

Google Cloud Skills Boost

Machine Learning Engineer Learning Path > Introduction to AI and Machine Learning on Google Cloud > Generative AI

[Start Lab](#)

01:30:00

Get Started with Vertex AI Studio

Lab 1 hour No cost Introductory

**GSP1154****Google Cloud Self-Paced Labs**

Lab instructions and tasks

-/100

GSP1154

Overview

Setup and requirements

Task 1. Analyze images with Gemini multimodal

Task 2. Explore multimodal capabilities

Task 3. Design prompts with free-form and structured mode

Task 4. Generate conversations

Congratulations!

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Studio

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Google Cloud Self-Paced Labs

Note: If you see the **Choose an account** dialog, click **Use Another Account**.

3. If necessary, copy the **Username** below and paste it into the **Sign in** dialog.

"Username"



You can also find the **Username** in the **Lab Details** panel.

4. Click **Next**.

5. Copy the **Password** below and paste it into the **Welcome** dialog.

"Password"



6. Click **Next**.

Important: You must use the credentials the lab provides you. Do not use your Google Cloud account credentials.

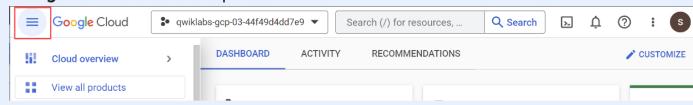
Note: Using your own Google Cloud account for this lab may incur extra charges.

7. Click through the subsequent pages:

- Accept the terms and conditions.
- Do not add recovery options or two-factor authentication (because this is a temporary account).

After a few moments, the Google Cloud console opens in this tab.

Note: To view a menu with a list of Google Cloud products and services, click the **Navigation menu** at the top-left.



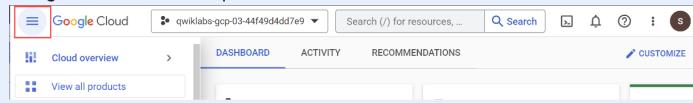
Enable the Vertex AI API

1. In the Google Cloud Console, enter **Vertex AI API** in the top search bar.

2. Click on the result for **Vertex AI API** under Marketplace & APIs.

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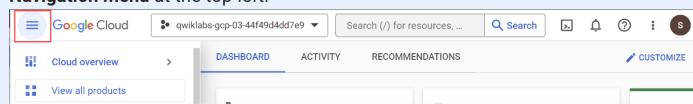
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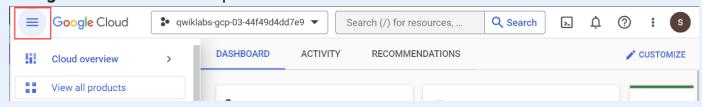


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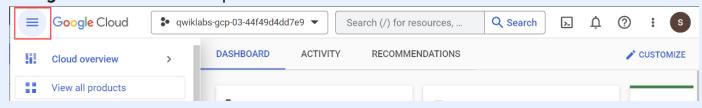


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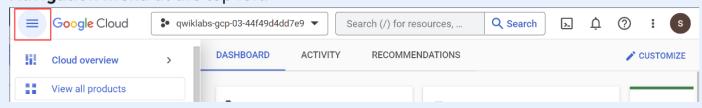


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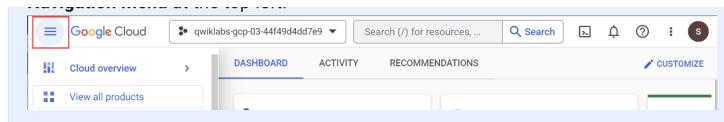


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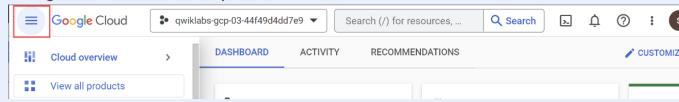


