

Prompt Engineering

① Before making your LLM to do some task of a specific domain, tell it to be/act as an expert of that domain.

② You can add extra layers in your prompts. Like your LLM will not only give the answer of your prompt, it will also verify if your prompt is good or it can be made better.

Example prompt: From now on, When I will be asking a question, suggest me a better version of my question

and ask me if I would like to use it or not!

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③ The more generous your prompt will be, the more generously ChatGPT will reply.

You have to be very specific with your prompt.

Example → Generous prompt → Discuss Vanderbilt University

More specific prompt → Discuss Vanderbilt University with respect to Kirkland Hall.

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Hence using "With respect to" keyword you are making more specific prompt.

④ You can also provide structures like how you want ChatGPT to structure your output.

Example → Discuss X University with respect to Y Hall.

Title: <Title of Article>

Author: <Author of Article>

Summary: <Summary>

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ChatGPT in advance

৫ You can always tell to provide output as you wish

Example → From now on, The input that I will be providing

to you, you will convert that to csv format values.

Remember that, there should be only three columns: NAME,

COURSE and ROLE.

Another Example: In addition to whatever I type in, generate

additional examples that fit the format of the csv that I

have asked you to proceed with.

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⑥ Prompt Pattern: A pattern for structuring our statements to use the LMs.

⑥ The persona pattern:

"Act as a" sceptik who is well versed in computer Science.

Whatever I ask you, provide a skeptical and detailed response.

Introducing new information:

Suppose, if you want know some information which chatgpt or

LMS are not trained on, you can add information as prompt

and ask questions based on that.

⑦ Root Prompt: You can structure the scope of chatgpt and make it act according to your choice of scope.

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Example: Act as my personal Assistant. From now on, whatever

task, I provide you, you come up with the solution takes
the minimum amount of time. All of your output should

be time efficient

Example - 2: Act as an AI assistant. that had it's training

stop in 2019 . If I ask you a question that involves info

afterc 2019, state that your training has ended in 2019

and you can't answer the question.

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⑧ Question Refinement Pattern:

Example 1: From now on, whenever I ask a question, suggest a better version of question to use instead and ask me if I would like to use that.

Example 2: Whenever I ask a question about dieting, suggest a better version of the question that emphasizes healthy eating habits and sound nutrition. Ask me for the first question to refine.

Example 3: Whenever I ask a question about who is the greatest of all time (GOT), suggest a better version of the question that puts multiple players unique accomplishment into perspective. Ask me for the first question to refine.

⑨ Cognitive Verifierz Pattern:

Example: Whenever you are asked a question, follow these rules.

Generate a number of additional questions that would help you more accurately answer the question. Combine the answers to the individual questions to produce the final answer to the overall question.

Applied Example: When you are asked to create a recipe, follow these rules. Generate a number of additional questions about the ingredients I have on hand and the cooking equipment I own. Combine the answers of the questions to help produce a recipe that I have the ingredients and tools to make.

Applied example 2: When you asked to plan a trip, follow these rules. Generate a number of additional questions about my budget, preferred activities and whether or not I will have a car. Combine the answers of the question to better plan my trip.

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⑩ Audience Persona Pattern:

Prompt pattern: Explain X to me assuming I am Y.

Example → Explain AIms to me assuming I am very weak in CS.

Example → Explain me about calculus assuming I am a 3 year old boy. Shah Rukh Khan

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⑪ Flipped Interaction Pattern:

Prompt Pattern: I would like you to ask me questions to achieve X. You should ask questions until condition Y is met or to achieve this goal. Ask me one question at a time. Ask your first question.

Example : I would like you to ask me diagnose a problem with my internet. Ask me questions until you have enough information to identify the two most likely causes. Ask one question at a time. Ask me the first question.

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⑫ Few shot Prompting :

It's like teaching the llms about pattern. For example

Input : (Something positive)

Sentiment : Positive

Input : (Something negative)

Sentiment : Negative

Input : (Something Neutral)

Sentiment :

If we press enter without providing the sentiment, chatgpt will try to mimic our ~~answ-~~ pattern and will produce an output related to that.

Output : Sentiment: Neutral.

Also, if we just provide the input, the output llm will provide is a sentiment.

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In the same way like sentiment pattern according to input we can also create a pattern where there will be multiple

Scenario: (Given a scenario)

Action: (What should be done based on the scenario)

We can create a group of it to make the lm aware of the pattern and then if we just provide a scenario; in the output chatgpt will provide the output as "Action"

Then when you will interact about a specific situation and actions based on that, you can ask chatgpt to create more situations and actions accordingly.

Suppose, where there are more option to think instead of just input and output, you can train the lm with multiple steps like below →

Situation

think!

Action:

think!

Action:

think!

Action:

like in a particular scenario, you can have a lot of conditions and actions based on those conditions

(11) Using LLMs to grade outputs.

In Prompt:

Input: (Give an Event)

Output: (Give a not suitable output)

Explanation: The output contains some unwanted words
that are not necessary

Grade: 5/10

Input: (Give that same Event)

Output: (Give a least suitable output)

Explanation: The output is out of context

Grade: 3/10

Input: (Give the same event)

Output: (Give the accurate output)

Explanation: Output is accurate and to the point

Grade: 10/10

- Now provide a new event as input and see what's grading it.

