

Creating API Key for Various LLM Models

Scenario:

As an Agentic AI engineer working at XYZ company, you're tasked with integrating advanced AI models into various customer-facing applications. These models need to handle complex tasks such as natural language understanding, conversation management, and intelligent data extraction. To achieve this, you need access to a range of cutting-edge language models (LLMs) like Google Gemini, Hugging Face, and others.

Description:

In this hands-on lab, you will learn how to create API keys for various language models (LLM) APIs. This guide will cover steps for models such as Google Gemini, Hugging Face, and others. The goal is to equip you with the knowledge to work with different LLMs, obtain their API keys, and integrate them into platforms for building AI-powered applications. As the lab evolves, more LLMs will be added to expand your toolkit for working with cutting-edge AI technologies in real-world applications.

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1 Introduction

In this lab, you will learn how to create API keys for multiple Large Language Models (LLMs), including Google Gemini, Hugging Face, and others.

These API keys are essential for authenticating your applications and enabling them to interact with the models securely and efficiently.

API keys act as a gateway to connect your application with powerful LLMs, allowing you to unlock their full capabilities for tasks like natural language processing, text generation, and conversational AI.

This lab will guide you through the process of generating and using these keys for seamless integration with the LLMs, providing you with the tools needed to enhance your AI-driven projects.

By the end of this lab, you'll be equipped with the knowledge to generate, manage, and securely use API keys for various LLMs, setting a strong foundation for your AI applications.

2 Overview & Key Concepts

2.1 API Keys

An API key is a unique identifier used to authenticate your application when making requests to an API. Think of it like a password that proves your application is authorized to access the service.

It's important to keep your API key secure because it gives access to the services provided by the model. If an API key is compromised, anyone with access to it can misuse the service.

Therefore, it's essential to store your API keys safely, typically using environment variables or secret management tools, rather than directly in your code.

2.2 Large Language Models (LLMs)

Large Language Models (LLMs) are advanced AI systems trained on vast amounts of text data to understand and generate human-like text.

Models like Google Gemini and Hugging Face are popular examples of LLMs that are used in a wide range of applications, from chatbots to content generation.

These models can process and understand natural language, making them powerful tools for tasks such as language translation, text summarization, and sentiment analysis.

To use these models programmatically, you need an API key to authenticate and interact with them.

2.3 Model Providers

Model providers are companies or platforms that offer access to LLMs via APIs. Examples include **Google**, which provides access to its Gemini model, and **Hugging Face**, a platform that offers a wide variety of pre-trained LLMs.

These providers offer APIs to allow developers to integrate their models into applications. Each provider requires an API key to ensure that only authorized users can access their models.

By generating and using the API key, you're able to authenticate your requests and access the models' capabilities.

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3 Documentation

1. Google Gemini API:

ai.google.dev

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4 Prerequisite

There are no prerequisites to perform this lab.

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5 Creating an OpenAI API Key and Adding Credits to Your OpenAI Account

In this section, we will guide you through creating an OpenAI API key and adding credits to your account.

First, you will **generate an API key from OpenAI**, which will **allow you to securely access and interact with OpenAI's services, such as using GPT models, without entering your credentials each time**. The API key acts as a unique identifier for your account, ensuring only authorized users can access the services.

Next, you'll **add credits to your OpenAI account**, which **will be used to pay for API calls and services**. **This step is necessary to continue using OpenAI's API, as credits ensure you're billed for the resources you consume and prevent service interruptions.**

5.1 Creating an OpenAI API key

An **API key** is like a secure password that lets your applications talk to OpenAI's services. Without it, OpenAI can't identify you, and your requests won't work.

Think of it as your **digital ID** — it proves who you are, allows you to use OpenAI tools, and helps OpenAI track your usage for billing and monitoring.

With an API key, you can:

- Access OpenAI models like **GPT**, **DALL·E**, and **Whisper** directly from your code, apps, or tools.
 - Add AI features to your projects — for example, chatbots, text generation, or image creation.
 - Safely connect OpenAI to other platforms, APIs, and systems.
1. Go to <https://platform.openai.com/> and enter your email address and password to log in to your OpenAI account.

Build on the OpenAI API Platform

Sign up or login with an OpenAI account to build with the OpenAI API.

1

Continue

2

OR

 Continue with Google

 Continue with Apple

 Continue with Microsoft

 Continue with phone

Enter your password

Email address

support@k21academy.com

Edit

Password

.....

1



[Forgot password?](#)

