Basic Knowledge on Natural Language Processing (NLP) Tools



Image generated by DALL-E-2

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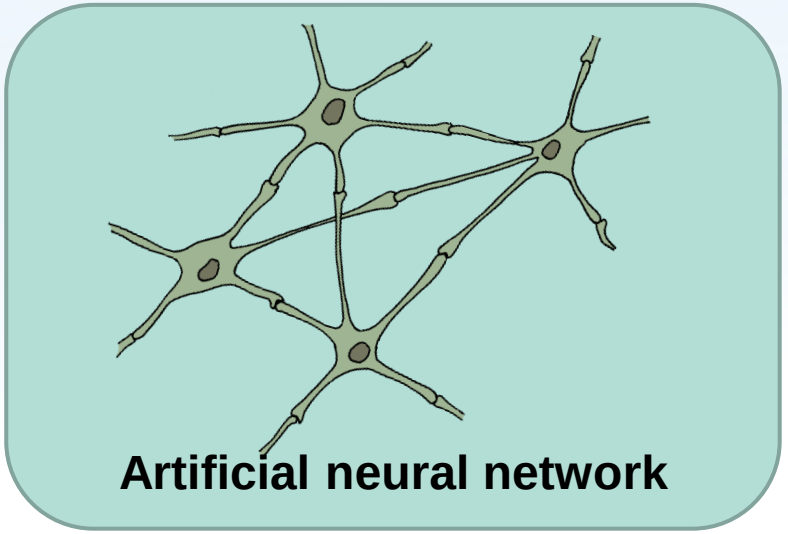
GPT - Generative Pretrained Transformer

Using the Example of ChatGPT

https://chat.openai.com/

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How is ChatGPT trained?



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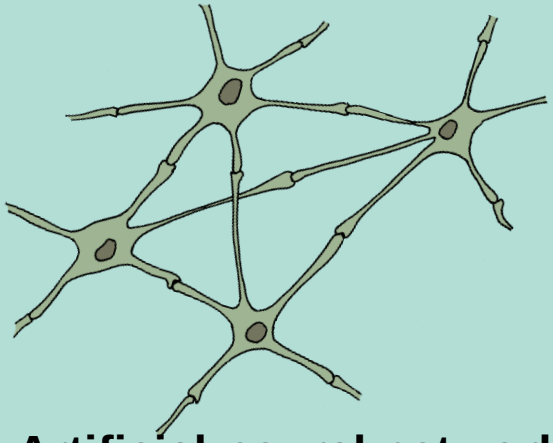
How is ChatGPT trained?

GPT-3.5 / GPT-4.0 (paid version)
Generative Pre-trained Transformer



texts available
in 2021

Training

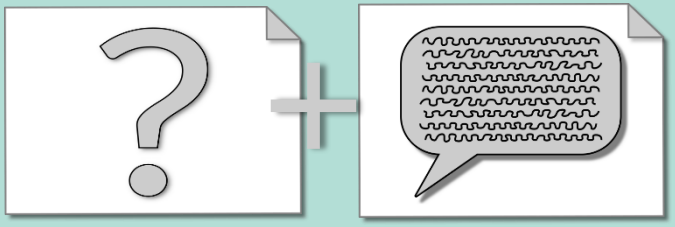


Artificial neural network

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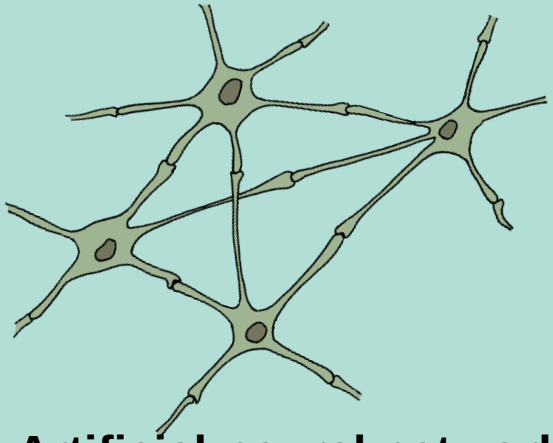
How is ChatGPT trained?

