AI Prompt Design: Brainstorming & Creativity
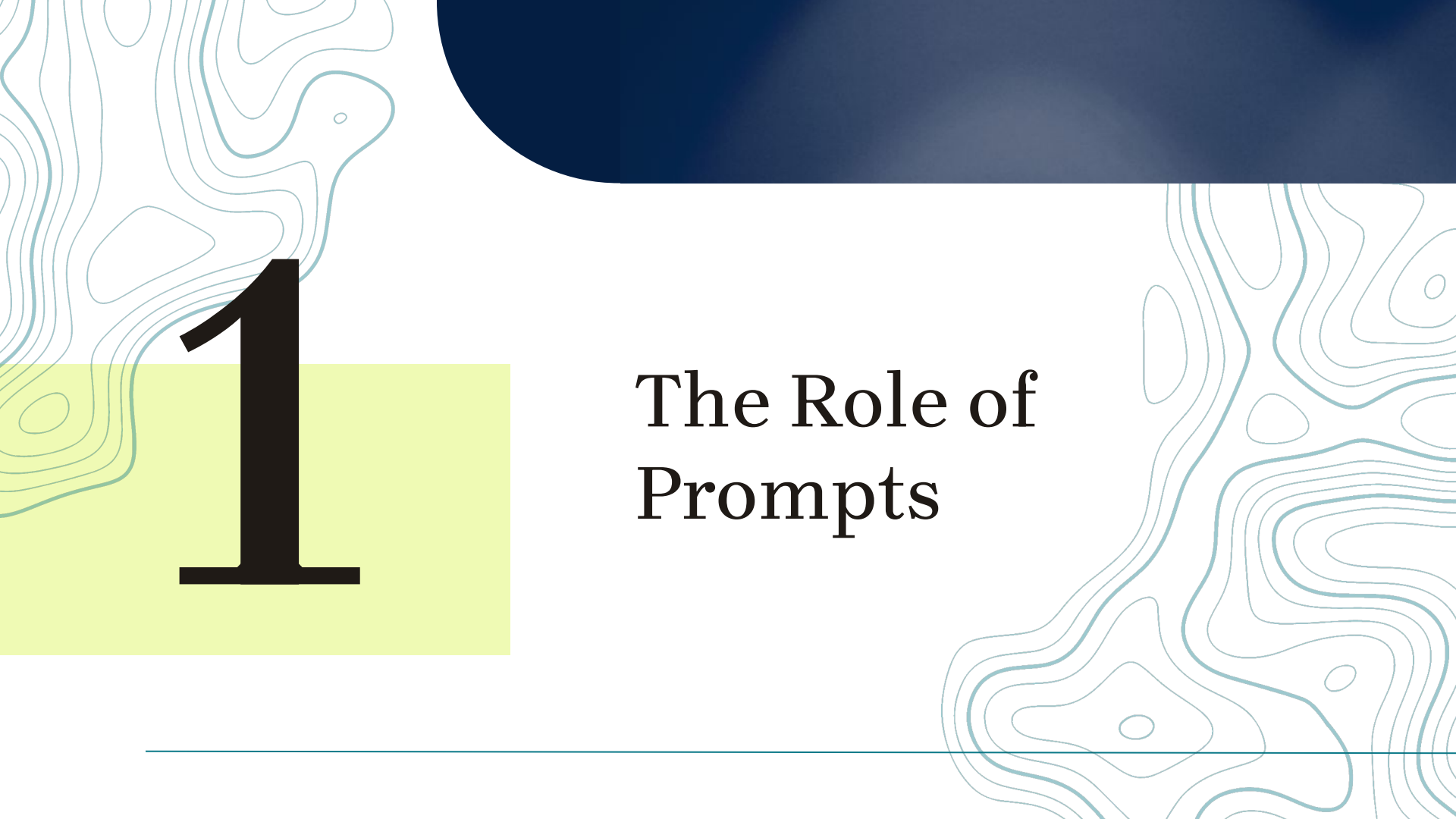
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··· February 9, 2024 ···