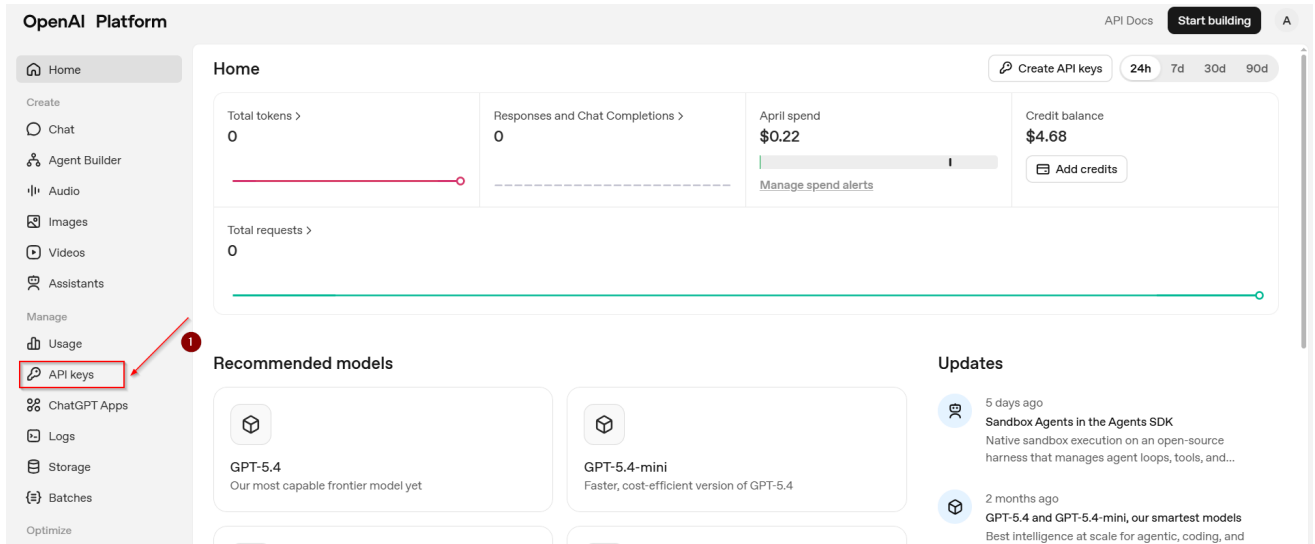
Continue

2

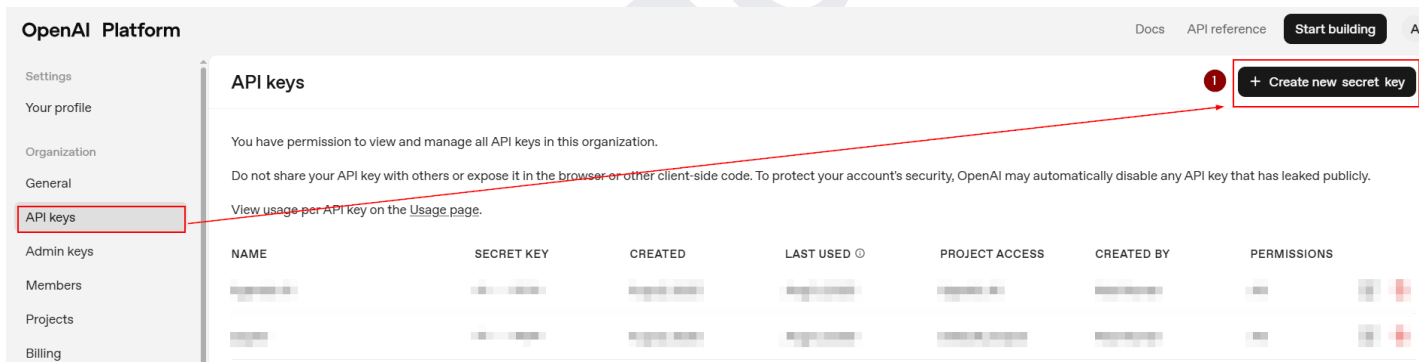
OR

Log in with a one-time code

2. From the **left-hand menu**, scroll to the **Manage** section and click on **API keys**.



3. In the API Keys section, click on **“Create New Secret Key.”**



4. In the **“Create new secret key”** window, select

- Owned by – Select You.
- Name – Enter a name for your key (e.g., Atul OpenAI).
- Project – Select Default project or your desired project.
- Permissions – Choose All.
- Click Create secret key.

Create new secret key

Owned by

You

Service account

This API key is tied to your user and can make requests against the selected project. If you are removed from the organization or project, this key will be disabled.

Name Optional

Atul OpenAI

Project

Default project

Permissions

All

Restricted

Read only

Cancel

Create secret key

5. Make sure to copy and store your API key right away in Notepad, as it can't be viewed again. If it's lost, you'll have to create a new one.

Save your key

Please save your secret key in a safe place since **you won't be able to view it again**. Keep it secure, as anyone with your API key can make requests on your behalf. If you do lose it, you'll need to generate a new one.

[Learn more about API key best practices](#) 

1

sk-proj-NnbkWqT9DVIHTx0inGJip-RHavly

 Copy

Permissions

Read and write API resources

Done

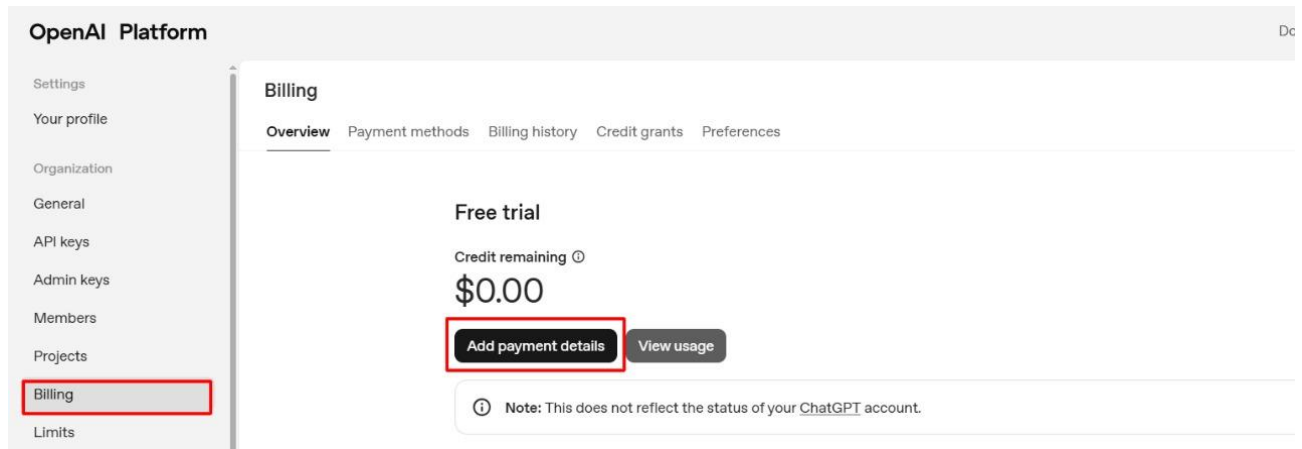
Important Note: You've created your first API key, but you can't use it yet. First, you need to add funds to your account since this is a paid service and requires a balance to work. Please follow the steps below to add credits to your account.

