The Power of Prompts: Evidencebased Strategies for Optimizing ChatGPT and Other Al Interaction

0

0

0

This session will provide attendees with practical insights on effective prompt engineering and strategies to improve the quality of interactions with ChatGPT, BARD and Other AI. NATIONAL SOCIAL SCIENCE ASSOCIATION Virtual Spring Conference 2023

April 26, 2023

Las Vegas, NV

Presenters

 Dr. Steven Grubaugh, University of Nevada, Las Vegas Dr. Greg Levitt, University of Nevada, Las Vegas

Introduction

 Prompts in ChatGPT are inputs that guide the AI's response. The importance of well-worded prompts cannot be overstated as they ensure accurate and useful responses. This presentation will cover the types of prompts, tips for wording and refining prompts, examples, and a conclusion. ChatGPT, BARD and Other AI?

- ChatGPT is an advanced language model developed by OpenAI based on the GPT architecture. It is designed to generate human-like responses to a variety of prompts, providing users with relevant information, suggestions, and assistance in a conversational manner. ChatGPT can be utilized in numerous applications, such as answering questions, offering recommendations, generating content, and assisting with various tasks, making it a valuable resource in diverse settings.
- GPT stands for "Generative Pre-trained Transformer." It is a type of artificial intelligence language model developed by OpenAI that uses deep learning techniques to generate human-like text. The model is pre-trained on a large dataset and can generate contextually relevant responses, understand complex prompts, and provide valuable information across a wide range of topics. The transformer architecture allows GPT to efficiently process and generate text by considering relationships between words and their context in a given sentence or paragraph.

Organizing to Prompt

- Brainstorm > then you organize > then input content into AI with your prompt to "Organize this." Regenerate until rendered as best for your project.
- Brainstorm > then prompt ChatGPT "Organize this: (Contents of the brainstorm)" > Regenerate until rendered as organized for your project.
- Repeat as necessary.

Five Types of Prompts



Open-ended Prompts

How did the Industrial Revolution impact society and the environment, and what are some lasting effects we still experience today?

Compare and contrast the leadership styles of Abraham Lincoln and Winston Churchill during their respective countries' times of crisis.

Analyze the role of women in the American Civil Rights Movement and discuss the impact they had on its success. Open-ended prompts encourage creative, broad responses. They stimulate brainstorming or generate ideas.

Examples of open-ended prompts include "What are some potential uses for AI in healthcare?" or "Describe the future of transportation."

Closed-ended Prompts

Which historical event marked the beginning of the American Revolution: the Boston Tea Party or the signing of the Declaration of Independence?

Who was the primary author of the United States Constitution: James Madison or Thomas Jefferson?

In which year did the fall of the Berlin Wall occur: 1989 or 1991?

Closed-ended prompts seek specific, concise answers. They obtain factual information or confirm understanding.

Examples of closed-ended prompts include "When was the first iPhone released?" or "Is water a good conductor of electricity?"

Instructive Prompts

Create a timeline of key events leading up to the French Revolution, and briefly explain the significance of each event in contributing to the revolution.

Write a short essay comparing the political systems of ancient Athens and ancient Rome, highlighting the key differences and similarities between the two.

Research the causes and effects of the Columbian Exchange, and prepare a presentation discussing its impact on the Old World and the New World societies.



Instructive prompts request step-by-step guidance or explanations. They help us learn how to do something or understand a process.



Examples of instructive prompts include "How do I change a flat tire?" or "Explain the process of photosynthesis."

Exploratory Prompts

Investigate the cultural, economic, and political factors that contributed to the Renaissance, and discuss how these factors fostered a flourishing of arts, sciences, and humanism.

Explore the motivations and impacts of European colonialism in Africa during the 19th and 20th centuries, and discuss the long-term consequences of colonization on the continent.

Examine the social and political context in which the Universal Declaration of Human Rights was drafted, and analyze its ongoing significance in promoting human rights around the world. Exploratory prompts invite analysis, comparison, or evaluation. They help us gain insights or explore different perspectives.

Examples of exploratory prompts include "Compare the advantages of solar energy and wind energy." or "Analyze the factors contributing to climate change."

Opinion Prompts

In your opinion, which historical figure had the most significant impact on the development of modern democracy and why?

Do you believe the outcomes of the Treaty of Versailles were fair to all parties involved, and how might this treaty have influenced the events leading to World War II?

What do you think was the most important factor contributing to the success of the civil rights movement in the United States, and why?

Opinion prompts ask for personal viewpoints or preferences. They engage us in a discussion or help us learn about various perspectives.

Examples of opinion prompts include "What are your thoughts on remote work?" or "Which superhero is your favorite and why?"

Act as a...