Today's Session

1. The Role of Prompts
2. 4 Types of Prompts
3. Participant Practice
4. Questions & Resources

1

The Role of Prompts

Prompt

Set of instructions (**inputs**) given to an AI system to generate a response (**output**).
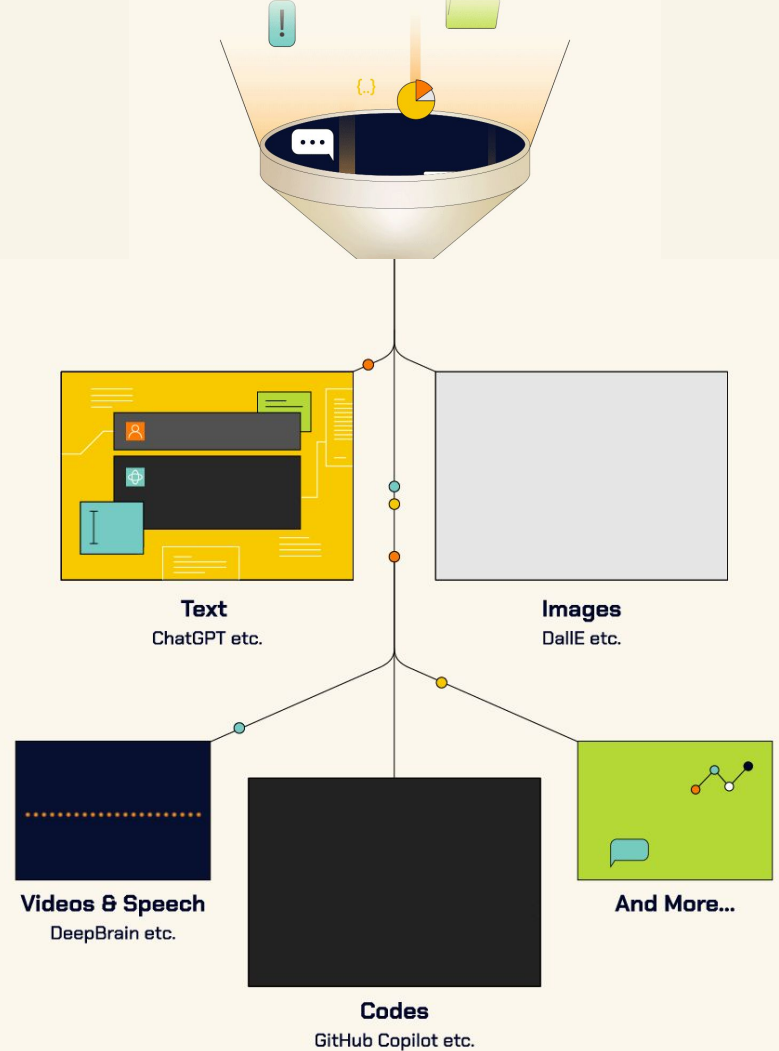
Can you write a 1,000 word essay on the French involvement in the American Revolution?

Certainly! The French involvement in the American Revolution was a pivotal factor in the eventual success of the American colonies in their bid for independence from Great Britain. Without the assistance of France, it is likely that the outcome of the war would have been different.

The French became involved in the American Revolution in 1778, after several years of tension with Great Britain. France had been humiliated in the Seven Years' War, losing much of its territory in North America, and was eager to regain its standing as a world power. Additionally, France saw an opportunity to weaken its longtime enemy, Great Britain, by supporting the American colonists in their fight for independence.

The first step in French involvement was the signing of the Treaty of Alliance on February 6, 1778, which established a formal military alliance between France and the United States. This treaty pledged the French to provide military and financial support to the Americans in their struggle against Great Britain.