Supervised Learning



Input/output pairs

Training

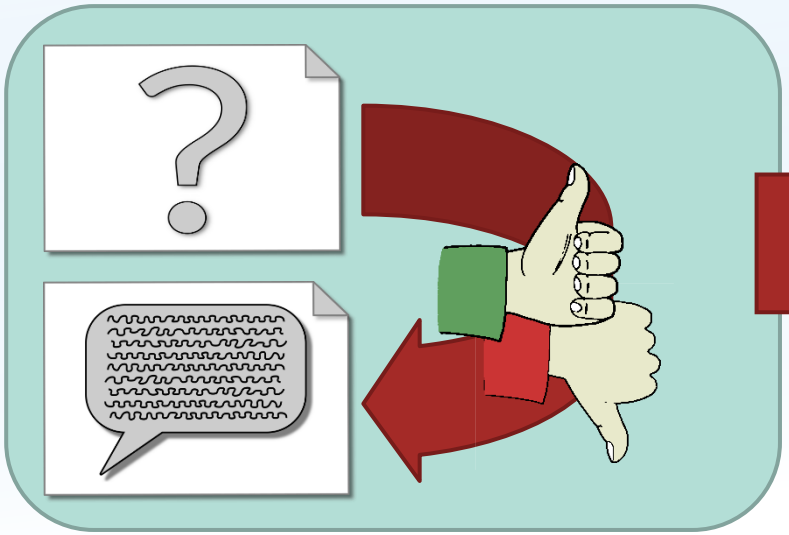


Artificial neural network

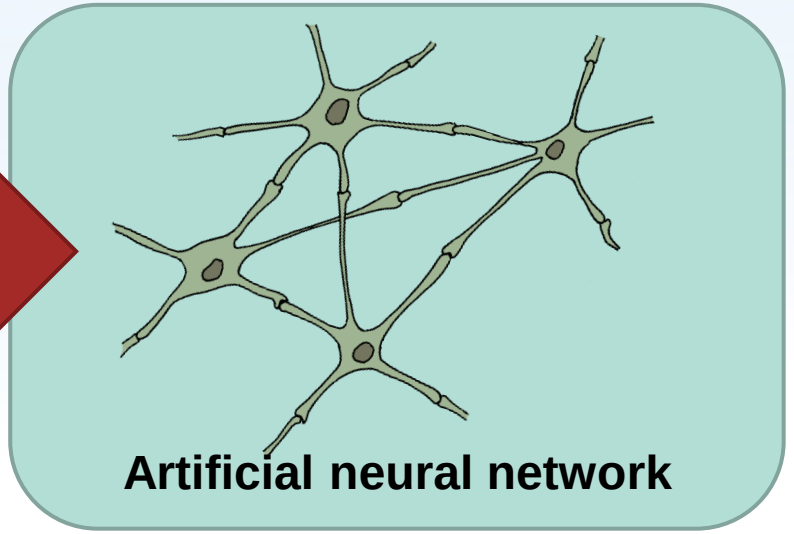
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How is ChatGPT trained?