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(12) Gamplay Pattern

Prompt:

"Create a superhero Recognition game for me. Give hints about a superhero like (Their abilities, first letter of the superhero name, about their suits and villains). Then ask me to guess the game in name. The superheroes Must be from (Marvel Cinematic Universe) Not others. Give me 3 chance in each. When I will lost 2 chances, provide an additional hint → which is the real name of the superhero on the Actor played the superhero role).

Start the game when I will write "Start!"

Keep the game running until I say "Stop the game!"
After each round, ask me if I would like to continue or not!

⑬ Template Pattern:

Prompt: I am going to give you a template for your output
CAPITALIZED WORDS are my placeholders. Fill in
my placeholders with your output. Please preserve
the overall formatting of my template. My template
is:

*** Question *** QUESTION

*** Answer *** ANSWER

I will provide you the data in my next prompt
Create 20 questions using my template.

Prompt 2: I am going to give you a template for your output
CAPITALIZED WORDS are my place holders. Fill in
my placeholders with your output. Please preserve the
overall formatting of my template. My template is:

Bio : <NAME>

*** Executive Summary *** <ONE SENTENCE SUMMARY>

*** Full Description : *** <ONE PARAGRAPH SUMMARY>

Extract information about the people involved in the
history of Vanderbilt University.

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⑯ META Language Pattern.

Prompt: We are going to create a trip planning application.

I will describe my trip and you are going to list interesting things to do in places that I will pass through. I will tell you how many days I will stay in each place and you will plan things accordingly.

To describe my route, I will use shorthand notation.

When I say, "Kolkata-2→Bangalore-3" I mean that

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my route will go from Kolkata to Bangalore and I will stay 2 days in Kolkata and 3 days in Bangalore.

After that, you can check for more shorthand notation and ChatGPT will provide the plan accordingly.

Another method:

When I say Task X [Task Y] means, Task X is dependent on task Y being completed first.

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(15) Recipe Pattern

I know how to poach an egg. I know that will need

Stove, eggs, soyabim oil). I don't want to burn my poached egg. I know that I have ^{to} first heat my metal tray. Then put oil in it, and ~~po~~ when it is a bit hot, I have to give the egg in it. Provide a complete sequence of steps for me. Fill any missing eggs. steps.

When you know many of the things of a process but don't know the sequence or you have doubt that ~~to~~ you might miss something. Then you should ~~yo~~ use the Recipe pattern.

Also you can use short hand notation.

Suppose you want to go to Dhaka from Narayanganj.

You can ask lms to say the complete path

Chashara → Sign board → Matua → ... → ... → Dhaka

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(16) Alternate Approach:

Prompt:

For every prompt I give you, determine the underlying problem that I am trying to solve and how I am trying to solve it. Report the alternative approaches to solve the problem and compare the approaches with the original approach implied by request to you.

(17) Ask For Input Pattern:

Prompt 1:

From Now on, I am going to cut/Paste email chains into our conversation. You will summarize what are each person's points in the mail chain. You will provide your summary as a series of bullet points. At the end, list any open questions or action items directly addressed to me. My name is 'Jill Smith'. Ask me for the first mail chain.

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Prompt 2: From now on, translate anything I write into a series of sounds and actions from a dog that represents the dogs reaction to what I write. Ask me, for the first thing to translate.

(18) Outline Expansion Pattern:

Prompt: Act as an outline Expander. Generate a bullet point outline based on the input that I give you and then ask me for which bullet point you should expand on. Create a new outline for the bulletpoint that I select.

At the end, ask me for what bullet point to expand next.

Ask me what to outline.

→ Input: Writing effective prompts for chatgpt /

⇒ Effective way to Learn Data Science .

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Prompt 2: Act as an outline expander. Generate a bullet point outline based on the input that I give you and then ask me for which bullet point you should expand on. Each bullet can have at most 3-5 sub bullets. The bullets should be numbered using the pattern [A-Z].[i-v]. [*through *]. Create a new outline for the bullet point that I select. At the end, ask me for what bullet point to expand next. Ask me for what to outline now.

⑯ Menu Action Pattern:

Prompt: I want you to suggest me some grocery list.

From your list, I will curate and make my own grocery list. So when I will type "Start listing" you will ask me what option to add into my new grocery list. When I will type "Add food", you will show me a list of groceries who are listed by point (1. Eggs, 2. Milk, 3. Shampoo) like this.

Then you will ask me to choose a number from your list. When I will type "Add <pointnumber>" you will add that to my grocery list and when I

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will type 'Remove <point number>' you will remove that point from my grocery list. Start listing.

(20) Fact List check Pattern:

Prompt: Whenever you output texts, generate a set of facts that are contained in the output. The set of facts should be inserted at the end of the output. The set of facts should be the fundamental facts that could undermine the veracity of the output

(21) Tail Generating Pattern:

→ Something you want to add as disclaimer

→ Or you want chatgpt to remember things that it has to do every time

Prompt: (Only the last line prompt example)

→ At the end, add this disclaimer "x"

→ At the end, repeat your first prompt

→ At the end, keep asking me to give a feedback

→ At the end, ask me which bullet point to expand next.

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(22)

Semantic Filter patterns: (Filtering inputs)

Prompt 1: Filter this information below to remove all dates and rewrite the text as little as possible to fix the issues caused by the date removal.

Prompt 2: Filter the information below, to remove any information that would help someone figure out that the patient has diabetes. First explain what information you are going to remove and how

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it might help someone figure out that the patient have diabetes. Then provide the filtered information.

Prompt 3: Filter this information to remove any personal identification info or info that could potentially be used to re-identify the person.