

Prompt Engineering

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What is prompting?

Prompting is the process of interacting with an artificial intelligence (AI) system by providing specific instructions or queries to achieve a desired outcome.

Making the Implicit Explicit



Humans Have Context

If a patron approaches the reference desk and says, “I need a recent article about chemistry,” information pros will be aware of important context:

- You’re currently at a college library, and they’re probably a student.
- They’re probably working on a class assignment.
- College-level assignments require reputable academic sources, and this patron probably wants a resource from one of the library’s periodicals or databases.
- You might even be familiar with this assignment and know that “recent” means published within the past three years and “article” means a primary research article from a peer-reviewed journal.

Bots Don't

- A GenAI chatbot might answer like this:

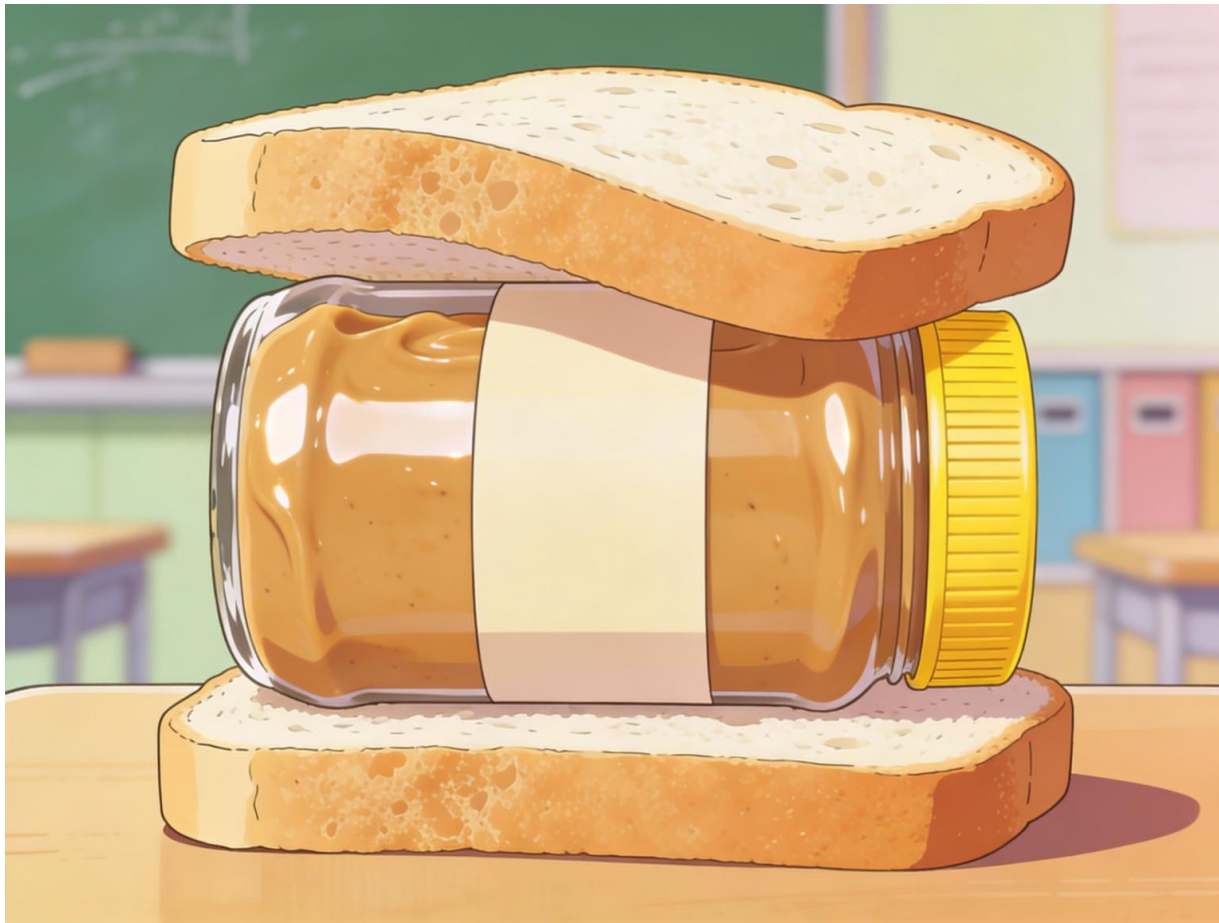
*Here's a recent chemistry article: "**Discovery of new polymer class provides compostable alternative to conventional thermoplastics**" from Phys.org, published **April 20, 2026**. It looks at a newly discovered polymer class that could offer a biodegradable alternative to traditional plastics.**