5.2 Add credits to your OpenAI account

OpenAI is a **paid service** (with usage-based pricing). The API calls you make will consume credits, so your account must have a balance before you can use the key. Without credits, requests will be rejected.

1. Go to the **Billing** section: <https://platform.openai.com/account/billing>

2. Click **Add Payment Details**.



3. Enter your payment information:

- Credit Card Number
- Name on Card
- Billing Address
- Then click Continue.

Add payment details



Add your credit card details below. This card will be saved to your account and can be removed at any time.

Card information

 4400 06 [redacted] **1** **2** 12 [redacted] 30 **3**

Name on card

Atul Kumar **4**

Billing address **5**

[redacted] 

[redacted]

[redacted]

[redacted] [redacted]

[redacted] 

☐ Purchasing as a business

6

4. In **Initial Credit Purchase**, enter **\$5**, uncheck **Automatic Recharge** to prevent automatic deductions, and click **Continue**.

Configure payment

Initial credit purchase

 1

Enter an amount between \$5 and \$100

Model pricing [↗](#)

Would you like to set up automatic recharge?

☐ Yes, automatically recharge my card when my credit balance falls below a threshold

2

When credit balance goes below

Enter an amount between \$5 and \$95

Bring credit balance back up to

Enter an amount between \$10 and \$100

Limit the amount of automatic recharge per month

Enter an amount between \$10 and \$100. Leave this field empty for no recharge limit.

3

5. Click **Confirm Payment** and enter the OTP to complete the transaction successfully.

Payment summary

Due today

Description	Amount
OpenAI API usage credit	\$5.00
Estimated tax	\$0.90
Estimated total	\$5.90

Payment method

 ••••3003
Expires 11/2030

Default

By continuing you agree to our [service credit terms](#). Paid credits are non-refundable and expire one year from purchase date.

Back

Confirm payment

Payment successful! x Docs API n

Billing

Overview Payment methods Billing history Credit grants Preferences

Free trial

Credit remaining ⓘ

\$5.00

Add payment details View usage

ⓘ Note: This does not reflect the status of your [ChatGPT](#) account.

 **Payment methods**
Add or change payment method

 **Billing history**
View past and current invoices

You can now start using the API key in your labs.

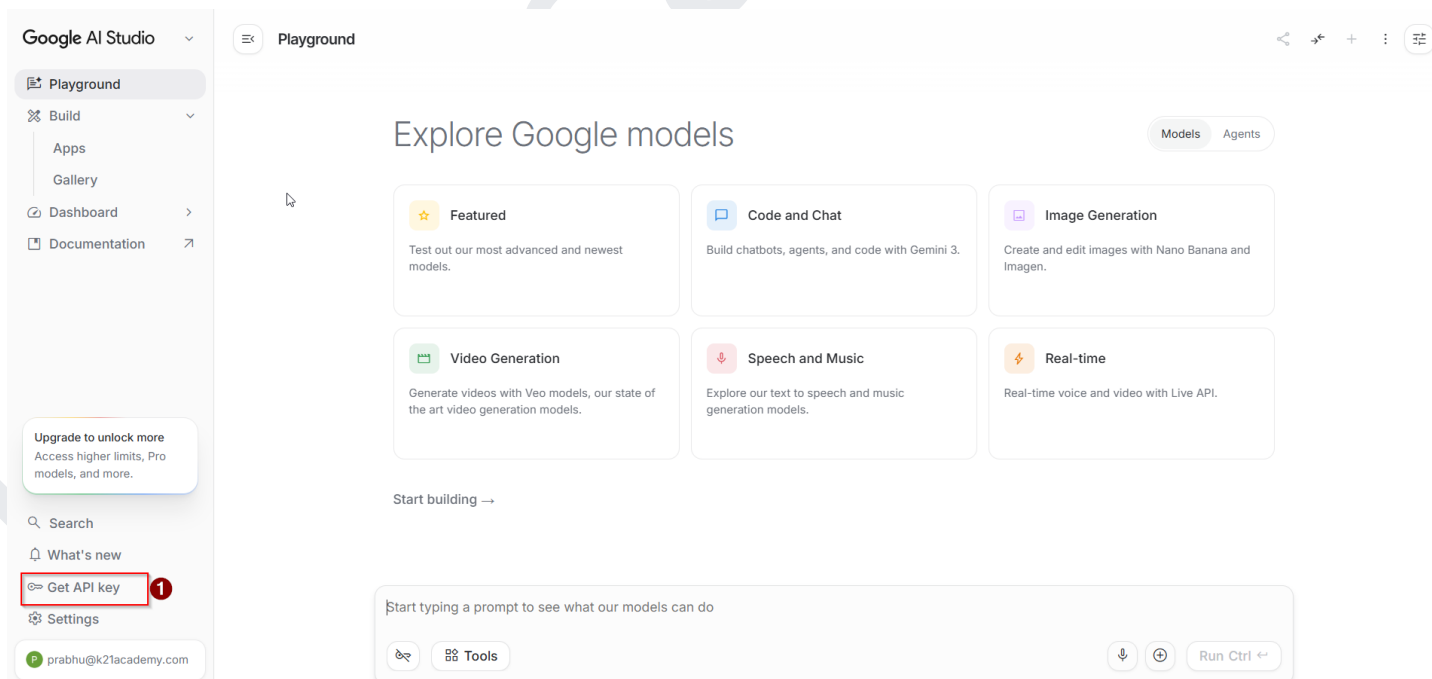
6 Creating a Gemini API Key

Creating a **Google Gemini API key** is essential to access and interact with Google's powerful language models.

