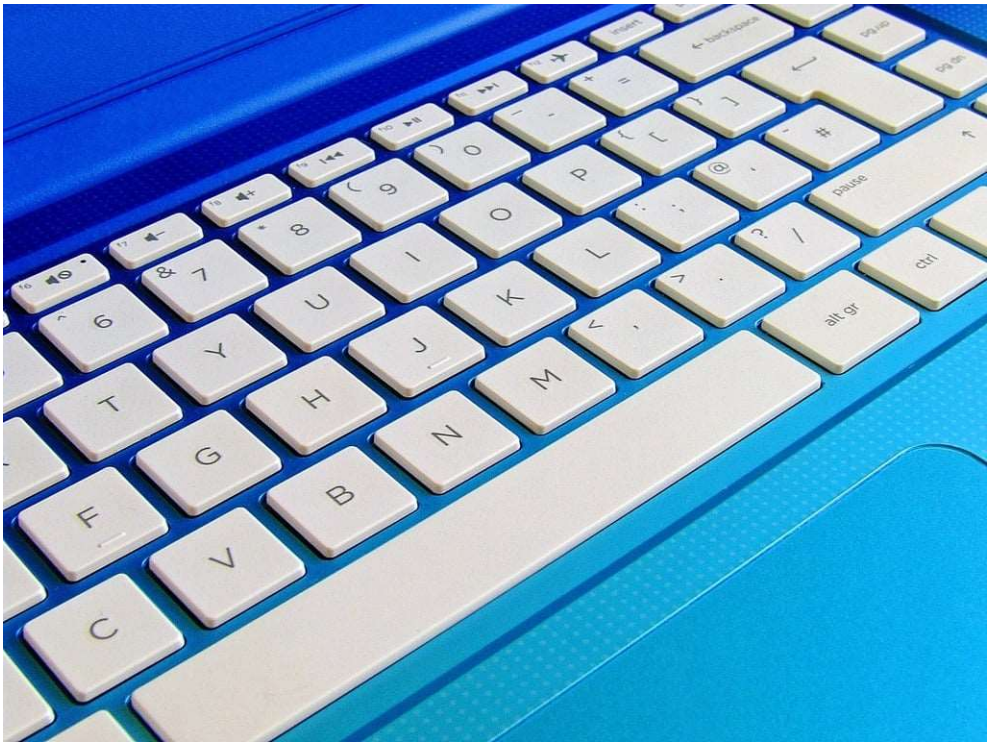
A Quick Guide to AI Prompt Engineering for Targeted Individual Research



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Version August 11, 2024

Introduction

The purpose of this book is to provide a quick guide to prompt engineering for targeted individual research. Prompt engineering is about wording the request that you put into a large language model input prompt. It does not require specialized technical skills or computer coding. You can put artificial intelligence to work for you by learning how to write an effective prompt.

With this book we will cover:

1) The general topic of large language model prompt engineering.
2) Specific issues encountered by targeted individuals with the use of large language models.

3) Common mistakes made when using large language model systems by targeted individuals.
4) Good ways to use large language models for task automation and idea generation.

Prompt Engineering General Best Practices

Note: Some features listed below may only be fully supported in newer versions of large language models that may require a paid subscription.

1) Identify a role. So instead of a prompt such as 'tell me about x', you would start with the phrase 'As a <role> tell me about x'. An example in software development would be 'As a senior software engineer, provide a solution this this problem…' By identifying the role that is skilled in software development, the solution will often be of higher quality. Without specifying the role, the system may search for answers across all skill levels or even those outside the software development field and the solution may not be as reliable.

   You may need to do a little research to identify the job title of an experienced person in the subject matter you are looking for.

2) Ask for citations or references. This can be very valuable in reviewing large language model results. Often you will obtain results from a LLM and you will want to verify how the results were generated. By asking for citations or references, you will be able to tie back the output of the program to specific links or other sources that can be reviewed as the source of the information.