One of the key figures in the French involvement was the Marquis de Lafayette, a young

Text
ChatGPT etc.

Images
DallE etc.

Videos & Speech
DeepBrain etc.

Codes
GitHub Copilot etc.

And More...

Ineffective prompt

Class assignment

Write a paper prompt for goal setting.

Task only

Write a paper prompt for students that asks them to set goals.

Task & audience only

Write a paragraph-long paper prompt for students that asks them to set goals and submit as a 3-5 bulleted list.

Task, audience, format only

Unsophisticated Prompts & Bias

Prompt: "Toys in Iraq"

"Playing soccer"

"Cleaning"

'(In)effective' looks the same across platforms

AI generated

Suno.ai prompt: 'lo-fi, reflective, mellow'

Woman with salad, laughing

Woman with salad, laughing

Woman with salad, laughing

2

Four Styles of Prompts

Chain and Tree of Thought Prompting

1. Chain of Thought Prompt Example

"How might one start a small business in a virtual reality world? Begin by identifying the target market, then consider the types of products or services that would be appealing, and finally, outline a basic marketing strategy."

This chain of thought prompt guides the AI through a logical sequence of steps. It starts with identifying a target market, moves to product or service ideation, and concludes with marketing strategy considerations, mirroring a thought process.

2. Tree of Thought Prompt Example

"Explore the potential impacts of teleportation on global society. Consider changes in travel, urban planning, international relations, and environmental effects."

This tree of thought prompt invites the AI to branch out into various related topics. Starting from the central idea of teleportation, it expands into different areas - travel, urban planning, etc., each representing a 'branch' of thought stemming from the main 'trunk' (teleportation).

Multi-Shot Prompting

3. Multi-Shot Prompt Example

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"Create catchy slogans for a new eco-friendly
clothing brand:
    ▪  Ex. 1: 'Wear the change you want to see.'
    ▪  Ex. 2: 'Green fashion for a blue planet.'
    ▪  Ex. 3: 'Style that loves the planet back.'"
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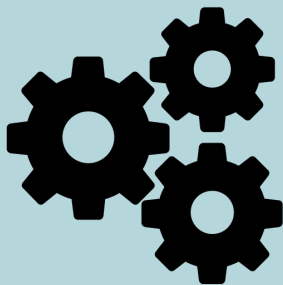

Explanation:

Here, multiple examples of slogans establish a clear pattern and style for the AI to mimic. The examples help the AI understand the tone, brevity, and thematic focus (eco-friendliness) expected in the slogans it generates.

This approach is particularly useful for tasks where specific stylistic or thematic consistency is desired, as it gives the AI a clearer template to follow.

4. Framework (basic)

Role

Task

What the AI needs to do

Requirements

What the product should include, contain, be, etc.

Instructions

What the AI should do as it acts on the prompt

Breakdown of good framework prompting

Persona (voice or role)	You are an academic researcher at Georgetown.
Audience (for whom?)	You are writing to your peers in the psychology department.
Context (situation)	You are inviting colleagues to participate in an conference you run every summer
Goal (what should this do?)	Explain history and background of conference; invite responses as to whether recipients will participate or not.
Format	Formal, emailed invitation
Output (provide samples, may include what *not* to do)	Please see attached example and the APA's national conference. Also, you know and work with these people quite well.
Blind Spots (what AI doesn't know about the context)	Some recipients use screen readers so please write everything out.

Let's Practice!

3

Spot Checks & Specific Tasks

Adjust your vocabulary

Improve transitions

Change your tone & style

Give me ten words instead of 'interactive':
This interactive session will provide the opportunity for faculty to experiment with various techniques to elicit complex, precise, and/or creative responses from generative AI tools.

Make these two sentences connect more fluidly:
Many of the key challenges facing higher education are included in that list. The Design Lab will situate these activities and themes in the broader context of social transformation.

Feed the tool three examples of your emails and tell it to write an email in the same style.