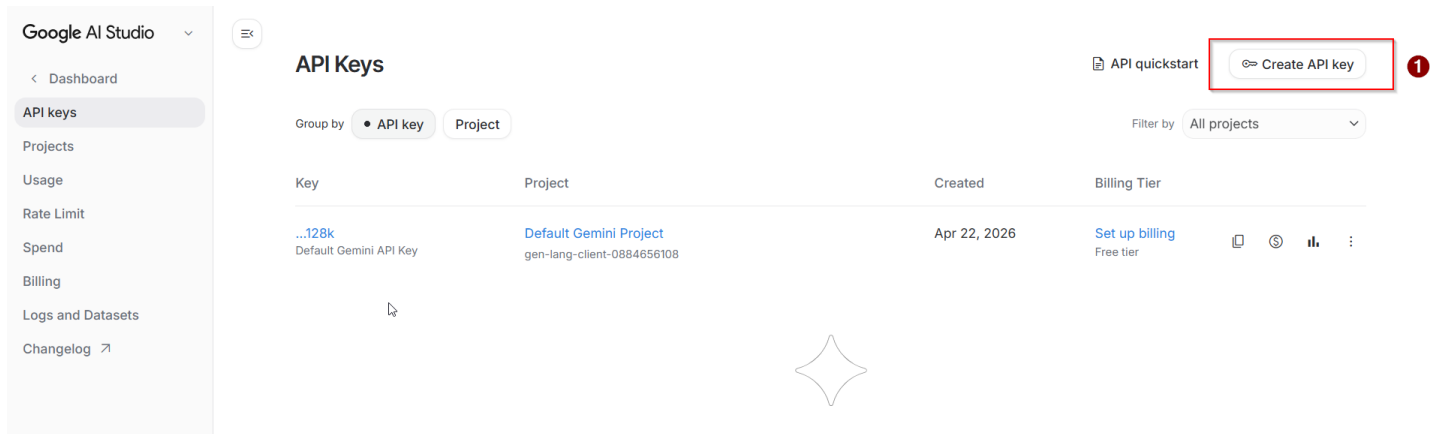
Google Gemini is designed to understand and generate human-like text, and the API key acts as the gatekeeper, allowing your application to securely access this advanced AI technology.

Note: Google Gemini API keys are **free to obtain**. You can generate one through Google AI Studio by signing in with your Google account. This free tier is designed for testing and development purposes, offering limited usage suitable for experimentation.

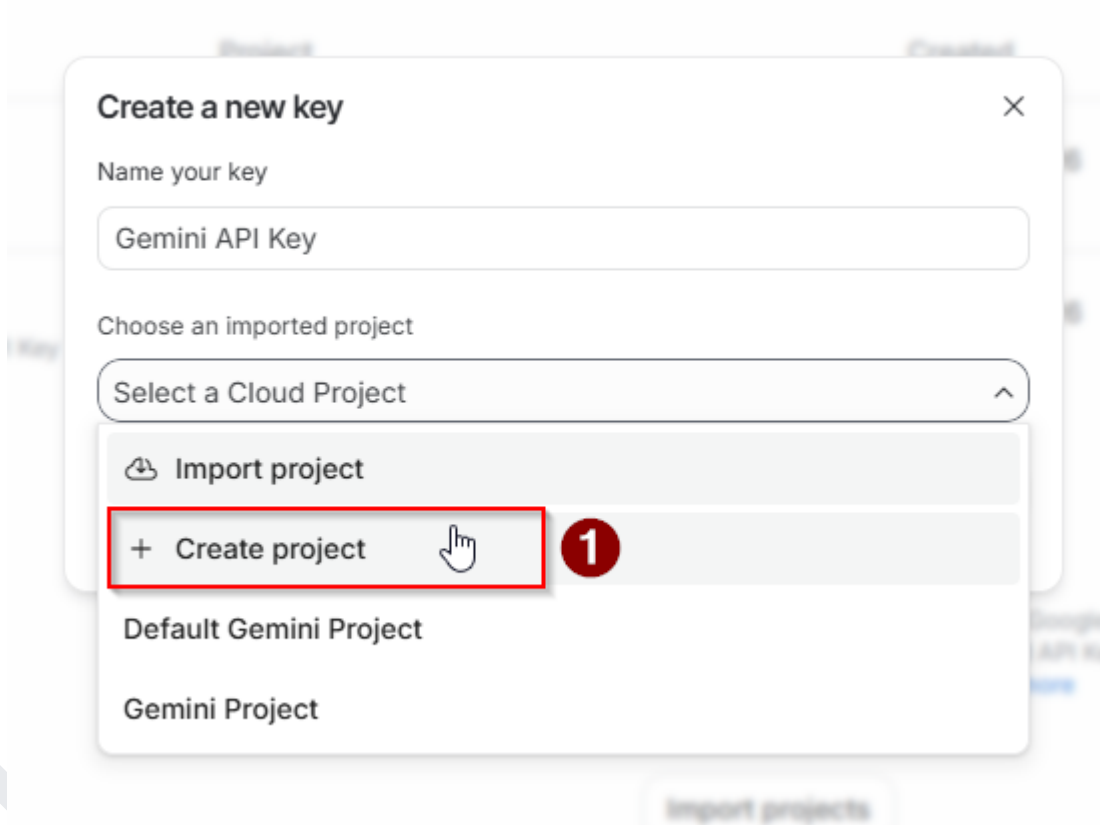
1. To connect the Google Gemini Chat Model, you will need an API Key. Let's create a **Google Gemini API Key** to proceed.
2. Open [Google AI Studio](#) and Click on **Get API Key**.



