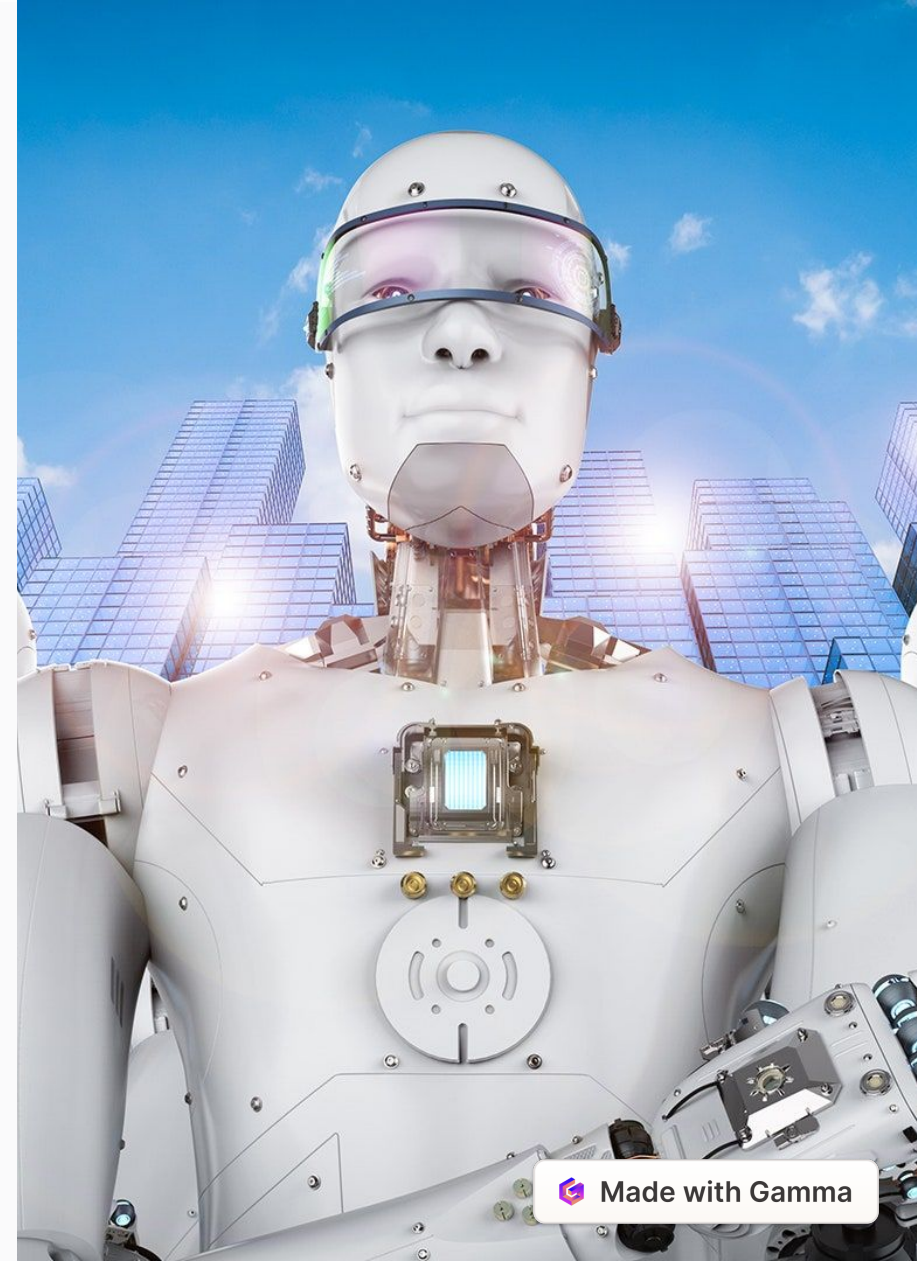# Generative AI: Definitions and Overview

Generative Artificial Intelligence (AI) is a subset of AI that enables machines to create new content such as images, videos, and texts. Language Models (LLMs) are a type of machine learning models trained on large amounts of text data. GPT (Generative Pre-trained Transformer) is a type of LLM developed by OpenAI and widely used for natural language generation tasks.

by Nick Scott

Roles of ChatGPT

1 **Language Teacher**

Use ChatGPT to assist Spanish speakers to learn English, providing meaning explanations and practice exercises.

