

Experimenting with Prompts



Estimated time needed: 40 minutes

Introduction

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

After completing this lab, you will be able to:

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 the 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

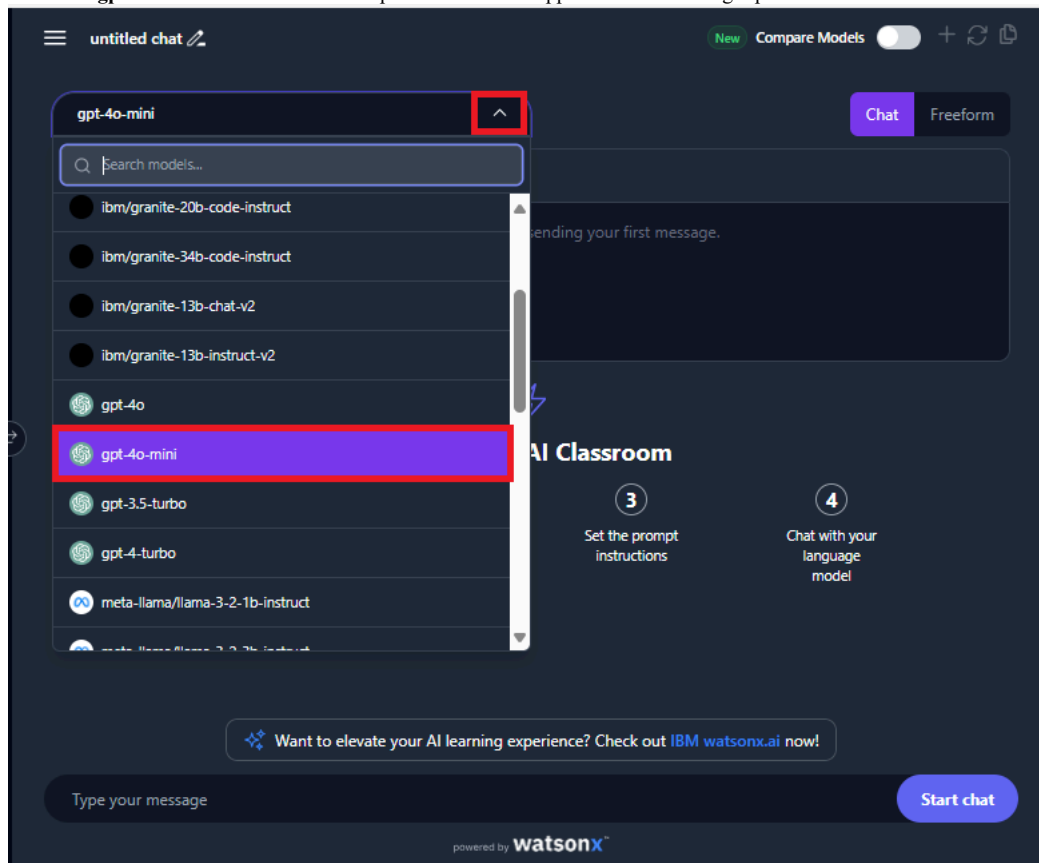
Select the model.

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-4o-mini** to experiment with the prompts.

OpenAI's gpt-4o-mini is an advanced foundation large language model. As a powerful tool for generating coherent and contextually relevant text, the **gpt-4o-mini** foundation model can be used for various applications, including chatbots, virtual assistants, and content generation. 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, and letters.

Select the **gpt-4.0-mini** model from the drop-down list in the upper section of the right pane for this exercise.



Note: Though the drop-down list defaults to some other 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.

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

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

PROMPT INSTRUCTIONS
🔗

[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 Sujun." in Spanish is "Mi nombre es sujan."

3. Write the prompt in the **Type your message** field.

Translate English Statement into Spanish: "Infusing Generative Artificial Intelligence into business-driven operations is need of an hour." (For

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.")

Start chat

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 operaciones impulsadas por negocios es una necesidad del momento."

If you need further assistance with translations or have other phrases you'd like to translate, feel free to ask!

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.



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

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

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



Generative AI is increasingly relevant in the content marketing sector due to its ability to create high-quality, engaging content at scale. Here are some key points regarding its significance:

1. **Content Creation**: Generative AI can produce various types of content, including blog posts, social media updates, product descriptions, and even video scripts. This helps marketers save time and resources while maintaining a consistent output.
2. **Personalization**: AI can analyze customer data to create personalized content tailored to individual preferences and behaviors. This enhances customer engagement and can lead to higher conversion rates.

► Click here for full output of the result we got. The output produced at your end may be different.

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.

