

INTRODUCTION TO GENERATIVE AI

Center for the Advancement of Teaching & Learning

Fall 2023

LEARNING OUTCOMES

After engaging with this presentation, we hope you can...

- Recognize different types of generative AI tools and understand how this technology is continuously evolving.
- Explain the basics of what generative AI tools like ChatGPT can do, including their strengths and limitations.
- Safely and responsibly use a variety of generative AI tools for personal, research, professional, or educational purposes, whether paid or freely available, especially in a classroom setting.

WHAT IS GENERATIVE AI & WHAT CAN IT DO?



GENERATIVE AI TOOLS

ChatGPT

- Nov. 2022
- Developed by OpenAI
- <https://chat.openai.com/>

Bing AI

- Feb. 2023
- Developed by Microsoft
- <https://www.bing.com>

Google Bard

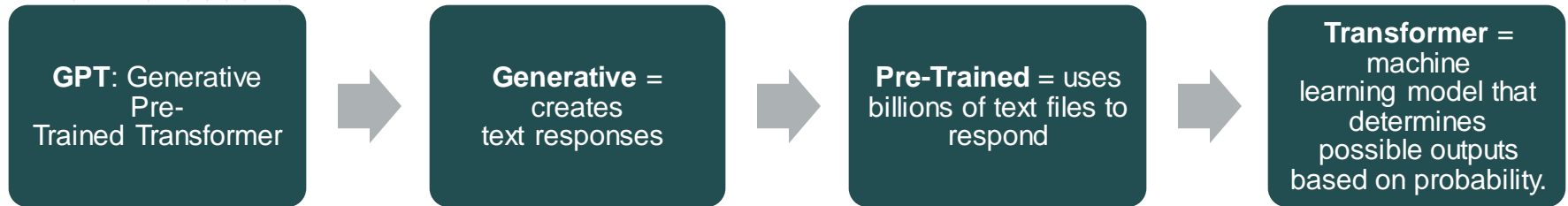
- Mar. 2023
- Developed by Google
- <https://bard.google.com/>

Others

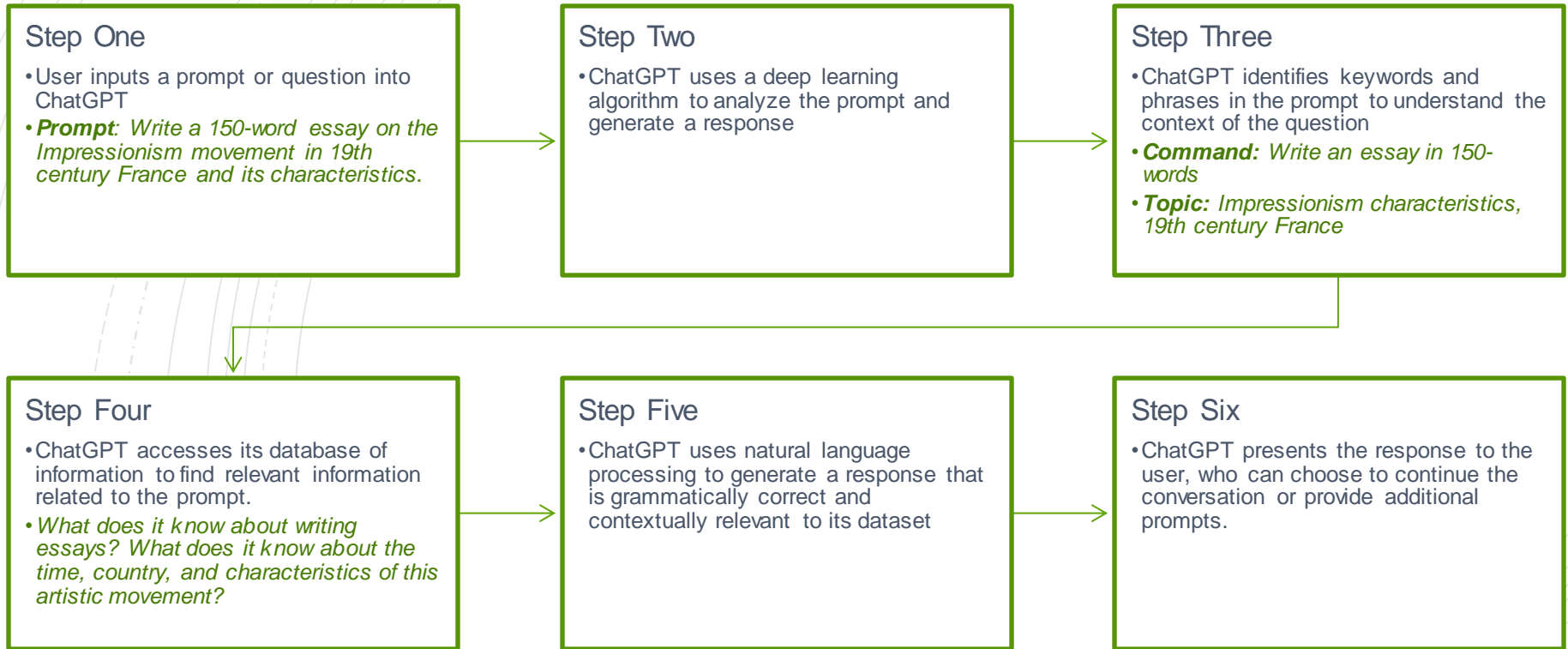
- Notion, Jasper, DALL-E, and many more.

