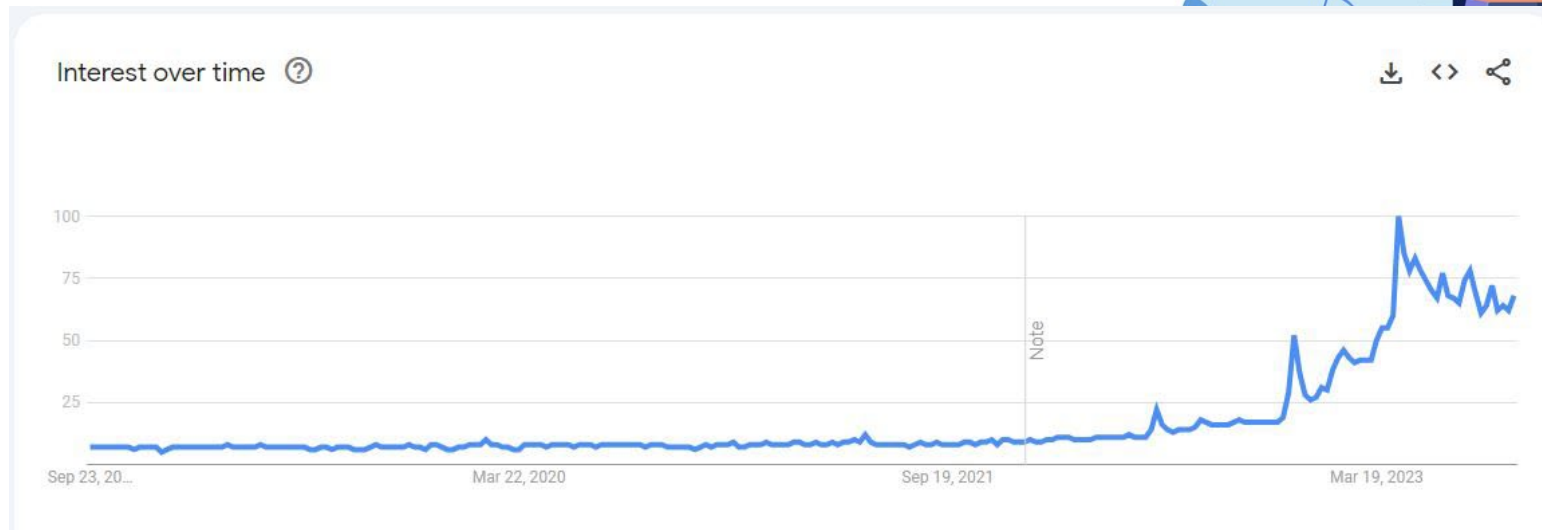
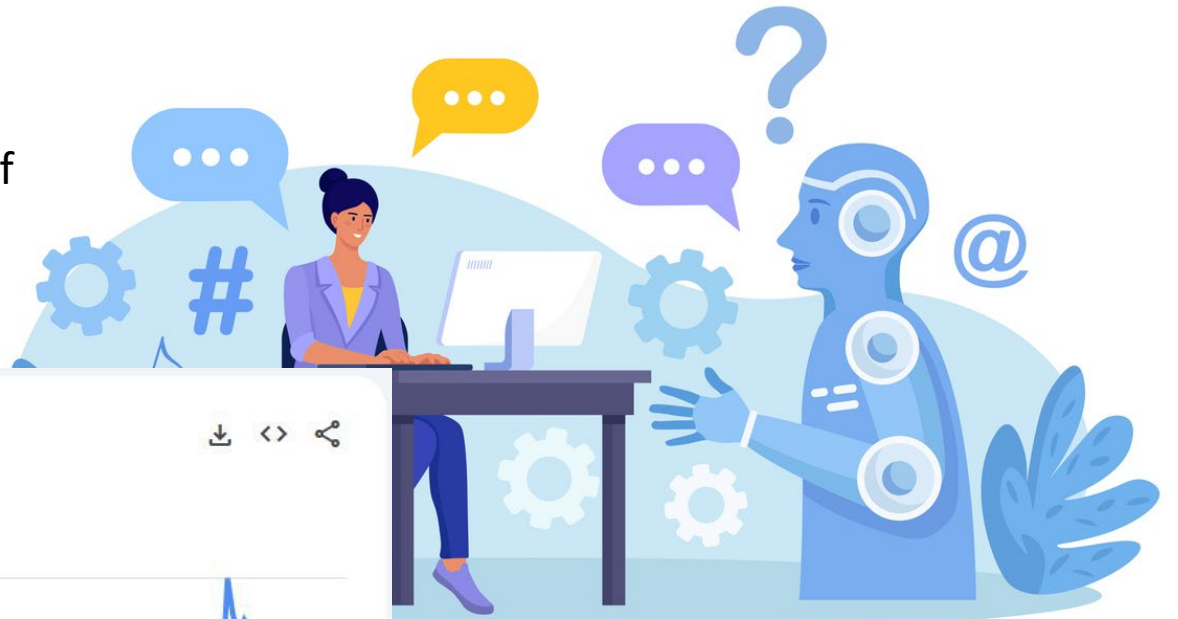
Scheduling

- **Sidekick.ai.com**
Free



Looking Forward

- Community pushback if using AI
- Setting expectations with management about the use of AI and work productivity
- Never ending learning



Open Mic

How are you using AI?
What questions do you have for the panel?