Ask the tool to maintain the same length and content but adjust word choice to make tone more personal and warm.

Did you know that you can prompt for tables?

"Could you please represent the differences between these papers via a table?"

Aspect	DEI Paper Midterm V1	DEI Paper Final V2
Content Depth	Provides a foundational discussion on maternity leave in the U.S., including basic comparisons with other countries.	Offers a more comprehensive analysis with expanded discussions and additional data.
Recommendations	Lacks specific tactical recommendations.	Includes detailed recommendations for organizations, individual leaders, and educators on improving maternity leave.
Data and References	Utilizes certain studies and surveys, which may not be the most current.	Cites more recent studies and surveys, providing up-to-date information and analysis.
Focus on Data Analytics	Less emphasis on data analytics in policy formation.	Stresses the importance of data analytics in shaping and tailoring maternity leave policies.
Intersectionality	Limited exploration of how maternity leave intersects with issues of gender, race, and class.	Delivers a deeper insight into the intersectionality of maternity leave, considering factors like gender, race, and class.

Table Use Cases

You

please format these class notes into a table

🌀 **ChatGPT**

Certainly! Here is the information you provided formatted into a table:

Category	Description
Capabilities	- "Spectrum of learning" (range/scope of capabilities) - Possibly "MeC56" (specific attribute/functional capability)
Limitations	- "Limitation" (encompassing potential limitations) - "Context relationship to space" (limitation in how it operates within its environment)
Roles	- "Role of artist/author" (impact/function of creators) - "Role & Knowledge" (function of knowledge within this context)
Values	- "Value?" (discussion on importance/worth of certain aspects) - "Authenticity" (value either upheld or compromised within the system)
Implications	- "Homogenization" (potential consequence of the system, lack of diversity) - "Danger," "Crime," "Vulnerability" (potential negative implications/risks associated with the system)

This table should make it easier to review and reference the key points from your class notes.

Certainly! Here is the information you provided organized into a table format:

Aspect of FERPA	Description
Purpose	The Family Educational Rights and Privacy Act (FERPA) is a federal law in the United States enacted in 1974 to protect the privacy of student education records. It applies to schools that receive U.S. Department of Education funding.
Access to Records	FERPA grants parents or eligible students (those over 18 or attending a post-secondary institution) the right to access and review their education records maintained by the school within 45 days of receiving a request.
Control Over Disclosure	Schools cannot disclose personally identifiable information from a student's education records without written consent, with exceptions for school officials with legitimate educational interests or health and safety emergencies.
Directory Information	FERPA allows schools to disclose "directory information" (e.g., name, address, phone number, honors, dates of attendance) without consent, but schools must inform parents and students and allow them to opt out.
Correction of Records	Parents and students have the right to request the correction of inaccurate, misleading, or privacy-violating information in the student's education records.
Complaints and Enforcement	The U.S. Department of Education's Family Policy Compliance Office (FPCO) enforces FERPA. Parents and eligible students can file complaints with FPCO if they believe their FERPA rights have been violated.
Role and Importance	FERPA plays a crucial role in safeguarding the privacy of student education records, ensuring that parents and students have essential rights regarding their education records, and promoting trust in the handling of sensitive information within the education system.

Tasks Examples

Deeper Learning of a Topic or Skill

"I am a novice at [desired topic or skill]. Create a four-week development plan that will help beginners like me learn and improve at [topic or skill]."

Create a Case Study Assignment as a Means of Authentic Assessment

"Create a case study assignment for a college-level nursing course."

Glossary of Terms and Definitions Relevant to a Unit of Study

"Create a glossary of terms and corresponding definitions for [unit or concept being taught]."

Stories and Metaphors to Enable Retention

"I am learning about [topic]. Convert key elements of this topic into engaging stories and metaphors to aid my learning and retention."

Options for Alternative Assessment Methods

"Provide a list of 5 alternative assessment methods that could be used to assess student understanding of [concept being taught]."

