Experimenting with Prompts

Estimated time needed: 40 minutes

Experimenting with Prompts

Large language models (LLMs) are pre-trained on vast amounts of data to generate novel content, including text, images, and video. To generate the desired response, you should feed the input to a model as a prompt. It is important to provide a context-based, clear, and precise prompt to guide the model and get the desired output. The process of designing effective prompts to generate better and desired responses is called prompt engineering.

In this lab, you will learn the basics of prompt engineering and experiment with simple prompts to control how a model interprets and generates desired and coherent responses.

Learning Objectives:

- 1. Design a prompt structure to write concise prompts based on requirements.
- 2. Write unambiguous and context-based prompts to generate the desired output.
- 3. Write prompts in different formats, such as questions, statements, and instructions.

Let's get started prompting and experimenting with foundation models.

Before you start prompting

Before beginning the exercise, you must set up the AI classroom and know the generative AI workspace.

Step 1

As a first step, you must set up your AI classroom for better learning experience.

- · Name the chat
- · Choose the foundation model

Step 2

Know your workspace to prompt the foundation model-based chatbot better.

- Use prompt instructions
- · Type your message
- · Manage your chat
- · Delete the chat from history

Step 3

Identify the task to be accomplished through a prompt

Before you draft a prompt, you should clearly understand the task that a model needs to perform. For example, do you want the model to generate a story or a social post, or do you want the model to summarize text or classify text by identifying sentiments?

Step 4

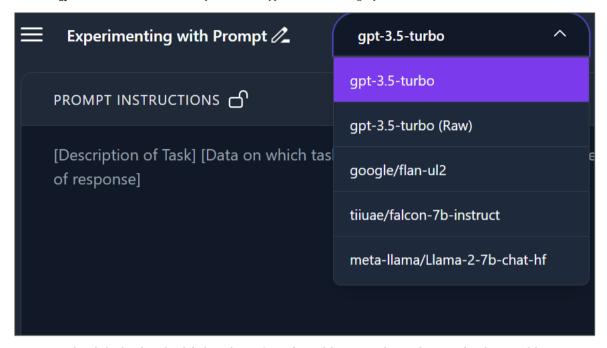
Select the model

Before you start designing prompts, it is important to understand the model you will leverage to accomplish the tasks.

In this exercise, you will use the foundation model **gpt-3.5-turbo** to experiment with the prompts.

OpenAI's gpt-3.5-turbo is an advanced foundation large language model. As a powerful tool for generating coherent and contextually relevant text, the **gpt-3.5-turbo** foundation model can be used for various applications, including chatbots, virtual assistants, content generation, and more. It can be applied for translating languages, answering questions in an informative way, and completing tasks such as writing poems, code, scripts, musical pieces, emails, letters, and so on.

Select the **gpt-3.5-turbo** model from the dropdown in the upper section of the right pane for this exercise.



Note: Though the dropdown list defaults to the **gpt-3.5-turbo** model, you can select an alternative foundation model.

Exercise 1: Prompt Structure

In this exercise, you will experiment to create a prompt structure for drafting prompts for converting the given text from English to Spanish.

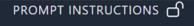
Designing a prompt structure to convert text from English to Spanish

- 1. Let us propose a prompt structure that will help you write concise text prompts. You can provide this in the **Prompt Instructions** field.
- 1. 1
- 1. [Description of task] [Data on which task needs to operate] [Optional-sample example of response]

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You can copy the above example and paste it into the required field.

about:blank 2/8



[Description of Task] [Data on which task needs to operate] [Optional-sample example of response]

2. Let's design a prompt based on the given structure.

Description of task: Translate English statement into Spanish

Data on which task needs to operate: Infusing Generative Artificial Intelligence into business-driven operations is need of an hour.

Example: "My name is Sujan." in Spanish is "Mi nombre es sujan."

- 3. Write the prompt in the **Type your message** field.
- 1. 1
- 1. Translate English Statement into Spanish: "Infusing Generative Artificial Intelligence into business-driven operations is need of an hour." (For example, "My name is Sujan." in Spanish is "Mi nom

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You can copy the above example and paste it in the required field.

Translate English Statement into Spanish: "Infusing Generative Artificial Intelligence into business-driven operations is need of an hour." (For example, "My name is Sujan." in Spanish is "Mi nombre es sujan.")



4. Click **Start Chat** to get the chatbot response as a result in the middle part of the right pane.

Translate English Statement into Spanish: "Infusing Generative Artificial Intelligence into business-driven operations is need of an hour." (For example, "My name is Sujan." in Spanish is "Mi nombre es sujan.")

"Infundir Inteligencia Artificial Generativa en las operaciones impulsadas por negocios es una necesidad imperante."

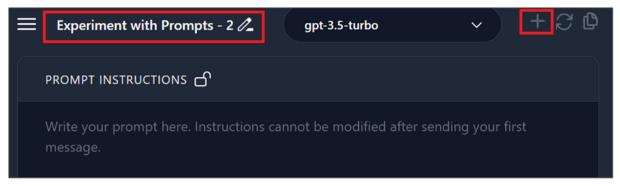
Exercise 2: Unambiguous prompts

Let's learn how adding context-specific input to the prompt influences the output. You need to design a prompt to get information about the relevance of generative AI applications in the content marketing sector.

Creating an unambiguous prompt

1. You can create a new chat and name it as per the context, or you can reset an existing chat.

about:blank 3/8



- 2. Enter the prompt in the **Type your message** field.
- 1. 1
- 1. Tell me about the relevance of generative AI in the content marketing sector

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3. Click **Start Chat** and observe the generated response, similar to the screenshot below.

Tell me about the relevance of generative AI in the content marketing sector.