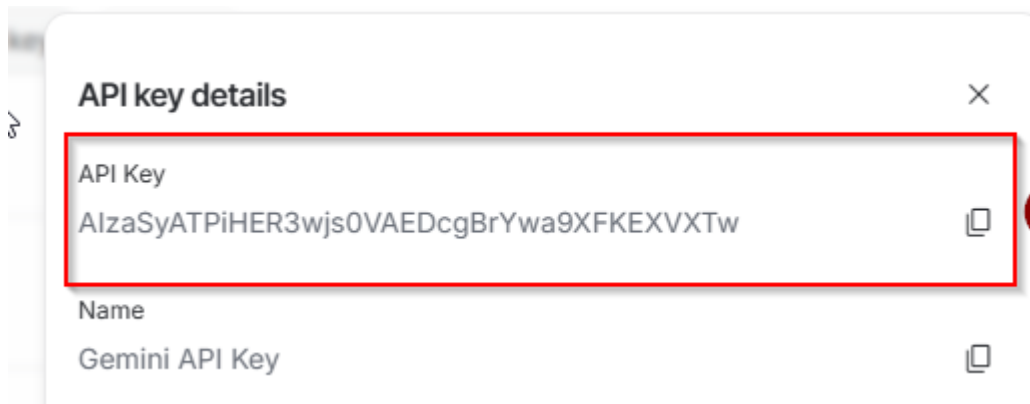
3. Click on **Create API Key**.



4. Click on **Create Project** to generate a new API key for your new project.

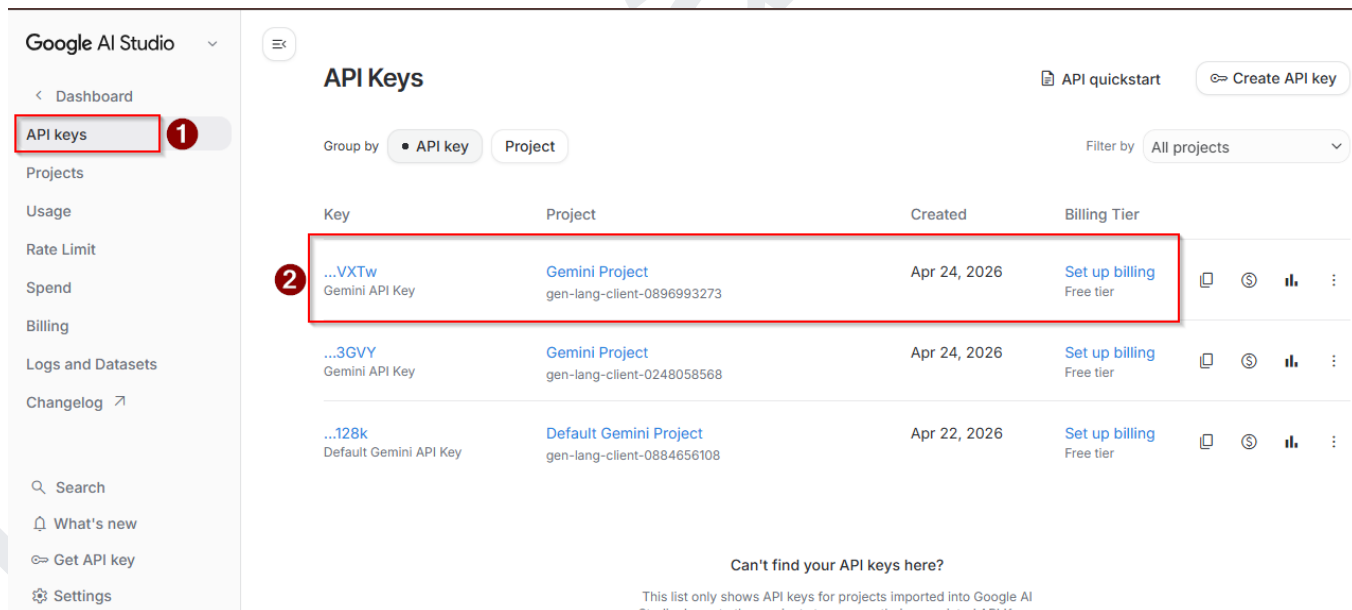


5. **Copy** the Generated API Key



6. Store the API Key in Notepad. We use this key in the upcoming labs.

Note: Do not share this token with anyone, as it provides access to your account. In the upcoming labs, we will be using models that are eligible for the free tier. Therefore, this token is completely free to use, and no charges are associated with it, as you have created a free trial account.



7 Creating a Hugging Face API Key

Hugging Face is a company and a platform that specializes in Natural Language Processing (NLP) and artificial intelligence (AI) technologies.

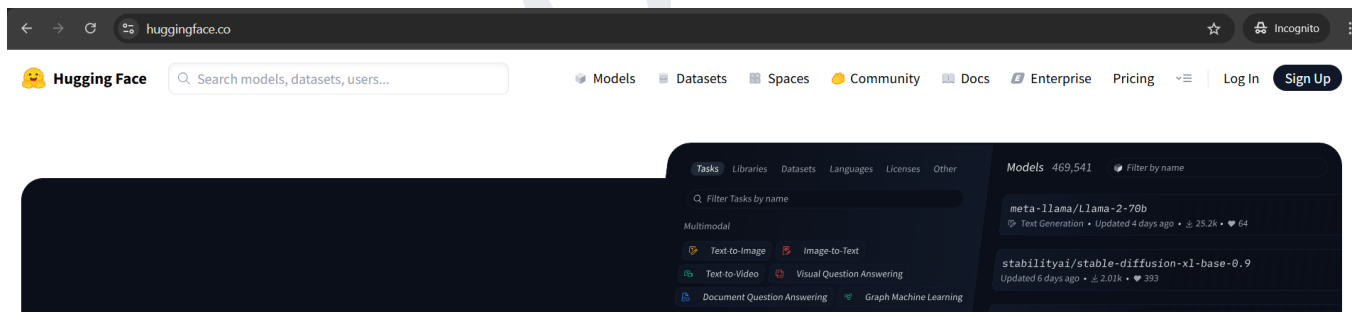
It has become one of the leading names in the AI and NLP space, primarily due to its open-source tools and models.

To integrate Hugging Face models and services into your applications, you'll need to create an API key.