Explain the key applications of generative AI in the content marketing sector

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



Generative AI has several key applications in the content marketing sector that enhance efficiency, creativity, and effectiveness. Here are some of the primary applications:

1. **Content Generation**: Generative AI can automatically create a wide range of content types, including articles, blog posts, social media content, email newsletters, and product descriptions. This allows marketers to maintain a steady flow of content without the need for extensive manual input.
2. **Personalized Marketing**: By analyzing customer data and behavior, generative AI can produce personalized content that resonates with individual users. This includes tailored recommendations, personalized emails, and customized landing pages, leading to improved customer experiences and higher engagement rates.

► Click here for full output of the result we got. The output produced at your end may be different.

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.

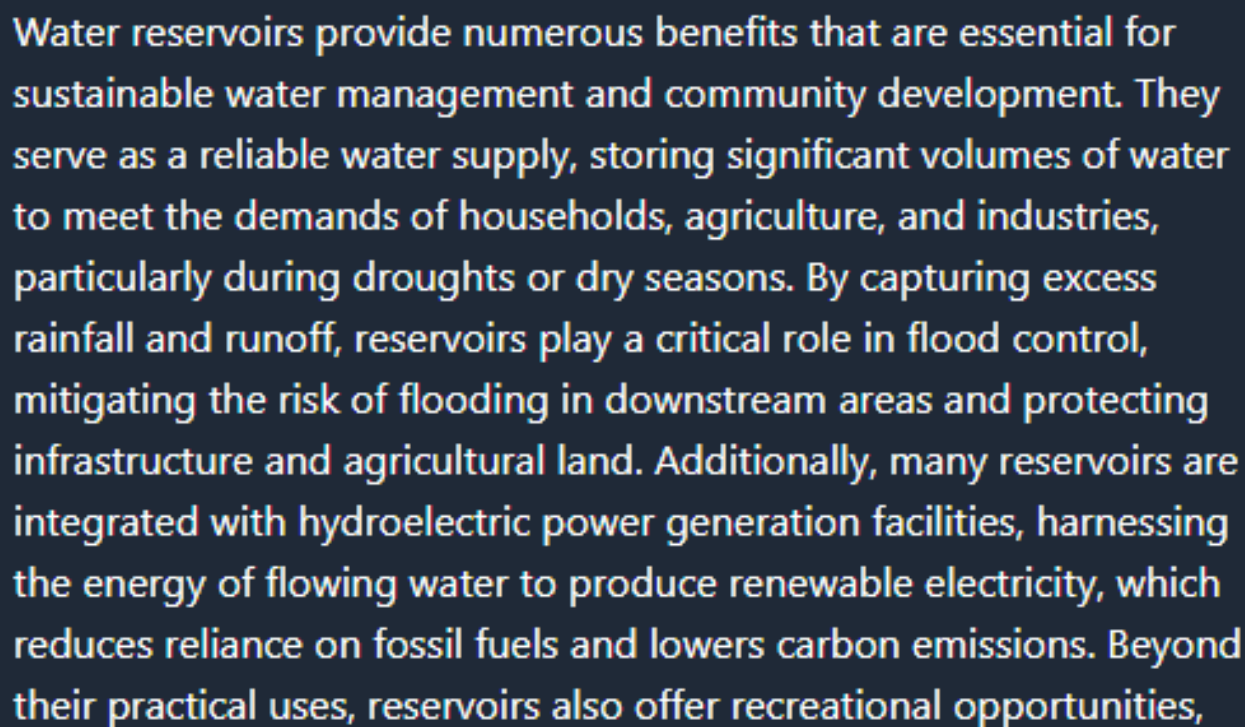
Experimenting with prompts in different formats

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.

What are the benefits of water reservoirs in a detailed paragraph?

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.



Water reservoirs provide numerous benefits that are essential for sustainable water management and community development. They serve as a reliable water supply, storing significant volumes of water to meet the demands of households, agriculture, and industries, particularly during droughts or dry seasons. By capturing excess rainfall and runoff, reservoirs play a critical role in flood control, mitigating the risk of flooding in downstream areas and protecting infrastructure and agricultural land. Additionally, many reservoirs are integrated with hydroelectric power generation facilities, harnessing the energy of flowing water to produce renewable electricity, which reduces reliance on fossil fuels and lowers carbon emissions. Beyond their practical uses, reservoirs also offer recreational opportunities,

► Click here for full output of the result we got. The output produced at your end may be different.

4. Next, write the prompt in statement format. Enter the prompt in the **Type your message** field.

Discuss the benefits of utilizing water reservoirs.

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.



Utilizing water reservoirs presents a multitude of benefits that are vital for effective water resource management, environmental sustainability, and community welfare.

