

Generative AI: Prompting vs Searching



Below is a series of questions that are easily answered with either a classical search engine (such as Google Search) or a chatbot tuned from a large language model. Answer each question with the assistance of either of these methods, and try to identify if classical search or prompting the chatbot provides a better result.

Once you have gone through all the questions, make some notes on why you think one method of reference is more optimal than the other for which type of questions. Be prepared to discuss this in class Monday. **Submit your results to the instructor before the start of the next class.**

1. Give me a historical breakdown of the winners of the Nobel Prize in Physics from the past decade. **search engine, this information is widely known and easy to find**
2. Could you illustrate a hypothetical conversation where Shakespeare discusses his writing process? **prompting, this requires some creativity or options for choice. A search engine might give articles but you would need to find the best articles on the topic yourself**
3. How many people call Tokyo their home? **search engine, easily found census data that doesn't need creativity**
4. Let's walk through the steps involved in running a sentiment analysis using Python. **prompting, the steps can vary and require some analysis so a search engine would not work well**
5. I'm curious about the average distance between our planet and the Red Planet. **search engine, basic data that does not change and is easy to find**
6. What ideas can you come up with for a unique project that intertwines data analysis with Generative AI? **prompt, ideas will be more unique from a prompt rather than other people's ideas online**
7. Can you summarize some key motifs in political history spanning the previous century? **prompt, you could read online articles from a search but it would probably be easier to get a prompt**
8. The Great Wall of China, how far does it stretch exactly? **search engine, a simple fact that would be easily found**
9. Can you elucidate how Python's Global Interpreter Lock affects the performance of multi-threading? **prompt, interpretation of the system would be possible with data from online sources but you would need to analyze and put the ideas together. Fact checking would be needed**
10. What momentous event in American history took place on July 4, 1776? **engine, a specific date and context makes a search engine easy to use**