

Google Cloud Skills Boost for Partners

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Develop GenAI Apps with Gemini and Streamlit

Course · 5 hours 60%
45 minutes complete[Course overview](#)

Develop GenAI Apps with Gemini and Streamlit

Getting Started with the Gemini API in Vertex AI with cURL

Introduction to Function Calling with Gemini

Getting Started with Google Generative AI Using the Gen AI SDK

Utilize the Streamlit Framework with

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Quick tip: Review the prerequisites before you run the lab

[Start Lab](#)

00:45:00

Getting Started with the Gemini API in Vertex AI with cURL

 [Lab](#) [45 minutes](#) [No cost](#) [Intermediate](#)

Rate Lab

This lab may incorporate AI tools to support your learning.

Lab instructions and tasks

-/100

GSP1228

Overview

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Task 1. Open the notebook in Vertex AI Workbench

Task 2. Set up the notebook

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Task 4. Multimodal input

Congratulations!

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Google Cloud Self-Paced Labs

Overview

In this lab, you learn how to use the Gemini API in Vertex AI with cURL commands to interact with the Gemini 2.0 Flash (`gemini-2.0-flash`) model. You will learn how to generate text from a prompt, add model parameters, chat, and generate text from images and video.

Gemini

[Gemini](#) is a family of powerful generative AI models developed by Google DeepMind, capable of understanding and generating various forms of content, including text, code, images, audio, and video.

Gemini API in Vertex AI

The Gemini API in Vertex AI provides a unified interface for interacting with Gemini models. This allows developers to easily integrate these powerful AI capabilities into their applications. For the most up-to-date details and specific features of the latest versions, please refer to the official [Gemini documentation](#).

Gemini Models

- [Gemini Pro](#): Designed for complex reasoning, including:

- Analyzing and summarizing large amounts of information.

- [Gemini Flash](#): Optimized for speed and efficiency, offering:

- Sub-second response times and high throughput.
- High quality at a lower cost for a wide range of tasks.
- Enhanced multimodal capabilities, including improved spatial understanding, new output modalities (text, audio, images), and native tool use (Google Search, code execution, and third-party functions).

Prerequisites

Before starting this lab, you should be familiar with:

- Basic Python programming.
- General API concepts.
- Running Python code in a Jupyter notebook on [Vertex AI Workbench](#).

Objectives

In this lab, you will learn how to perform the following tasks:

- Install the Python SDK
- Use the Gemini API in Vertex AI to interact with each model
- Use the Gemini 2.0 Flash (`gemini-2.0-flash`) model to generate text from image(s), text prompts and video

Setup and requirements

Before you click the Start Lab button

Read these instructions. Labs are timed and you cannot pause them. The timer, which starts when you click **Start Lab**, shows how long Google Cloud resources are made available to you.

This hands-on lab lets you do the lab activities in a real cloud environment, not in a simulation or demo environment. It does so by giving you new, temporary credentials you use to sign in and access Google Cloud for the duration of the lab.

To complete this lab, you need:

- Access to a standard internet browser (Chrome browser recommended).

This prevents conflicts between your personal account and the student account, which may cause extra charges incurred to your personal account.

- Time to complete the lab—remember, once you start, you cannot pause a lab.

Note: Use only the student account for this lab. If you use a different Google Cloud account, you may incur charges to that account.

How to start your lab and sign in to the Google Cloud console

1. Click the **Start Lab** button. If you need to pay for the lab, a dialog opens for you to select your payment method. On the left is the Lab Details pane with the following:

- Time remaining
- The temporary credentials that you must use for this lab
- Other information, if needed, to step through this lab

2. Click **Open Google Cloud console** (or right-click and select **Open Link in Incognito Window** if you are running the Chrome browser).

The lab spins up resources, and then opens another tab that shows the Sign in page.

Tip: Arrange the tabs in separate windows, side-by-side.

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

"Username"



You can also find the Username in the Lab Details pane.

4. Click **Next**.

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

"Password"



You can also find the Password in the Lab Details pane.

6. Click **Next**.

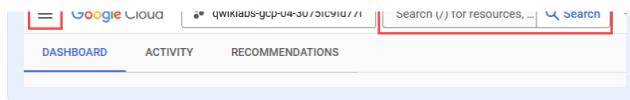
Note: Using your own Google Cloud account for this lab may incur extra charges.

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).
- Do not sign up for free trials.

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

Note: To access Google Cloud products and services, click the **Navigation menu** or



Task 1. Open the notebook in Vertex AI Workbench

1. In the Google Cloud console, on the **Navigation menu** (≡), click **Vertex AI > Workbench**.

The JupyterLab interface for your Workbench instance opens in a new browser tab.

Task 2. Set up the notebook

1. Open the `notebook_name` file.
2. In the **Select Kernel** dialog, choose **Python 3** from the list of available kernels.

3. Run through the **Getting Started** and the **Import libraries** sections of the notebook.

Note: You can skip any notebook cells that are noted *Colab only*. If you experience a 429 response from any of the notebook cell executions, wait 1 minute before running the cell again to proceed.

In the following sections, you will run through the notebook cells to see how to use the Gemini API in Vertex AI with cURL commands to interact with the Gemini 2.0 Flash (`gemini-2.0-flash`) model.

Task 3. Use the Gemini Flash Model

how to use the Gemini 2.0 Flash to generate text from a prompt.

1. In this task, run through the notebook cells to see how to use the Gemini Flash model to generate text from a text prompt.

Note: Save the notebook file before clicking on the **Check my progress** button for every task.

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

<input type="radio"/>	Generate text from the text prompt <input type="button" value="Check my progress"/>
<input type="radio"/>	Generate multi-turn conversations from the chat prompt
<input type="radio"/>	Run Function calling cell in the notebook <input type="button" value="Check my progress"/>

Task 4. Multimodal input

The Gemini 2.0 Flash (`gemini-2.0-flash`) is a multimodal model that supports adding images and videos in text or chat prompts for a text response.

Flash model to generate text from an image from a local file, an image from Google Cloud Storage, and a video file.

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

<input type="radio"/>	Generate text from the image file <input type="button" value="Check my progress"/>
<input type="radio"/>	Generate text from the video file <input type="button" value="Check my progress"/>

Congratulations!

Congratulations! In this lab, you have successfully learned how to use the Gemini API in Vertex AI with cURL commands to interact with the Gemini 2.0 Flash (`gemini-2.0-flash`) model to generate text, add model parameters, chat, generate text from a local image, generate text from an image on Google Cloud Storage and generate text from a video file.

Next steps / learn more

Check out the following resources to learn more about Gemini:

- [Gemini Overview](#)
- [Generative AI on Vertex AI Documentation](#)

Explore the [Vertex AI Notebook](#) for a curated, searchable gallery of notebooks for Generative AI.
• Explore other notebooks and samples in the [Google Cloud Generative AI repository](#).

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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