- Satisfies the expressed need, but not useful for this assignment.

* Answer generated by Perplexity on April 22, 2026

Writing How-Tos for a Martian

- A popular elementary school assignment in the 1990s:
“Write instructions to teach an extra-terrestrial alien how to make a peanut butter sandwich.”
- Most students would compose a familiar recipe like this:
 - Spread peanut butter on one piece of bread.
 - Put a second piece of bread on top.
- Then the teacher would follow the instructions literally...



This image was AI-generated using GPT-5.2

Principles and Tips



Be Specific

- AI has no understanding of cultural or institutional knowledge.
- A good prompt is like a reference interview in reverse: provide enough information to help the tool produce what you need.

Prompt Foundations



Provide Context

The more the tool knows about where you work and who you are serving, the more relevant the output will be.*

- Basic: “Help me brainstorm ideas for a new book display”
- Better: “I work at the library of a private religious college in Washington. Help me brainstorm ideas for a new book display that will appeal to our students and faculty.”

Note: When providing context to GenAI tools, keep your institution’s privacy policies in mind.

Define Format and Style

Give explicit instructions on the output format and provide examples of what “good” looks like.

- Basic: “Write a social media post about our Stress-Free Finals event.”
- Better: “Write a social media post about our Stress-Free Finals (Coffee/snacks Dec 8-12; Therapy dogs Dec 9-10). The post should be under 250 characters, start with a catchy hook, and include emojis. Here are two sample posts I’ve written in the past for reference.”

Assign a Persona or Role

By giving the AI a role, you narrow the focus to an area of expertise or a specific user perspective.

- Basic: “How can I improve this tutorial about how to use library databases?”
- Better: “You’re a first-year college student who has never heard of library databases before, and your professor said you have to use one to find citations for a paper. Which parts of this tutorial are confusing or need more explanation?”

The Power of “I Don’t Know”

Include language to avoid hallucinations/guessing.

E.g., “If you are unsure or the information is not in the provided text, please state that you do not know rather than guessing.”

Frameworks



Getting Started with Frameworks

- Dozens of different prompting frameworks exist, each focusing on different aspects of the desired output from the AI tool.
- There is no “best” or “perfect” prompting framework.
- This list is intended as a place to get started, but don’t let this limit the scope of your requests!

TRACI and CREATE

- Task, Role, Audience, Create, Intent
 - Great for use with outreach initiatives or marketing because of the focus on the audience (think newsletters, social media posts, etc.)
- Character, Request, Examples, Adjustments, Type of Output, Extras
 - Good for use with instruction and LibGuides, or anywhere you would like to provide clear expectations
 - Use the Example to show the AI tool what you want output to look like
- <https://digital.library.sc.edu/blogs/scholcomm/unlocking-the-power-of-prompt-mnemonics-traci-and-create/>

RISEN

- Role, Input, Steps, Expectation, Narrowing
- Useful for those working in metadata and technical services
 - Steps and Narrowing components especially useful for workflows
- <https://easyaibeginner.com/risen-framework-ai-prompt-for-chatgpt/>

CLEAR

- Concise, Logical, Explicit, Adaptive, Reflective
 - From Leo S. Lo ([research article](#))
- Great for use in reference and instruction, as the Reflective component adds metacognition to the prompting process, encouraging us to consider why we are making specific requests
- <https://www.sciencedirect.com/science/article/pii/S0099133323000599>