Frequent, Low-Stakes, Formative Assessments to Gauge Student Progress

"Create a quiz with [3-5] multiple choice questions that assesses students' understanding of [concept being taught]. Provide the answer key."

Generate New Ideas or Scaffold Writing

"I am writing a [post, blog, article, etc] about [topic]. Give me an outline of [#] bullet points to use as a framework for my writing. Also give me 3 options for an engaging title."

Strategies to Support a Range of Learner Variability

"For a lesson on [concept being taught] create a list of 5 teaching strategies that could be used to engage and challenge students of various abilities and learning preferences."

Open-Ended Questions Aligned with Modular Objectives
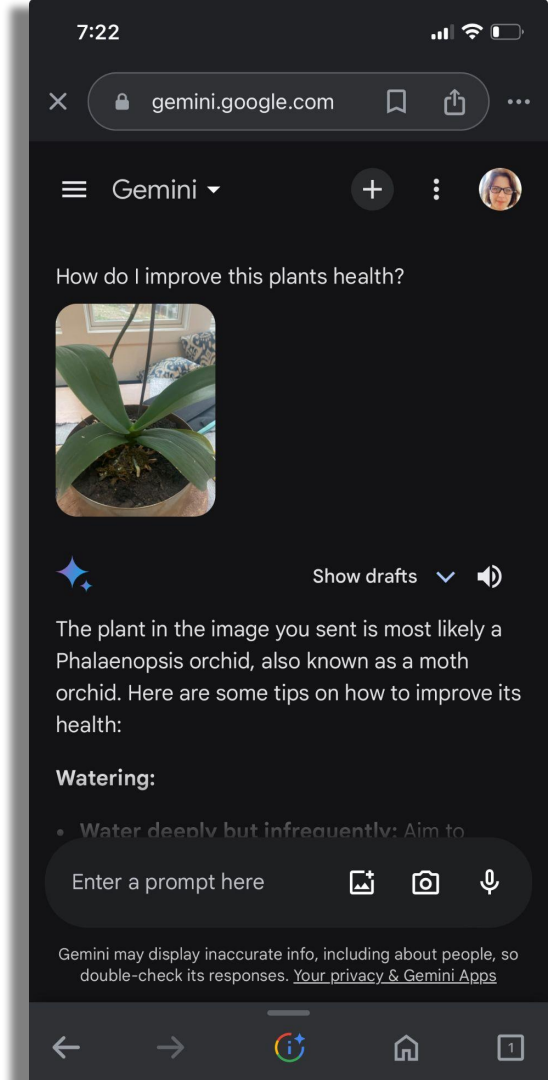
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Questions & Resources

Recommended AI Tools

ACTIVITY TYPE	TOOL EXAMPLES
Idea Generation	ChatGPT, Gemini, Bing, Claude
Literature Review	typeset.io, Rayyan, Explainpaper, Connectedpapers
Summarizing	Glasp, ChatGPT, Gemini, Bing, Claude
Outlining & Drafting	ChatGPT, Gemini, Bing, Claude, Kickresume, textblaze.me
Revising	copygenius.io, QuillBot, Grammarly, wordvice.ai
Study Aides	Snapchat, ChatGPT, Gemini, Bing, Claude
Time/Project Management	krisp.ai/ai-meeting-assistant, Goblin Tools
Coding Help	hashnode.com/ai, Fronty, Tabnine, debugcode.ai
Data Analysis	GPT4,Tableau AI, Excel, Google Workspace (non-GU), Power.bi
Presentation Tools	Gamma, SlidesGPT, slidesgo, Canva

Try Gemini in Google browser

Good audio capability so you can 'talk' to the bot

Get responses to photo input

Free in browser

Resources (pg 1/2)

