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#### **BUSINESSJOURNAL REPORTS: TECHNOLOGY**

# ChatGPT Can Give Great Answers. But Only If You Know How to Ask the Right Question.

That's why companies are hiring 'prompt engineers'—experts in talking to AI systems effectively



In general, the more detailed the request, the better the response. But the most effective prompt engineering goes beyond adding detail.

**ILLUSTRATION: FRAN PULIDO** 

### By Jackie Snow

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With the new generative AI tools, like ChatGPT, anyone can put in a prompt—type in a few words and get a result. But that doesn't mean that the results will be relevant or accurate.

The key is putting in the right prompt.

The fact that you can communicate with the latest AI systems in plain English "is very deceptive," says Peter Lin, a computer-science professor at the University of Waterloo.

That's why some businesses are now hiring prompt engineers—people with the skills, background and practice to talk to so-called large-language AI systems effectively—and why many people expect prompt engineering to be a desirable skill for many kinds of workers to add to their résumés.

LinkedIn says the use of the terms ChatGPT, prompt engineering, prompt crafting, generative AI and generative artificial intelligence in member profiles increased 55% globally in February from January and then 71% in March from February.

"We have dog whisperers and horse whisperers," Prof. Lin says. "And now we're developing large-language-model whisperers."

#### ASK A BETTER QUESTION

To write a better prompt for ChatGPT, include details about what you're looking for and feel free to suggest a specific format for the answer, such as a style of writing, a table, or a shopping list.

#### BASIC:

"What are ETFs?"

#### BETTER:

"How would you explain ETFs to a layman, and can you provide three examples for me to understand it?"

In general, the more detailed the request, the closer the response will come to what the user is looking for. But the most effective prompt engineering goes beyond adding detail.

For one thing, adding the *right* detail to get the best response is crucial. Also, there are many ways to guide how an AI system presents the information it finds, depending on the goal—telling it to write in a certain style or for a certain audience, for instance. Each tool also has particular capabilities and limitations that users can learn to manipulate. And the best results often come from an extended conversation with the AI, reacting to what it produces and asking for refinements.

Even for people applying to jobs that don't explicitly mention prompt engineering, having this skill could become essential for all sorts of roles, says Brianne Kimmel, the founder of Worklife, a venture fund that invests in companies that use generative AI. Art directors could use generative AI to sketch out ideas, and marketers could use it to develop new slogans.

Software engineers could use it to find problems with their code. Lawyers could use it to research a piece of law.

"This is going to be a foundational skill that all of us need to know," Ms. Kimmel says. "The through line is when you learn a new skill, you can take it in any direction you like."

# On the job

Sophie Antebi graduated in May from the University of Southern California with a degree in marketing and entrepreneurship and an interest in working at a startup. In an effort to make her application stand out, she has learned to use some of the new generative AI tools. She figures they could be useful in creating marketing campaigns or creating images to go into presentations.

#### BASIC:

"Write me a love poem to give to my partner."

#### BETTER:

"Write a love poem to give to my partner who loves mysteries. His favorite Edgar Allan Poe poem is 'The Raven.'"

#### **BASIC:**

"Create a five-day vegetarian meal plan."

#### BETTER:

"Create a shopping list for a five-day vegetarian meal plan."

While she hasn't landed a job yet, she says that since she added her familiarity with prompt engineering and other AI capabilities to her cover letters, the response to her applications has increased. She credits those skills with getting her to second and third rounds of interviews. "They ask a lot of questions, and they're interested in learning more about it," she says of her interviewers.

One company looking to hire a prompt engineer is Boston Children's Hospital, which posted the job in February and is interviewing candidates. The prompt engineer will work out of the hospital's Innovation and Digital Health Accelerator, which has been making investments in AI for the past few years and sees this hire as a natural progression, says John Brownstein, the hospital's chief innovation officer.