2 **Editing Translator**

Use ChatGPT to rewrite academic articles in easy-to-understand language and translate into other languages for better impact.

3 **Risk Assessor**

ChatGPT can help evaluate potential risks regarding a research study, taking ethical considerations into account.

4 **Critical Friend**

Use ChatGPT to test the validity of arguments regarding generative AI's impact on science communication.

ChatGPT Prompt Tips

Role-Based Prompts

Assign ChatGPT a role, such as a language teacher or personal motivator, to contextualize responses and increase relevance.
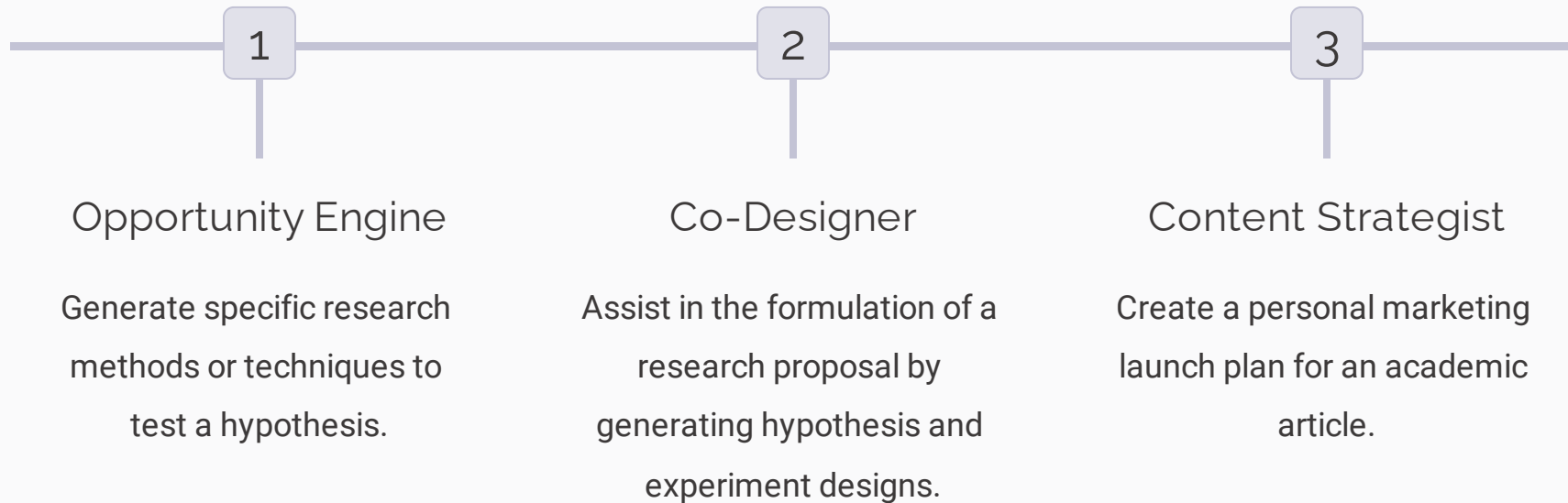
Conversational Prompts

Engage with ChatGPT and adjust responses by requesting changes, improvements, or clarifications while encouraging polite conversation.

Focused Prompts

Narrow the focus of ChatGPT's responses to support your areas of expertise, such as scientific publishing or risk assessment.

Use Cases of ChatGPT

1

Opportunity Engine

Generate specific research methods or techniques to test a hypothesis.

2

Co-Designer

Assist in the formulation of a research proposal by generating hypothesis and experiment designs.