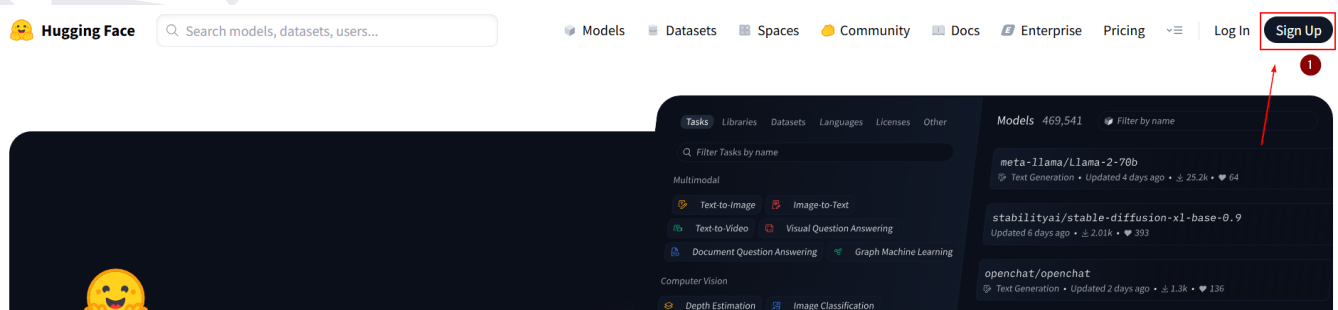
This key allows you to authenticate your requests and interact with Hugging Face's services, including model inference and other cloud-based features.

Here's how you can create an API key:

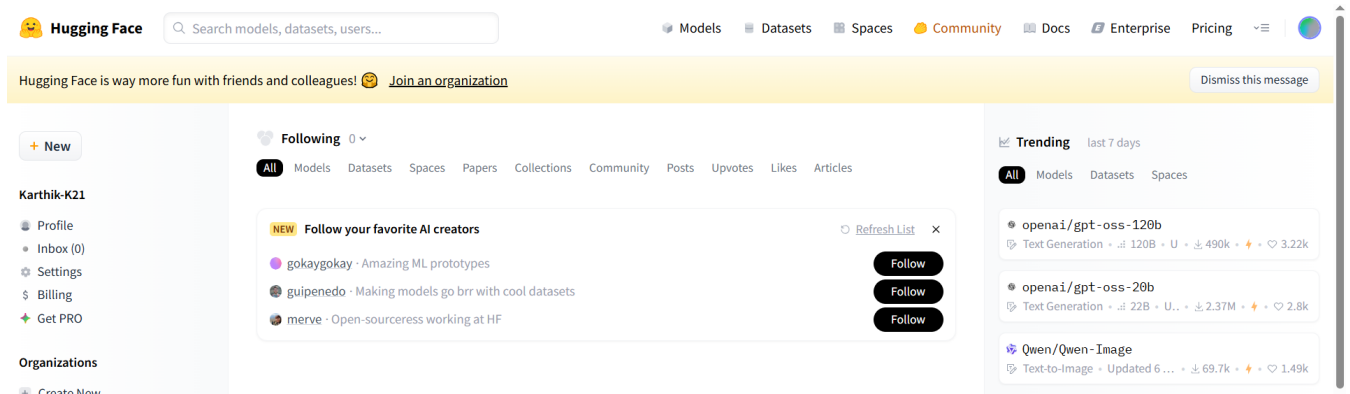
1. Click on the link to visit the Hugging Face website: <https://huggingface.co/>



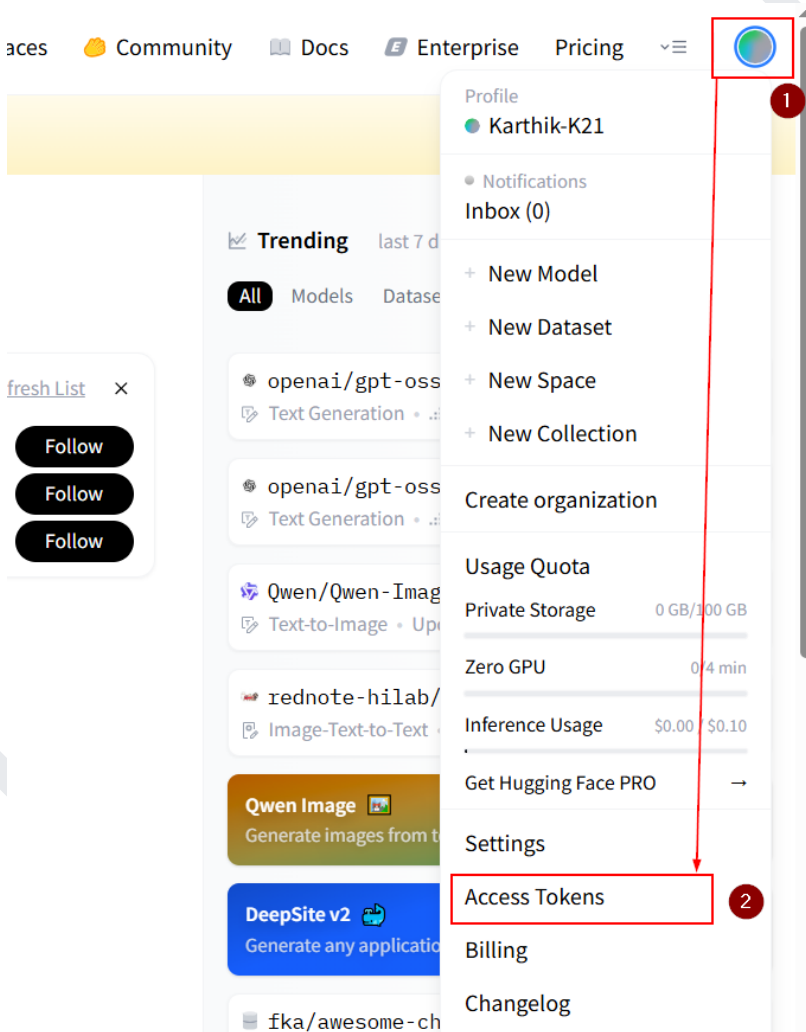
2. Click on **Sign Up** in the top-right corner and follow the registration process.