HOW DOES GENERATIVE AI WORK?

- **Generative AI (Gen AI):** Refers to deep-learning models that can generate high-quality text, images, and other content based on the data they are trained on. ([IBM](#))
- **ChatGPT:** Large Language Model-based chatbot



HOW DOES GENERATIVE AI WORK?





Write a 150-word essay on the Impressionism movement in 19th century France and its characteristics.



Impressionism, a revolutionary art movement that emerged in 19th century France, marked a profound shift in the way artists approached their craft. It eschewed the rigid academic traditions of the time, focusing instead on capturing fleeting moments and the play of light on everyday scenes. Impressionist painters such as Claude Monet, Pierre-Auguste Renoir, and Edgar Degas sought to convey the immediate sensory experience of their subjects.

Characterized by several key features, Impressionism embraced vibrant colors, loose brushwork, and a focus on landscapes, urban scenes, and the leisure activities of modern life. These artists often worked en plein air, outdoors, to capture the ever-changing effects of light and atmosphere. They used broken, dappled brushwork to create a sense of movement and a vivid atmosphere. The emphasis on color and light, rather than meticulous detail, set Impressionism apart from the academic art of the era.

Impressionism not only revolutionized the art world but also paved the way for subsequent artistic movements. Its influence can still be seen today, making it a lasting testament to the power of innovation in the world of art.

Continue this conversation

GENERATIVE AI: FUNCTIONS

Language and Content Generation

Can create content of many types, including code

Unique responses

Information Retrieval

Can answer most basic, non-academic questions

"Explain the concept of photosynthesis in a simple and clear manner..."

Language Translation

"Translate this sentence in English into Italian...."

Text Summarization

"Summarize the key plot points in Bradbury's Fahrenheit 451..."

Writing Assistance

"Improve the following sentence for clarity..."

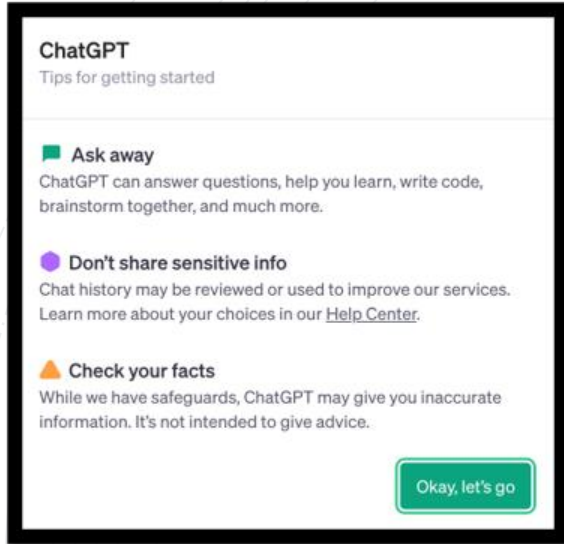
Conversational Assistance

Idea generator

"Generate three ideas for a five-page essay on..."



GENERATIVE AI: LIMITATIONS



- "ChatGPT may produce inaccurate information about people, places, or facts." - *ChatGPT disclaimer*

Incorrect or nonsensical responses

- Produces hallucinations
- Can not verify the accuracy of information (disinformation)

Over reliant on the data it is trained on: information contains biases

Doesn't have genuine comprehension, generates text based on patterns in data

GENERATIVE AI CONSIDERATIONS

Lack of regulations on the technology

- Potential copyright issues & ownership of content

Admin/Educators are still working on developing policies specific to GenAI across the nation

When using GenAI, provide clear, concise directions or instructions

- Rephrase prompts if you aren't getting a desired result

Use any generative AI tool with caution

- Avoid sharing sensitive information
- Get permission before using another's intellectual property for prompts

GENERATIVE AI CONSIDERATIONS

Encourage dialogue surrounding GenAI in the classroom

Provide your students with clear communication and expectations

Consider ethical and legal issues when using AI tools

Recognize that AI detection tools are not perfect

Understand the inevitability of advancing AI technology

EXPLORING GEN AI IN THE CLASSROOM

Bias

- Discriminatory outputs

Environment

- Mining, energy consumption, and waste

Academic Integrity

- Plagiarism, cheating

Copyright

- Infringement on intellectual property rights

Privacy

- Personal data collection

Datafication

- Commodification of personal data

Human Labor

- Job automation and exploitation

Power

- Global power imbalances, structural inequalities

WRAP-UP

Key Take-Aways

- This technology is not going away and will continue to grow in its applications
- It isn't "smart" as it does not have the ability to comprehend its output or data
- It is not the end of traditional writing or skills
- Instead, it may help us determine which skills are unique to humans and which can be automated
- Consider GenAI as a potential brainstorming partner, not a fact finder

What's Next?

- Visit The Cowbell for more CATL resources on Generative AI
- View our next video which delves into assessing the impact of generative AI on your course
- Talk with your colleagues and students, and continue the dialogue around appropriate usage

CITATIONS & RESOURCES, CONT.

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