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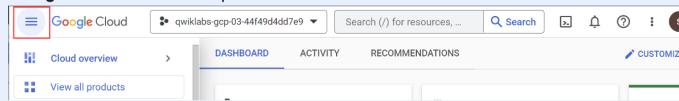


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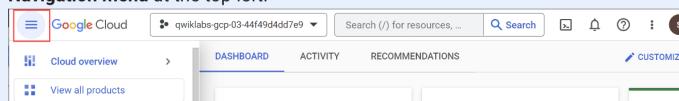


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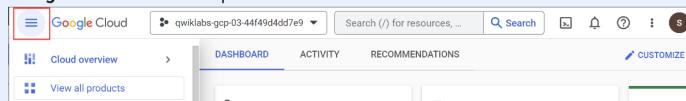


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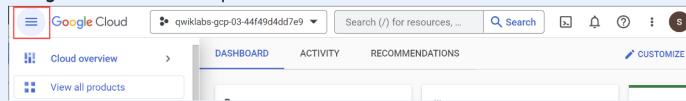


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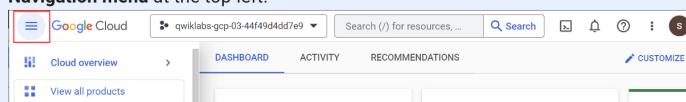


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Prompt design

You can feed your desired input text, e.g. a question, to the model. The model will then provide a response based on how you structured your prompt. The process of figuring out and designing the best input text (prompt) to get the desired response back from the model is called **Prompt Design**.

There is no best way to design the prompts yet. There are 3 methods you can use to shape the model's response:

- **Zero-shot prompting** - This is a method where the LLM is given only a prompt that

describes the task and no additional data. For example, if you want the LLM to answer a question, you just prompt "what is prompt design?".

- **One-shot prompting** - This is a method where the LLM is given a single example of the task that it is being asked to perform. For example, if you want the LLM to write a

examples of the task that it is being asked to perform. For example, if you want the LLM to write a news article, you might give it a few news articles to read.

You may also notice the **FREE-FORM** and **STRUCTURED** tabs. Those are the two modes that you can use when designing your prompt.

- **FREE-FORM** - This mode provides a free and easy approach to design your prompt. It is suitable for small and experimental prompts with no additional examples. You will be using this to explore zero-shot prompting.
- **STRUCTURED** - This mode provides an easy-to-use template approach to prompt design. Context and multiple examples can be added to the prompt in this mode. This is especially useful for one-shot and few-shot prompting methods which you will be exploring later.

FREE-FORM mode

Try zero-shot prompting in **FREE-FORM** mode.

1. Copy the following over to the prompt input field. Keep the current default model setting, which is **Gemini Pro**.

Note: The model name may change with the release of new models.

What is a prompt gallery?



2. Click on the **SUBMIT** button on the right side of the page.

The model will respond to a comprehensive definition of the term prompt gallery.

Here are some exploratory exercises to explore.

- adjust the Temperature parameter to 0.5 and click the **SUBMIT** button
- adjust the Temperature parameter to 1.0 and click the **SUBMIT** button

Inspect how the responses change as to change the parameters.

STRUCTURED mode

With **STRUCTURED** mode, you can design prompts in more organized ways. You can provide **Context** and **Examples** in their respective input fields. This is a good opportunity to learn one-shot and few-shot prompting.

In this section, you will ask the model to complete a sentence.

1. Return to the **Text Prompt** window.

the **Region**.

3. Remove any text from the **Context**

4. Under **Test** field, copy the following in **INPUT** field.

the color of the sky is



Note: You may want to change "color" to "colour" if that's the correct spelling in your country.

5. Click on the **SUBMIT** button on the right side of the page.

Instead of completing the sentence, the model gave a full sentence as a response which

Under **Examples** field, do the following:

1. Add this to the **INPUT** field:

the color of the grass is



2. Add this to the **OUTPUT** field:

the color of the grass is green



3. Click on the **SUBMIT** button on the right side of the page.

You have successfully influenced the way the model produces response.