Large-language AI tools will have a role in many jobs at the hospital, Dr. Brownstein says, possibly including analyzing vast amounts of unstructured clinical notes and detecting broader patterns that may otherwise go unnoticed, creating educational information for patients and making patient admissions more efficient.

"There is definitely a hype component to AI like ChatGPT," Dr. Brownstein says. "But this is not a technology looking for an application."

#### BASIC:

"Create a plan for 3 days in Paris."

#### BETTER:

"Create a full plan for three days in Paris for travelers including a hotel that is under \$500 a night, places to eat for every meal for people who are gluten-free."

Mishcon de Reya, a London law firm, is also planning to hire a prompt engineer. Summarizing legal documents, finding relevant case law and querying a database of information as the first step in litigation are some possible uses for large-language AI tools, says Nick West, Mishcon de Reya's chief strategy officer

"I believe this is a transformational technology," Mr. West says. "So any help I can get to accelerate our understanding and knowledge of it means that we can be faster to take advantage of it."

Even for places not hiring a full-time prompt engineer, it's becoming apparent that technology teams will need to be familiar with AI tools' possibilities, says Elvis Saravia, co-founder of Dair.ai, a group working to democratize AI with open-source research, educational material and training. Mr. Saravia has published a prompt engineering guide on how to build and interface with large-language models for engineers.

## The art of collaboration

Some of the prompt methods that researchers and users have discovered and Mr. Saravia has documented include telling a large-language model "Let's think step by step," a method that

gets the technology to break complicated requests into smaller steps that are easier to address. Another technique involves telling the AI that it is an expert in a field and its job is to give advice to a layperson. That can help simplify the response on complicated subjects.

Several researchers and users are publishing guides and tips as they find them. Some users are selling their prompts on marketplaces, and others are building tools that they say can optimize a prompt. But many resources are being shared free of charge in Twitter threads and YouTube videos, including some posted by Nick St. Pierre, a designer creating content that focuses on explaining Midjourney and other art-creating AIs.

For artwork, it takes a combination of experience with the tools and knowledge of art styles to refine prompts. Mr. Pierre suggests starting with a basic idea and adding to it as needed.

For example, a prompt might start with a request for an image of a 40-year-old woman with dark hair sitting at a bar, Mr. St. Pierre says. If the resulting image isn't what the user had in mind, they can add terms to change the camera angle, clothing style and lighting, among other things, to get different results.

Things listed earlier in a prompt typically get more prominence in the final image, Mr. St. Pierre has found, so he tends to list the most important terms for his vision first. "There is a lot of iterating, lots of testing and collaborating with the AI," he says.

## Some tips for better prompts on ChatGPT

- 1. Learn about the capabilities of the model. ChatGPT can do a lot, but not everything. It's a language model, for example, and isn't great at math. Also, ChatGPT currently is only trained through 2021, so any events after that are unknown. OpenAI doesn't reveal what data trains its models, but Andrew Mayne, a science communicator for OpenAI, suggests reading about what others are doing on ChatGPT and where they are having success, as well as just playing with it, figuring out how to get it to do what you want reliably.
- 2. Make sure your prompt is clear. Imprecise wording can confuse ChaptGPT just as it can confuse a human. Ambiguous wording, typos and missing words can all be problematic. Homonyms can be particularly troublesome: Without clear context, the AI could read "right," for instance, to mean the direction or "correct."
- 3. **Tweak your prompt**. ChatGPT will refine its responses with fresh input from the user—anything from requests for additional content to specific instructions on formatting or general guidelines on style. For instance, a user could ask it to present its response in bullet

points, or to try to be more serious or write in the tone of a well-known author, like Mark Twain.

4. **Ask for help.** If at first you don't succeed, you can ask ChatGPT to help you craft a better prompt. You can say, for instance, "What do I need to tell ChatGPT to write me a good cover letter?" and the tool will tell you what it needs from you to write it up.

Ms. Snow is a writer in Los Angeles. She can be reached at reports@wsj.com.

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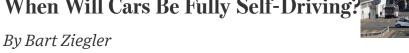


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