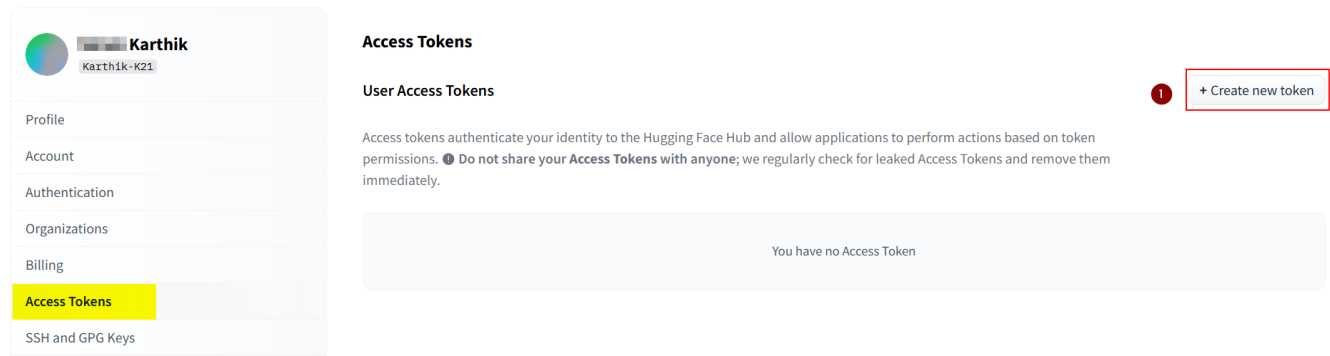
3. After creating your account, log in using your credentials.



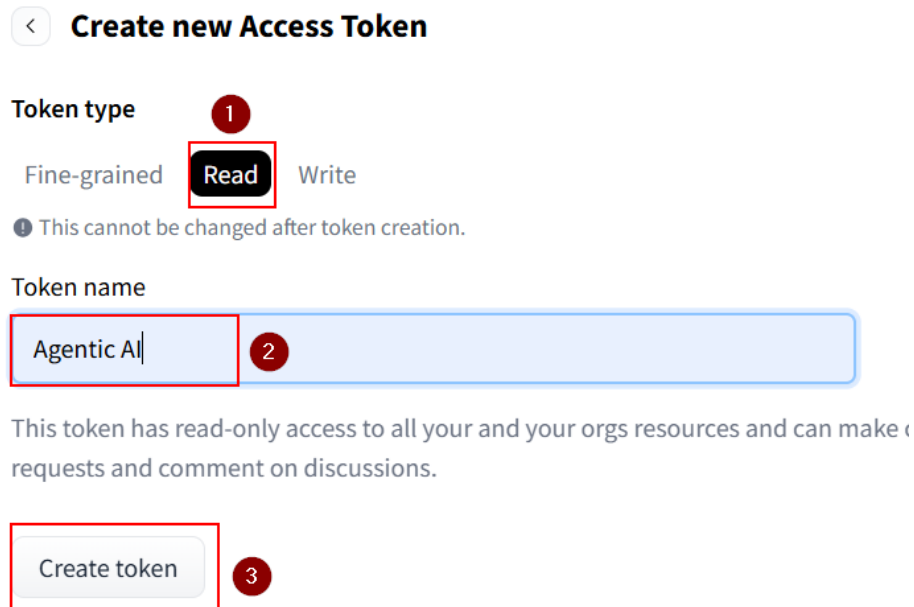
4. Click on your profile icon (top-right corner) and select **Access tokens**.



5. In the Access Token page, click **New Token**



6. To create a Hugging Face Access Token, select "Read" as the token type, enter a name (e.g., "Agentic AI"), and click "Create token" to generate the token with read-only access to your resources.



7. Make sure to copy and store your API key right away in Notepad, as it can't be viewed again. If it's lost, you'll have to create a new one.

Save your Access Token



Save your token value somewhere safe. **You will not be able to see it again after you close this modal.** If you lose it, you'll have to create a new one.