Advertiser, Storyteller, Motivational Coach, Novelist, Philosophy Teacher, AI Writing Tutor, Cyber Security Specialist, Career Counselor, Personal Trainer, Mental Health Adviser, Web Design Consultant, AI Assisted Doctor, Doctor, Chef, Personal Chef, Financial Analyst, Investment Manager, Interior Decorator, Self-Help Book, Aphorism Book, Fancy Title Generator, Statistician, Act as a Prompt Generator, Dream Interpreter, Act as a Fill in the Blank Worksheets Generator For Plagiarism App, Instructor in a School, Dietitian, Psychologist, Smart Domain Name Generator, Academician, Fallacy Finder, Journal Reviewer, DIY Expert, Social Media Influence, Act as a Socrat, Act as a Socratic Method prompt, Act as an Educational Content Creator, Act as an Essay Writer, Act as a Social Media Manager, Act as an Elocutionist, Act as a Hypnotherapist,

Act as a... (continued)

Act as a Historian, Act as an Astrologer, Act as a Film Critic, Journalist, Act as a Public Speaking Coach, Act as a Synonym finder, Act as a Food Critic, Legal Advisor, Act as a Personal Stylist, Act as a Biblical Translator, Act as an IT Expert, Act as an Chess Player, Act as a Time Travel Guide, Act as a Talent Coach, Act as an Emergency Response Professional, Act as a Web Browser, Act as a Startup Idea Generator, Act as a New Language Creator, Act as Spongebob's Magic Conch Shell, Act as a Salesperson, Act as a Chief Executive Officer, Act as a Speech-Language Pathologist (SLP), Act as a Startup Tech Lawyer, Act as a Song Recommender, Act as a Cover Letter, Act as a Technology Transferer, Act as an Unconstrained AI model DAN, Act as the Buddha, Act as a Friend, Act as a ChatGPT prompt generator, Act as a Wikipedia page, Act as a note-taking assistant, Act as a language Literary Critic.

Act as a... (continued)

Act as a Personal Shopper

I want you to act as my personal shopper. I will tell you my budget and preferences, and you will suggest items for me to purchase. You should only reply with the items you recommend, and nothing else. Do not write explanations. My first request is "I have a budget of \$100 and I am looking for a new dress."

Act as a Babysitter

I want you to act as a babysitter. You will be responsible for supervising young children, preparing meals and snacks, assisting with homework and creative projects, engaging in playtime activities, providing comfort and security when needed, being aware of safety concerns within the home and making sure all needs are taking care of. My first suggestion request is "I need help looking after three active boys aged 4-8 during the evening hours."

CommonThought Patterns Prompts

Definition

Sequence

Comparison and Contrast

Cause and Effect

Problem / Solution

General Tips for Wording Prompts

Clarity is crucial when wording prompts. Use simple and precise language and be specific in your request to avoid ambiguity. Provide necessary context for a wellinformed response, and match the tone to your desired outcome (formal, casual, etc.)

[] Square Brackets enclose any writing style, tone, personality, or genre within the prompt.

Examples of Refined Prompts

Original Prompt

• "Tell me about movies."

Refined

"Describe the evolution of science fiction movies over the past 30 years."

The refined prompt is more specific, providing context and a clear focus for the response.

Live Prompt Practice

Let's try a live demo.

The Omni Prompt

I want you to become my Prompt engineer. Your goal is to help me craft the best possible prompt for my needs. The Prompt will be used by you, chatGPT. You will follow the following process:

1. Your first response will be to ask me what the prompt should be about. I will provide my answer, but we will need to improve it through continual iterations by going through the next steps.

2. Based on my input, you will generate 2 sections, a) Revised prompt (provide your rewritten prompt, it should be clear, concise, and easily understood by you), b Questions (ask any relevant questions pertaining to what additional information is needed from me to improve the prompt).

3. We will continue this iterative process with me providing additional information to you and you updating the prompt in the Revised prompt section until I say we are done.

• The AI will ask 5 questions over and over again until you say stop and each time it will write a revised prompt. write a book for Or use your book title or close to it

Learn and Practice Prompt Writing

Helpful resources on prompt creation include the OpenAI blog and ChatGPT user guides. Articles and studies on effective communication with AI models can be found in AI research papers and AI language model studies. OpenAI's safety and ethics guidelines also offer recommendations for prompt creation.

https://learnprompting.org/docs/intro

Image Prompts

Image Prompt Engineering

Taxonomy of prompt modifiers44

DiffusionDB45

The DALLE 2 Prompt Book46

Prompt Engineering for Text-Based Generative Art47

With the right prompt, Stable Diffusion 2.0 can do hands.48

Optimizing Prompts for Text-to-Image Generation49 https://learnprompting.org/docs/intro

Conclusion

• The quality of prompts directly impacts the AI's response. The types of prompts, wording tips, and refining prompts are essential for effective communication with ChatGPT. Experiment and adapt prompts to optimize AI communication.

Contact Info

- <u>Steven.Grubaugh@unlv.edu</u>
- <u>Greg.Levitt@unlv.edu</u>

References and Resources

- Baker, R. S., & Inventado, P. S. (2021). Educational Data Mining and Learning Analytics. Cambridge University Press. https://doi.org/10.1017/9781108764353
- Pedro, F., Subosa, M., Rivas, A. & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development. UNESCO. <u>https://unesdoc.unesco.org/ark:/48223/pf00003777</u> <u>44</u>
- Vlachopoulos, D., & Makri, A. (2021). The effect of games and simulations on higher education: A systematic literature review. International Journal of Educational Technology in Higher Education, 18(1), 1-29. https://doi.org/10.1186/s41239-021-00270-2