3

Content Strategist

Create a personal marketing launch plan for an academic article.

Generative AI Concerns

Bias in Outputted Information

Generative AI models could create outputs that include biases present in the training dataset.

Credibility and Reputational Risk

Disseminated outputs from generative AI might be fake or misleading, which could damage reputation and public trust.
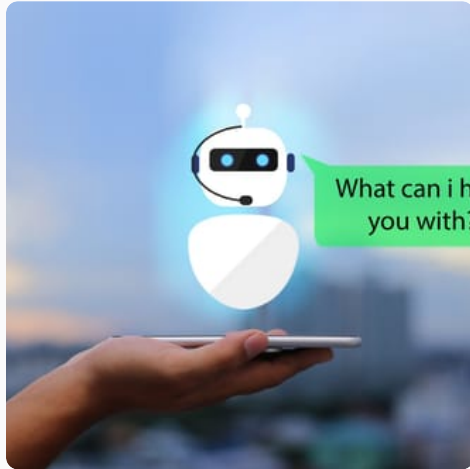
Data Privacy

Inputted data in generative AI models could be used for malicious purposes or be accessed by unauthorized parties.
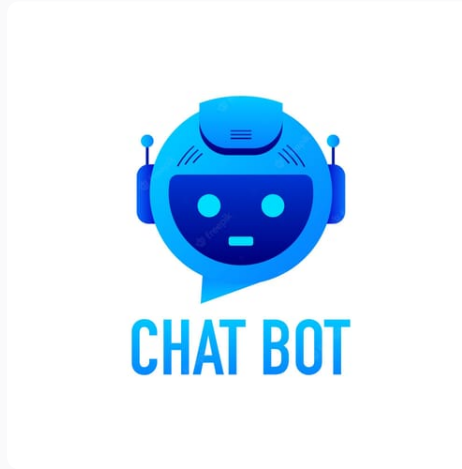
Misuse for Misinformation and Disinformation

Generative AI could be used to create fake news or content for malicious objectives.
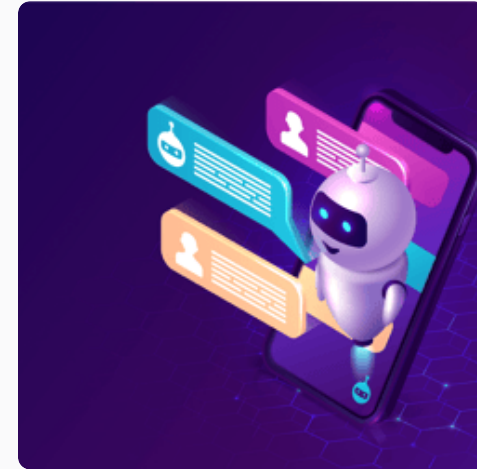
ChatGPT Limitations

2021 Data Cut-Off

ChatGPT is only trained on data until 2021, so may not be familiarised with recent developments.

No Internet Access

ChatGPT is constrained by the availability of internet access.

Eager to Please and makes stuff up

ChatGPT might make up information if it doesn't know the answer, leading to inaccurate or misleading outputs.

Generative AI Tools

AI chatbot	Bing AI
ChatGPT Plugins	Scholarly
Copywriting	Jasper.AI
AI chatbot	ChatGPT

Expert in Generative AI

Future

- Generative AI will move from behind the scenes to the front line.

- Generative AI will make voice assistants and voice search more intuitive.

- Generative AI will enhance personalized advertising.

Impact

- Generative AI may provide new opportunities for scientific discoveries.

- Jobs requiring AI knowledge will continue to expand.

- Generative AI may open new options for businesses, such as customized marketing and personalization.

Advice

- Make sure to always validate the outputs of the generative AI tools you use.

- Assess the potential ethical implications of using generative AI in decision-making.

- Stay up-to-date with the latest developments and news in generative AI to avoid misunderstandings.