3) Specify a format or template. When prompting for specific information, you can specify the format or template you would like for the results. It can be a simple format such as specifying that you would like the results in a table. Or it can be more sophisticated such as having the LLM fill output the results into a specific document template.

   You can also obtain better results in some instances by specifying a size limit. Asking for a 1 or 2 page summary of important points will often give you a more concise and focused result.

4) Provide an example. When you're looking for specific results you can provide an example of the type of results you are looking for. This can often point the LLM in the right direction as far as the output you are looking for.

Common Issues Encountered by Targeted Individuals

1) Sensitive Information. Often, targeted individuals are researching a subject that is considered sensitive information and will not be directly returned. For example, if you were interested in finding out more about Fusion Centers, some detail such as a direct list of employees will not be available.

   However, you may be able to generate helpful directions by asking the question one step removed. So, for example instead of 'Provide a list of all fusion center employees in my area', you might ask a more general question such as 'Provide a list of the types of employees or members who participate in a Fusion Center'. This would often generate a list of ideas that you can use for follow-up searches in your chosen search engine outside of the LLM.

   Another example might be salary ranges for a given employee. The LLM may not be able to directly answer the question, but often it can provide an example next step website such as Glassdoor.com which lists salaries for many companies based on job title.

2) Lack of information. Some subjects will also be difficult to research because there is little to no publicly available information. If you have re-phrased your prompt several times and still have not received the desired results, it may simply be due to a lack of enough quality websites that cover the topic. In which case you may as the LLM a more general question in order to generate research ideas, or you may proceed directly to a search engine.

Common Mistakes and Misunderstandings of Large Language Models in the TI Community

1) Large language models can produce hallucinations. LLM systems will sometimes produce wildly inaccurate results, known as a 'hallucination'. The results of a LLM request should be carefully reviewed for accuracy. The public web is used as the input for the LLM and just as the web sometimes has wildly inaccurate information, so to can a LLM produce nonsensical results.

2) LLM results is not 'Evidence' and should not be directed cited. So just to provide some background, LLM systems are fed with the results of publicly available websites and other public datasets. They do not have access to confidential, proprietary, or secured systems.

   The most popular LLM systems work based on the principle of guessing the next word. They continue this process in order to fill out the results of the prompt. (The technical term to describe this is autoregressive processing). So often the result of a TI related question will be the result of collating one or more TI blogs. That is how the prompt answer is derived, and that is the context in which it should be reviewed.

Using Large Language Models for Task automation and Idea Generation

1) Content. LLM systems can often be a good starting point for content. So if you have webpage content or social media content and you would like to get a starting point for your assignment, often an LLM is useful for creating a rough draft. (subject to some of the limitations mentioned above).
2) Task Automation, Instructions, and Outlines. LLM systems are often good with general non-confidential subjects such as project management. Asking for a checklist for planning an event, managing a project, creating mailers, or contacting your elected official will often produce a detailed list or starting template that can save you time and effort. Other general subjects to consider might include preparing a budget, planning a trip, steps to set up a blog, and many other common activities you could use some assistance with.

   LLM systems are also often good at good at basic technical tasks such as generating computer scripts and code for straight forward tasks.

3) Idea Generation. Sometimes LLM systems will produce interesting results and details that may lead you to do additional research or follow-up refinements to your prompt. You can use LLM as a source of inspiration. Ask for a list of best practices on a topic, details and definitions, and follow-ups and next steps.

4) Refinement. Often the results of your initial prompt will be close to what you need but not exact. Don't be afraid to add to or refine your prompt to get a new version that is closer to what you are looking for.

Conclusion

That wraps up the short guide to prompt engineering for targeted individuals. I have introduced the topic of prompt engineering, covered some specific issues encountered by targeted individuals such as the restrictions on sensitive information, covered some common mistakes when using large language models, as well as provided some good ways to use large language models for task automation and idea generation.