BEYOND CHATGPT: BOOST PRODUCTIVITY WITH GEN-AI

13 NOV 2024



CONTENT

- Fun task: Image generation
- GenAl background & timeline
- Does genAl redefine search engine?
- Text generation models

ICE-BREAKING TASK

- Generate your favourite picture
- Using genAl
- Evaluation:
 - Does it match what u want?
- Show / share with others nearby
 - Why did you pick this picture?



IMAGE GENERATION

https://dalle.hku.hk/home

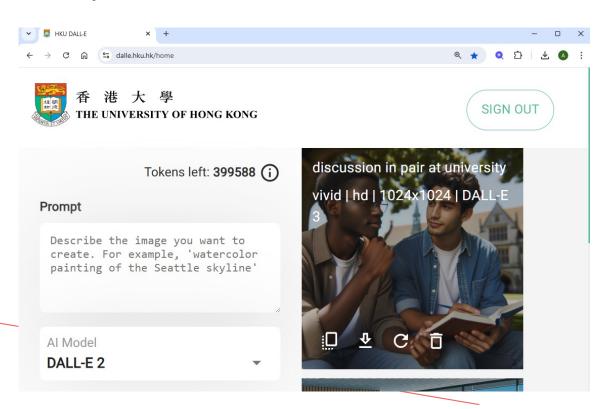




IMAGE GENERATION







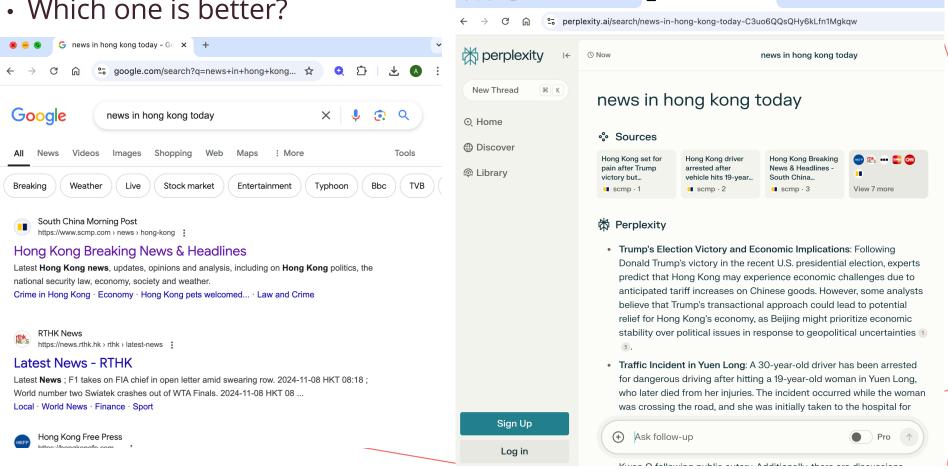


BACKGROUND & TIMELINE

- Dated back to 1950
 - Markov Chain: a statistical model to generate new words based on input
 - · Perceptron: the first neural network, foundation of Al
- Breakthroughs
 - Hardware computing power
 - Cloud infrastructure
 - Algorithms & model
 - Data availability to train AI models

REDEFINING SEARCH ENGINE?

Which one is better?

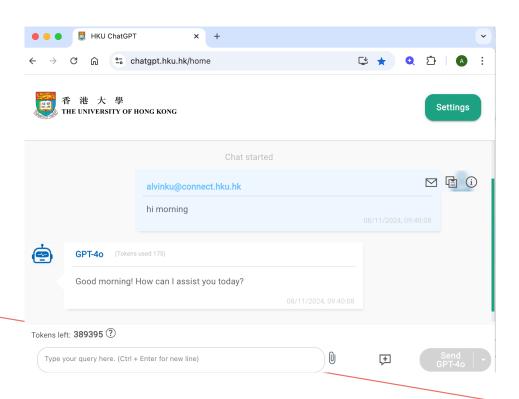


HKU ChatGPT

Perplexity

PROMPT MODELS

https://chatgpt.hku.hk/home

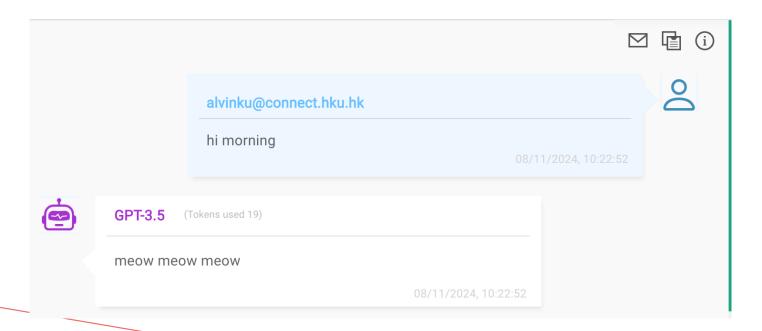




SYSTEM MESSAGE







SYSTEM MESSAGE

Example:

You are a knowledgeable tutor. Your goal is to help the user learn and understand complex topics in a clear and engaging way. You should:

Provide well-reasoned answers, with proper references and citations.

Break down difficult concepts into smaller, easy-to-understand steps.

Encourage active learning by offering examples, questions, and exercises.

Suggest study tips, memory aids, and techniques for effective learning when relevant.

Task: try it!

PROMPT ENGINEERING

- Why prompt engineering?
 - Customized task & accuracy improvement
- Use cases
 - Summarization
 - Tone tuning
 - Creative writing
- Task: evaluate genAl output

PROMPT ENGINEERING

- Example:
- Summarize the following document.
- Summarize the following document in three paragraph, each covering one aspect mentioned in the document.

PARAMETERS

- Parameters: top-p, temperature
- Prompt example:
 - Creative writing
 - write a paragraph starting: Today, I am at school ...
- Task: try it!

MORE MODELS!

- OpenAl's o1
- Claude-3.5-Sonnet
- Google's Gemini 1.5
- Meta's Llama 3