Generative AI has become increasingly relevant in the content marketing sector. It refers to the use of artificial intelligence algorithms to generate content, such as articles, blog posts, and social media updates. This technology has the potential to streamline and automate content creation processes, saving time and resources for content marketers.

4. Let's see how we can make the response more coherent by adding context to the prompt.

Enter the following prompt in the **Type your message** field.

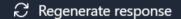
- 1. 1
- 1. Explain the key applications of generative AI in the content marketing sector

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5. Click **Start Chat** and observe the generated response, similar to the screenshot below.

The key applications of generative AI in the content marketing sector include:

- 1. Content Generation: Generative AI can automatically generate content such as articles, blog posts, social media updates, and product descriptions. This can save time and resources for content marketers, allowing them to produce a larger volume of content.
- 2. Personalization: Generative AI can analyze user data and preferences to create personalized content for different audience segments. This can help content marketers deliver targeted messages that resonate with their audience, leading to higher engagement and conversion rates.



6. Review and compare the difference in the response generated by the initial prompt and the modified prompt that included context and specific input.

Exercise 3: Prompts in different formats

Prompts can be presented in different formats, such as questions, statements, or instructions. Let's experiment with how prompts in different formats can yield different results.

Experimenting with Prompts in different formats

- 1. You can create a new chat and name the chat as per the context, or you can reset an existing chat.
- 2. First, let's write a prompt in question format. Enter the prompt in the **Type your message** field.
- 1
- 1. What are the benefits of water reservoirs?

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You can copy the above example and paste it into the required field.

3. Click **Start Chat** and observe the generated response, similar to the screenshot below.

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What are the benefits of water reservoirs?

Water reservoirs have several benefits. Firstly, they help in storing and regulating water supply, ensuring a consistent and reliable water source for various purposes such as drinking, agriculture, and industrial use. Reservoirs also provide a buffer against droughts and floods by storing excess water during wet periods and releasing it during dry spells. Additionally, reservoirs can help generate hydroelectric power by utilizing the stored water to drive turbines. They also provide recreational opportunities like boating, fishing, and swimming. Furthermore, reservoirs can support wildlife habitats and contribute to the overall ecological balance in the surrounding areas.

- 4. Next, write the prompt in statement format. Enter the prompt in the **Type your message** field.
- 1. 1
- 1. Discuss the advantages of water reservoirs.

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You can copy the above example and paste it into the required field.

5. Click **Start Chat** and observe the generated response, similar to the screenshot below.

Discuss the advantages of water reservoirs.

Water reservoirs offer numerous advantages. Firstly, they play a crucial role in water management by storing and regulating water supply. This ensures a consistent and reliable water source for various purposes such as drinking, irrigation for agriculture, and industrial use. By storing water during wet periods, reservoirs provide a buffer against droughts, ensuring a continuous water supply even during dry spells. Additionally, they help mitigate the risk of floods by storing excess water and releasing it slowly, reducing the impact on downstream areas.

Another advantage of water reserve \mathcal{C} Regenerate response hydroelectric power. By

- 6. Further, write the prompt in an instruction format. Enter the prompt in the **Type your message** field.
- 1. 1
- 1. List the top five benefits of water reservoirs.

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You can copy the above example and paste it into the required field.

7. Click **Start Chat** and observe the generated response, similar to the screenshot below.

List the top five benefits of water reservoirs.

The top five benefits of water reservoirs are:

1. Reliable water supply: Reservoirs ensure a consistent water supply by storing water during periods of excess rainfall and releasing it during dry periods. This is crucial for drinking water, irrigation, and industrial use.

2. Flood control: Reservoirs help in flood control by storing excess water during heavy rainfall events and gradually releasing it. The protect lives and property in flood.

Regenerate response

8. You can review and analyze the response generated by each prompt to identify which prompt format works best to accomplish the desired task. For example, the instruction format would work well for a summarization task. For text completion, the statement format would be suitable. When you want to extract a specific entity from a statement, the question format would be most suitable.

Exercise 4: Limit the output length

For a few text generation tasks, such as generating tweets or text messages for a social media post, there are limitations on the number of words. Let's experiment with a prompt that instructs the model to generate a response with a specific number of words or to generate a specific number of statements.

Generating a response of a specific number of words/statements

- 1. You can create a new chat and name the chat as per the context, or you can reset an existing chat.
- 2. Enter the prompt in the **Type your message** field.
- 1. 1
- 1. Create an announcement for starting a new job at ABCTech company as a lead data scientist in a tweet-length message.

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You can copy the above example and paste it into the required field.

3. Click **Start Chat** and observe the generated response, similar to the screenshot below.

Create an announcement for starting a new job at ABCTech company as a lead data scientist in a tweet-length message.

Excited to join ABCTech as the lead data scientist! Looking forward to leveraging cutting-edge technologies and driving data-driven insights for impactful decision-making. #NewJob #DataScience #ABCTech

Try it yourself

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You can try experimenting with prompts regarding the following tasks:

- 1. 1
- 1. 1. An academic researcher uses a text generation model to gather information on the latest AI technologies in education

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- 1. 1
- 1. 2. A content writer wants to create a captivating post about a new smartphone, with a character limit of 280

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- 1. 1
- 1. 3. Get recommendations on the best places to visit in your city



Summary

Congratulations! You just completed the hands-on lab about experimenting with prompts.

In this lab, you experimented with designing a prompt structure that helps to write concise prompts. You learned how to write a concise, unambiguous prompt to generate the desired response. You also experimented with different formats of prompts, such as questions, statements, and instructions. You learned to select the specific format based on the requirements and desired response.

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about:blank 8/8