Reinforcement Learning



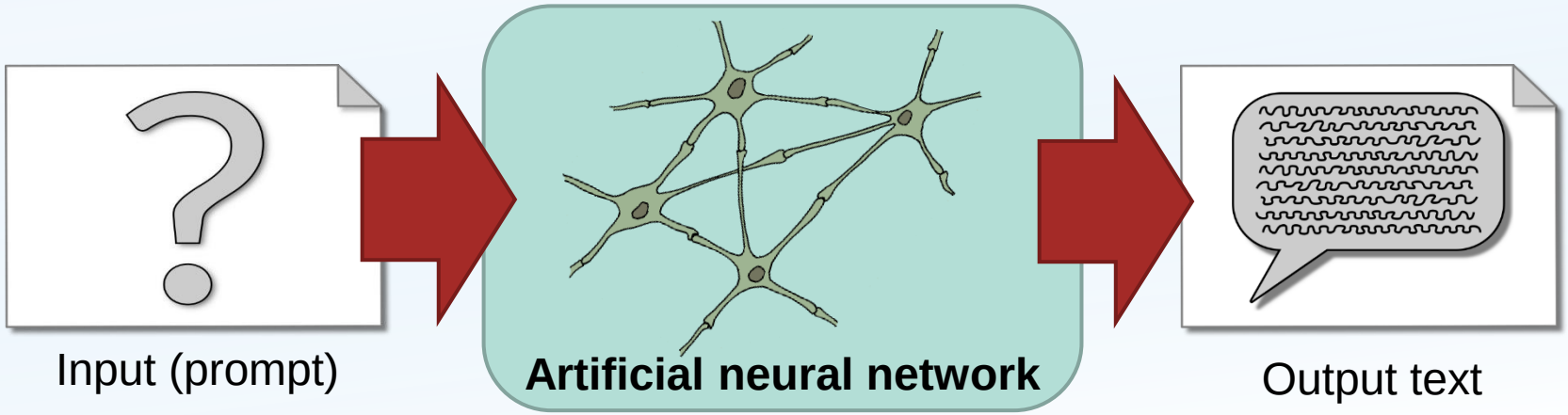
Training



Artificial neural network

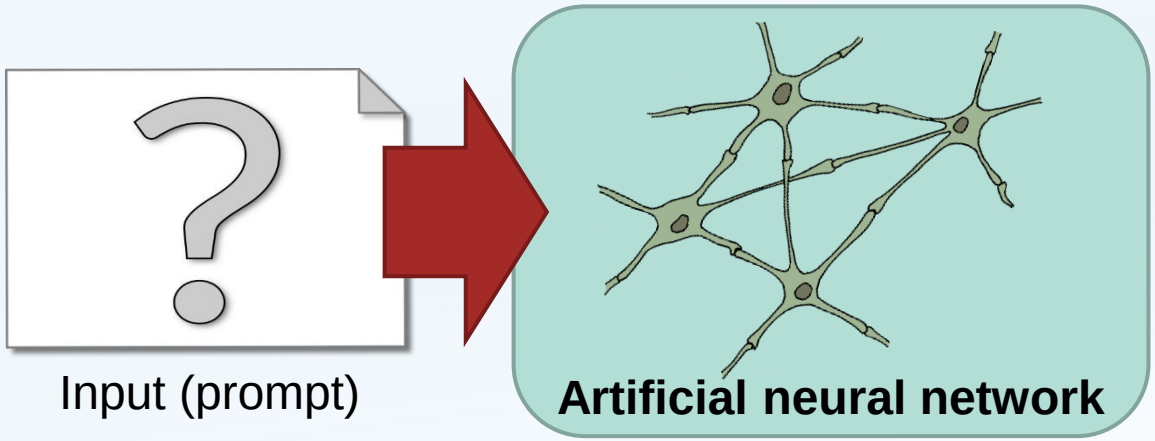
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How does ChatGPT produce text?



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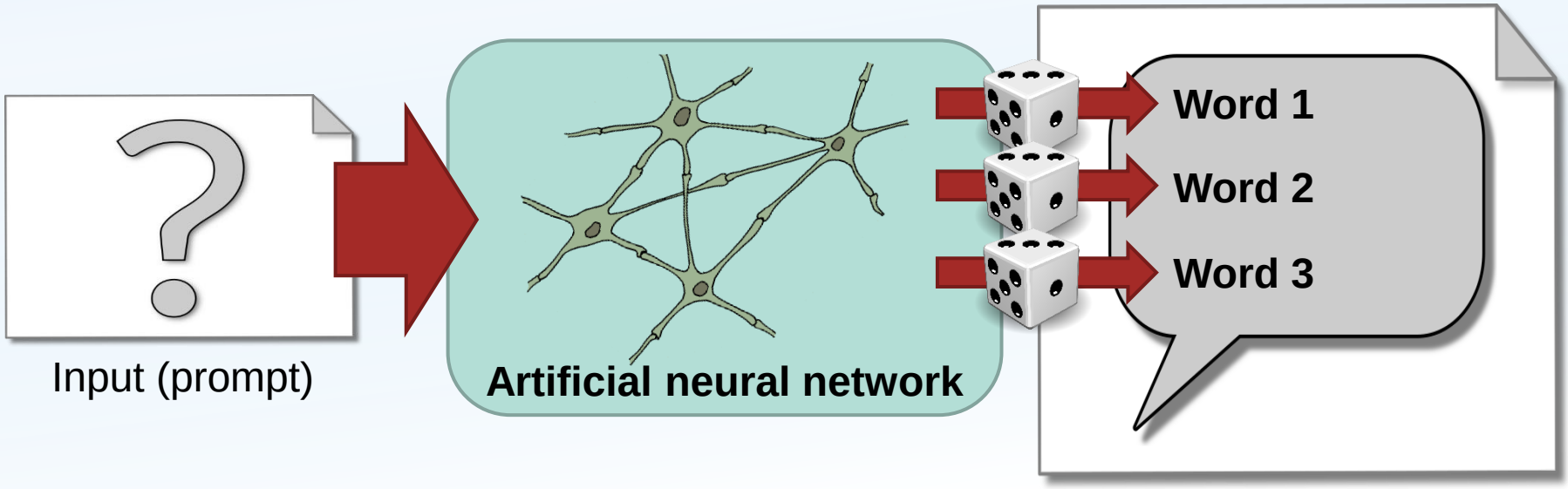
How does ChatGPT produce text?