Web Resources

- Barnard College's [Guide to Generative AI & the College Classroom](#).
- CNDLS' guide to [Assignment Design](#)
- [Yale's Poorvu Teaching and Learning Center's AI Teaching](#) [Examples](#)
- Dartmouth University Institute for Writing and Rhetoric. [Syllabus and Assignment Design](#).
- "[Unlocking the Power of AI: How Tools Like ChatGPT Can Make Teaching Easier and More Effective](#)"
- College Unbound's [Classroom Policies for AI](#)
- Open source Zotero [Chat GPT library](#)

Mollick, Ethan. "[How AI Changes Everything](#)." YouTube. Jun 15, 2023

WACA, "[Statement on AI Writing Tools in Writing Across the Curriculum](#)," *Writing Across the Curriculum Association.* Jan 30, 2023.

Nicol, David. "[Practice Resources](#)." *The Power of Inner Feedback.* 2023.

How to Use Generative AI: A Guide for Students.
https://canvas.sydney.edu.au/courses/51655

Exercises

- [Case scenarios](#)
- [Unesco Report 2023](#)
- [Conducting a Technoethical Audit](#)
- [University of Sydney Student Guide to AI](#)

Articles & Books

Chen, Brian X. "[Get the Best from Chat GPT with these golden prompts](#)." *New York Times.* 25 May 2023.

Mollick, Ethan R. and Mollick, Lilach. "[Let ChatGPT Be Your Teaching Assistant](#)." *Harvard Business Review,* April 27, 2023. <www.Hbsp.harvard.edu >

Ibid. "[Why All Our Classes Suddenly Became AI Classes](#)." *Harvard Business Review,* February 9, 2023.

Ibid. "[Using AI to Implement Effective Teaching Strategies in Classrooms: Five Strategies, Including Prompts](#)" March 17, 2023.

Weimer, Maryellen. [How Assignment Design Shapes Student Learning](#). *Faculty Focus*, April 2015.

Resources (pg 2/2)

Generative AI, Libraries, & Higher Ed in General

Aoun, Joseph. (2018). *Robot Proof: Higher Education in the Age of Artificial Intelligence*

Fitzpatrick, Dan, Amanda Fox and Brad Weinstein. (2023, March 30). *The AI Classroom: The Ultimate Guide to Artificial Intelligence in Education*. Teacher Goals Publishing.

"Learn With AI." University of Maine.

LinkedIn Learning Generative AI in Education Tool Kit

Mollick, Ethan. (2023, April 23). "AI Required: Teaching in a New World." Youtube.

Peterson-Lugo, B. (2023). Tech Talk—ChatGPT. Library Instruction Round Table News, 45(No. 3/4), 16. https://www.ala.org/rt/sites/ala.org.rt/files/content/archive/2023mar-jun.pdf

Webb, M. (2023, May 11). *A Generative AI Primer*. Retrieved July 12, 2023, from https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/

Good Prompting & Teaching Resources

Mollick, Ethan. *Working with AI: Two Paths to Prompting*. https://www.oneusefulthing.org/p/working-with-ai-two-paths-to-prompting. Accessed 12 Nov. 2023.

Ibid. *Almost an Agent: What GPTs Can Do.* https://www.oneusefulthing.org/p/almost-an-agent-what-gpts-can-do. Accessed 12 Nov. 2023.

NMD Projects. "Mock Interview with a Web Designer." NMD Projects, https://nmdprojects.net/learnwithai_www/media/gpt4_09_mock_interview_web_designer.mp4. Accessed 10 June 2023.

Alexander, Bryan. "Experimenting with Using ChatGPT as a Simulation Application." Bryan Alexander's Blog, https://bryanalexander.org/gaming/experimenting-with-using-chatgpt-as-a-simulation-application/. Accessed 10 June 2023.

"Brainstorm." Teaching.Tools, https://teaching.tools/brainstorm. Accessed 10 June 2023.

"Teaching with AI." Open AI. https://openai.com/blog/teaching-with-ai

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https://cndls.georgetown.edu/ai/resources/