CRISPE

- Capacity and Role, Insight, Statement, Personality, Experiment
- Good for tasks such as policy development, strategic planning, and other administrative duties
- <https://sourcingdenis.medium.com/crispe-prompt-engineering-framework-e47eaaf83611>

Common Elements

- **Who:** Giving the AI a persona, or telling it to act as a specific kind of expert
- **Why:** Providing background information
- **How:** Defining desired output tone, format, and length
- **What's Next?:** The first draft is usually not the final product; iteration is sometimes necessary for optimal output

Troubleshooting



Add Guardrails

- Try asking the AI to be “more” or “less.”
 - “Rewrite this to be more succinct / more casual / more professional / less technical / less verbose.”
 - “Rewrite this in plain language.”
- Give explicit “no” instructions.
 - “If you do not know the answer based on the provided text, state that you do not know. Do not attempt to find external sources.”

“Chain-of-Thought”

Ask it to explain its process/reasoning. Some AI tools have an option to show their steps, and enabling this feature can help if the AI is failing at a complex task.

- “Let’s think step by step.”
- “What did you do to get to this answer?”

Break Up Complex Tasks

A task might require multiple steps in reasoning.

- Instead of asking, “Write a newsletter article in the style of previous issues covering these points,” first prompt it to summarize example newsletter articles from previous issues, then prompt it to generate a new article covering your points in the same style.
- Instead of asking, “Can you find a meeting time when my committee members are available?” first ask it to calculate how many potential meeting times match your members’ reported “yes” or “maybe” availability, then ask it to select the time from those results where the most people responded “yes.”

Flip the Script

If the output is vague, the AI might not have enough information. Ask the AI to ask you about the information it needs to fulfill your request.

- “I want you to draft a collection development policy. Before you start, ask me 5 questions about my institution’s goals and budget so you can make the draft more accurate.”

Meta-Prompting

Let the AI do the heavy lifting for you!

- “I want to [Task]. Using the TRACI framework, write a prompt that I can use to get the best possible result for this.”
- “Here is a prompt for drafting a sensitive copyright policy. Identify three ways this prompt might lead to a hallucination or an error, and suggest a revised version.”
- “What is a detailed, reusable prompt I could use to generate new images in the same style as the one attached?”

Caveats

- Specialized tools with complex architecture might not respond well to these techniques.
- The Primo Research Assistant (PRA) is designed to use library resources for Retrieval Augmented Generation (RAG). For every prompt, the tool will select and summarize relevant sources from the Central Discovery Index (CDI).
- You might also have varying levels of success with these techniques between chatbots made by different companies, or even between different versions of the same chatbot.

Practice and Further Reading



Practice Scenarios

- Experimentation and practice over time is the best way to figure out which approaches work (and which don't) in the GenAI tools you can access at your institution.
- Find exercises at: <https://github.orbiscascade.org/generative-ai/prompts#practice-scenarios>

Resources: Articles

- Articles
 - [Getting started with prompts for text-based Generative AI tools](#) (Harvard)
 - [Effective Prompts for AI: The Essentials](#) (MIT)
 - [Text Generation and Prompting](#) - more high level
 - [Prompt Engineering Guide](#) - lots of techniques!
 - [Prompt Engineering \(white paper\)](#)
 - [Prompts.chat](#) - prompt directory
 - [Prompt to Design Interfaces: Why Vague Prompts Fail and How to Fix Them](#) (NN Group)

Resources: Tutorials and Courses

- Tutorials
 - [Overview of prompting strategies](#) - tutorial from Google
 - [Generative AI Prompt Writing Introduction: Tutorial](#) - from W3 Schools
- Courses
 - [ChatGPT Prompt Engineering for Developers](#) – in partnership with OpenAI
 - [Google Prompting Essentials](#) (Coursera)
 - [Generative AI Prompt Literacy](#) – from UM Flint