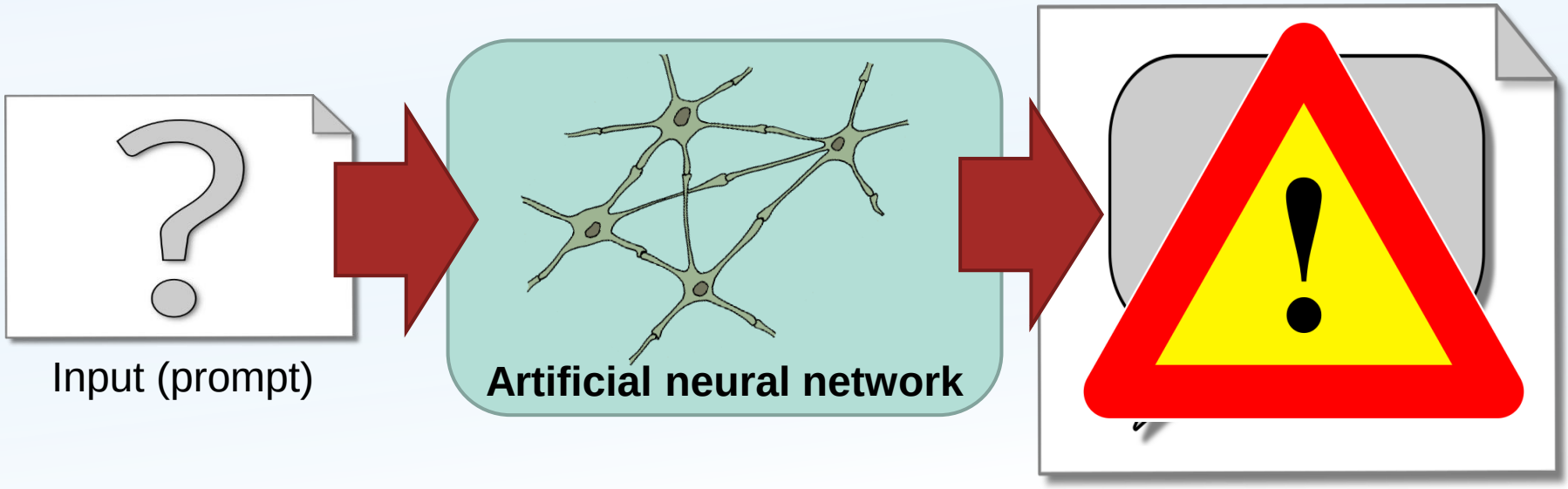
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How does ChatGPT produce text?



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When does ChatGPT fail?



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When does ChatGPT fail?



- May provide false information (hallucinations)
- Uses only data until 2021
- Gives no information about sources of the information
- If sources and authors are requested, they are completely fictitious
- Authorship of the text is unclear
- Is subject to algorithmic/training biases

AI –Tools for Productivity

- https://www.perplexity.ai/ summarizing, and brainstorming ideas
- https://elicit.org/
  https://www.researchrabbit.ai/
  for enhanced lliterature review by providing interactive summaries of key information about those papers in an interactive table
- https://chat.openai.com/chat for brainstorming and texting
- https://www.deepl.com/translate for translations
- https://www.deepl.com/write
  https://quillbot.com for optimizing text
- https://openai.com/dall-e-2/ and https://stablediffusionweb.com/
  for generating images
- https://www.zerogpt.com/, https://platform.openai.com/ai-text-classifier,
  https://contentatscale.ai/ai-content-detector/
  for detecting AI-generated text.
- https://github.com/features/copilot for programming



Dall-e-2: a medieval oil painting of a female humanoid robot in a white lab coat writing with a feather on a parchment

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9 Essential ChatGPT Prompts to Boost Your Productivity

1 Learn any complex topic in only a few minutes

Prompt:
Explain [insert topic] in simple and easy terms that any beginner can understan

2 Get ChatGPT to write in your style

Prompt:
Analyze the writing style from the text below and write a 200 word piece on [insert topic].

3 Train ChatGPT to generate prompts for you

Prompt:
You are an AI designed to help [insert profession]. Generate a list of the 10 best prompts for yourself. The prompts should be about [insert topic].

4 Ask ChatGPT to help you become better at using ChatGPT

Prompt:
Create a beginner's guide to using ChatGPT. Topics should include prompts, priming, and personas. Include examples where necessary.

5 Ask ChatGPT for solutions to a problem

Prompt:
Act as an expert career coach. I [explain problem]. Give me a list of 5 solutions that could potentially fix this problem.