****1. Reliable Water Supply:**** Water reservoirs are essential for storing large quantities of water, ensuring a steady and reliable supply for various applications, including household use, agricultural irrigation, and industrial processes. This is particularly important during periods of drought or low rainfall, when natural water sources may be insufficient, thereby safeguarding public health and economic stability.

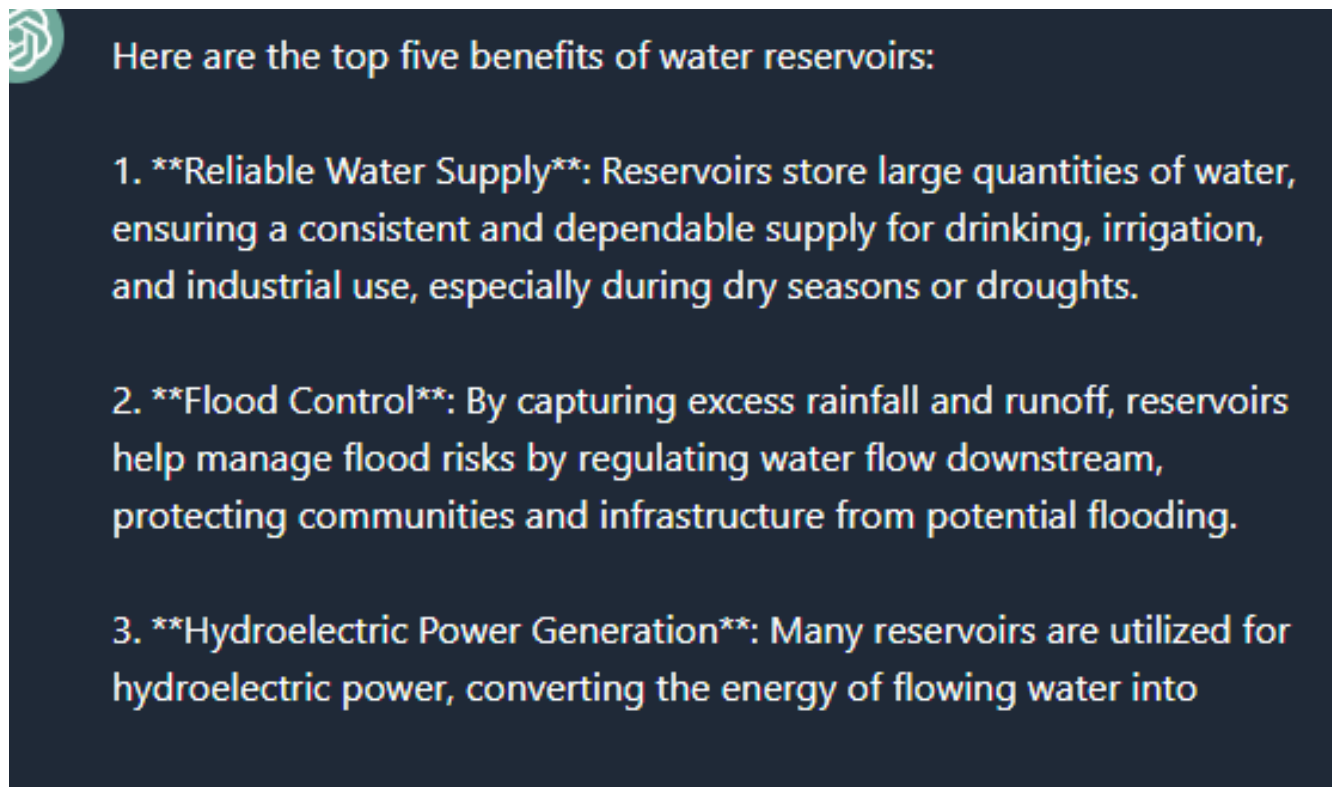
► Click here for full output of the result we got. The output produced at your end may be different.

6. Further, write the prompt in an instruction format. Enter the prompt in the **Type your message** field.

List the top five benefits of water reservoirs.

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.



► Click here for full output of the result we got..The output produced at your end may be different

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 or 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.

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

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 announce that I'm joining ABCTech as a Lead Data Scientist! Thrilled to work with an amazing team and tackle innovative challenges in the world of data. Let's make an impact together! #NewBeginnings #DataScience #ABCTech

Try it yourself

Exercise

You can try experimenting with prompts regarding the following tasks:

1. An academic researcher uses a text generation model to gather information on the latest AI technologies in education.
2. A content writer wants to create a captivating post about a new smartphone, with a character limit of 280.
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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