In the next practice, you will use the model to perform sentiment analysis on a sentence, such as determining whether a movie review is positive or negative.

1. Return to the **Text Prompt** window.

2. Under **Examples** field, delete the previous text for INPUT and OUTPUT for green grass.

3. Under **Test** field, copy the following prompt over to the **INPUT** field.

It was a time well spent!



4. Click on the **SUBMIT** button on the right side of the page.

The model did not have enough information to know that you were asking it to do sentiment analysis. This can be improved by providing the model with a few examples of

Try adding these examples as shown in the image below:

INPUT	OUTPUT
A well-made and entertaining film	positive
I fell asleep after 10 minutes	negative
The movie was ok	neutral

Then click on the **SUBMIT** button on the right side of the page.

The model now provides a sentiment for the input text. For the text *It was a time well spent!*, the sentiment is labeled as *positive*.

You can also save the newly designed prompt. To save the prompt, name the prompt any way you like, such as *sentiment analysis test* and click on **Save** button and then select the region **Region** of your lab. Click **SAVE**

The saved prompt will appear at the **MY PROMPTS** tab.

The screenshot shows the Language interface with the 'MY PROMPTS' tab selected. At the top, there are tabs for 'GET STARTED', 'MY PROMPTS' (which is highlighted in blue), and 'TUNING'. Below these are buttons for '+ CREATE PROMPT', '+ CREATE CHAT PROMPT', and 'IMPORT PROMPT'. A 'Filter' button and a search bar ('Prompt name') are also present. The search bar contains the text 'my-sentiment-analysis'.

Click **Check my progress** to verify the objectives.

The screenshot shows a simple interface titled 'Create prompts with text' with a large, empty text area below it.

Task 4. Generate conversations

Create Chat Prompt lets you have a freeform chat with the model, which tracks what was previously said and responds based on context.

1. Return to the **Language** page.
2. Click on the **TEXT CHAT** button to create a new chat prompt.

The screenshot shows the 'Create a new prompt' interface. It has two main sections: 'Generate text' and 'Start a conversation'. The 'Start a conversation' section is highlighted with a red arrow pointing to the 'TEXT CHAT' button. Below each section are 'TEXT PROMPT' and 'CODE PROMPT' buttons.

3. Under **Model**, select **chat-bison (latest)** and select **Region** for **Region**. You will see the new chat prompt page.

For this section, you will add context to the chat and let the model respond based on the context provided.

4. Then the following context to **Context** field.

The screenshot shows a text input field labeled 'Context' containing the following text:
Your name is Roy.
You are a support technician of an IT department.
You only respond with "Have you tried turning it off and on again?" to any queries.

5. Add the following text to the chatbox under Responses.

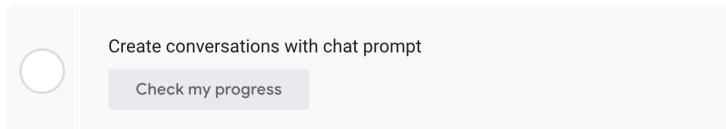
The screenshot shows a text input field labeled 'Responses' containing the following text:
My computer is so slow

6. Press **Enter** key or click **Send message** (right arrow-head button).

The model would consider the provided additional context and answer the questions within the constraints.

7. Name the prompt anyway you like and click on **Save** button and then select the region **Region** of your lab. Click **SAVE**

Click Check my progress to verify the objectives.



Congratulations!

You learned how to analyze an image with multimodal, explore multimodal capabilities, create and test a prompt, and generate a conversation. You have taken the first step to

Google Cloud training and certification

...helps you make the most of Google Cloud technologies. [Our classes](#) include technical skills and best practices to help you get up to speed quickly and continue your learning journey. We offer fundamental to advanced level training, with on-demand, live, and virtual options to suit your busy schedule. [Certifications](#) help you validate and prove your skill and expertise in Google Cloud technologies.

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Lab Last Tested May 22, 2024

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