6 Get ChatGPT to help you with hiring

Prompt:
I am looking to hire [insert job]. Give me a list of 10 online communities and job boards where I can source candidates for this job.

7 Eliminate writer's block

Prompt:
I'm writing a blog post about [insert topic]. I can't come up with a catchy title. Give me a list of 5 suggestions for the blog title for this piece.

8 Prepare for a job interview

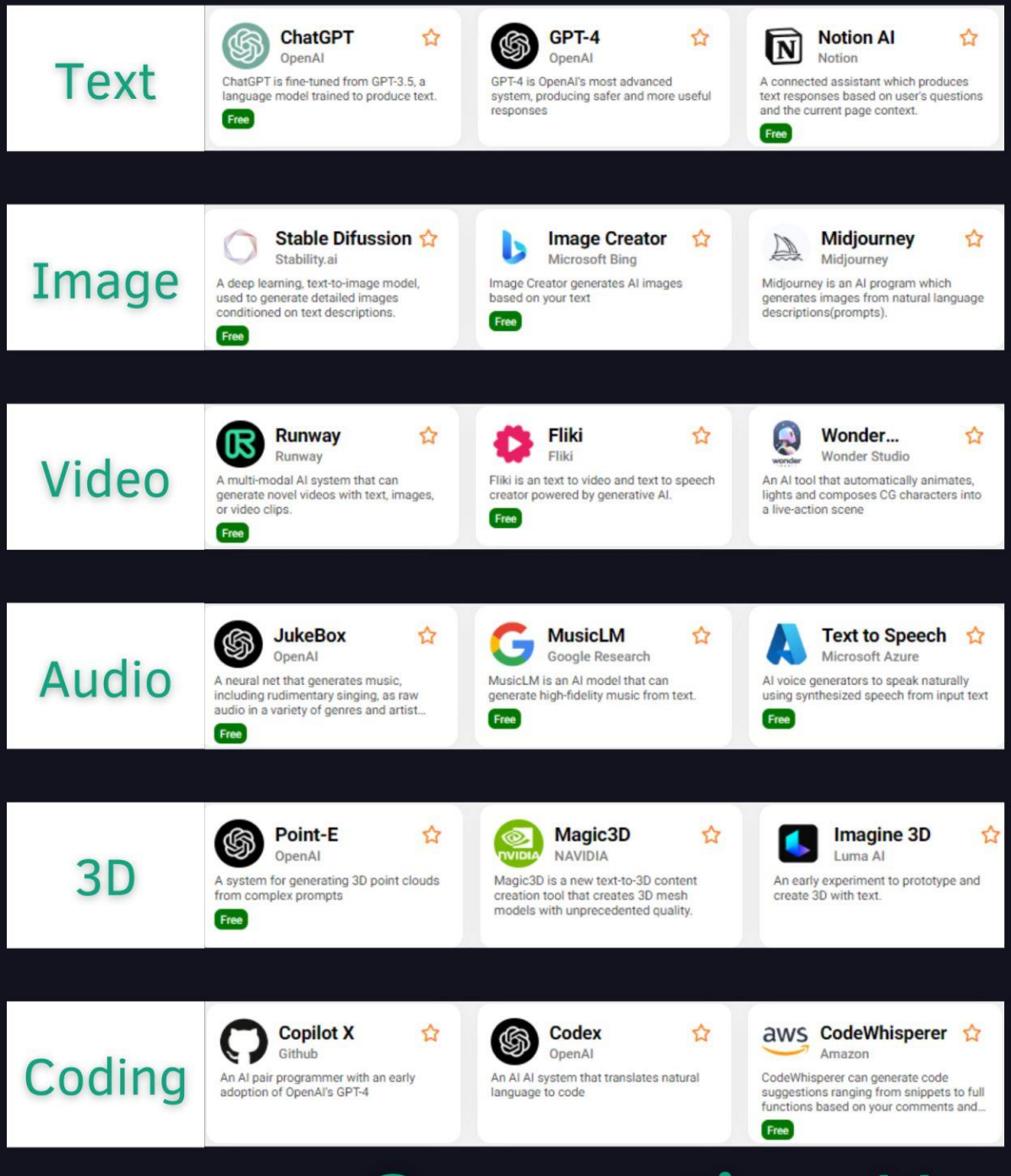
Prompt:
I am interviewing for [enter position]. Can you give me a comprehensive list of questions interviewers will ask me during this interview with answers.

9 Generate new ideas

Prompt:
I want to [insert task or goal]. Generate 10 ideas for [insert task or goal].

Source:
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Steve Nouri

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