hf_yFsWjGhvtvW QHhDtOPRBGtUktXv

 Copy

1

Name

Permissions

Agentic AI

READ

Done

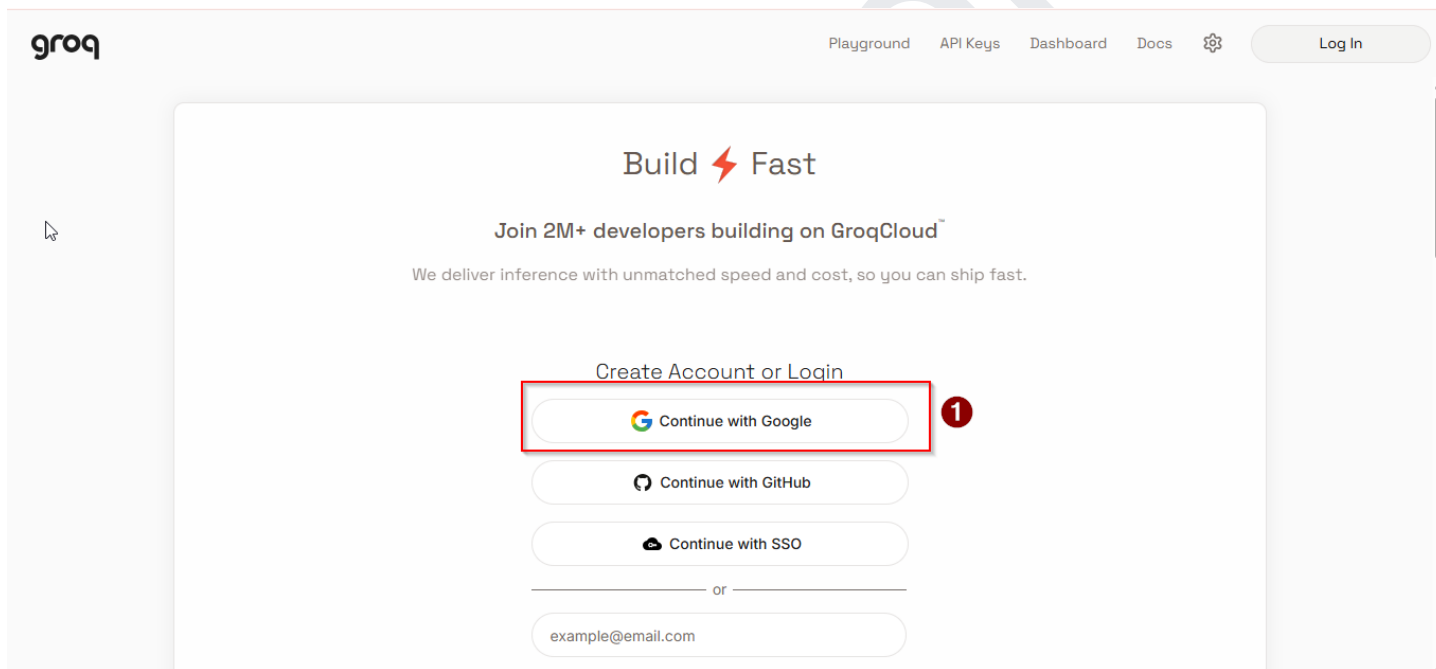
Note: Do not share this token with anyone, as it grants access to your account. This token is completely free, and there are no charges to use it, as you have created a free trial account.

8 Creating a Groq API Key

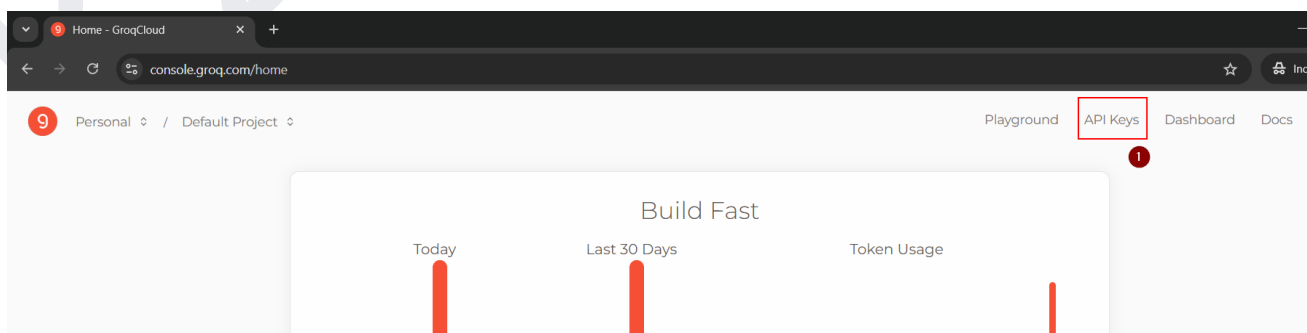
Groq is a platform that provides advanced AI/ML models and inference services. To interact with Groq's services, you'll need to create an API key.

Here's how you can generate and use a Groq API key:

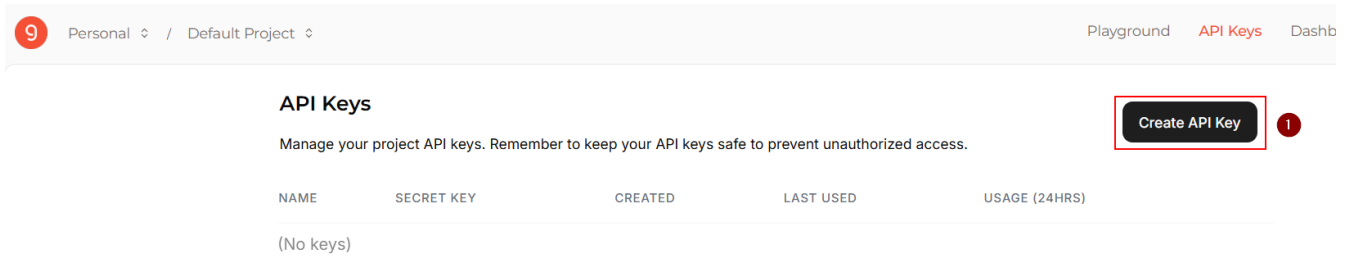
1. Click on the link to visit the Groq website: <https://console.groq.com/>.
2. Log in using your Google account.



3. On the homepage, navigate to the **API Keys** section.



4. Click on **Create API Key**



9 Personal / Default Project Playground API Keys Dashb

API Keys

Manage your project API keys. Remember to keep your API keys safe to prevent unauthorized access.

1 **Create API Key**

NAME	SECRET KEY	CREATED	LAST USED	USAGE (24HRS)
(No keys)				

5. Enter a name for your API key (e.g., "Agentic AI"), choose expiration and submit.



Create API Key

Display Name

1 Agentic AI

A display name for the key. Maximum 50 characters.

Expiration

2 No expiration

This key will not expire.

3 **Submit**

6. Make sure to copy and store your API key right away in Notepad, as it can't be viewed again. If it's lost, you'll have to create a new one.

Create API Key



Your new API key has been created. **Copy it now, as we will not display it again.**

1

gsk_JwaWbC4fXC6DWBewGC...UnlAsY1VbGzYoVFzDNHEfIR

Copy 

Done

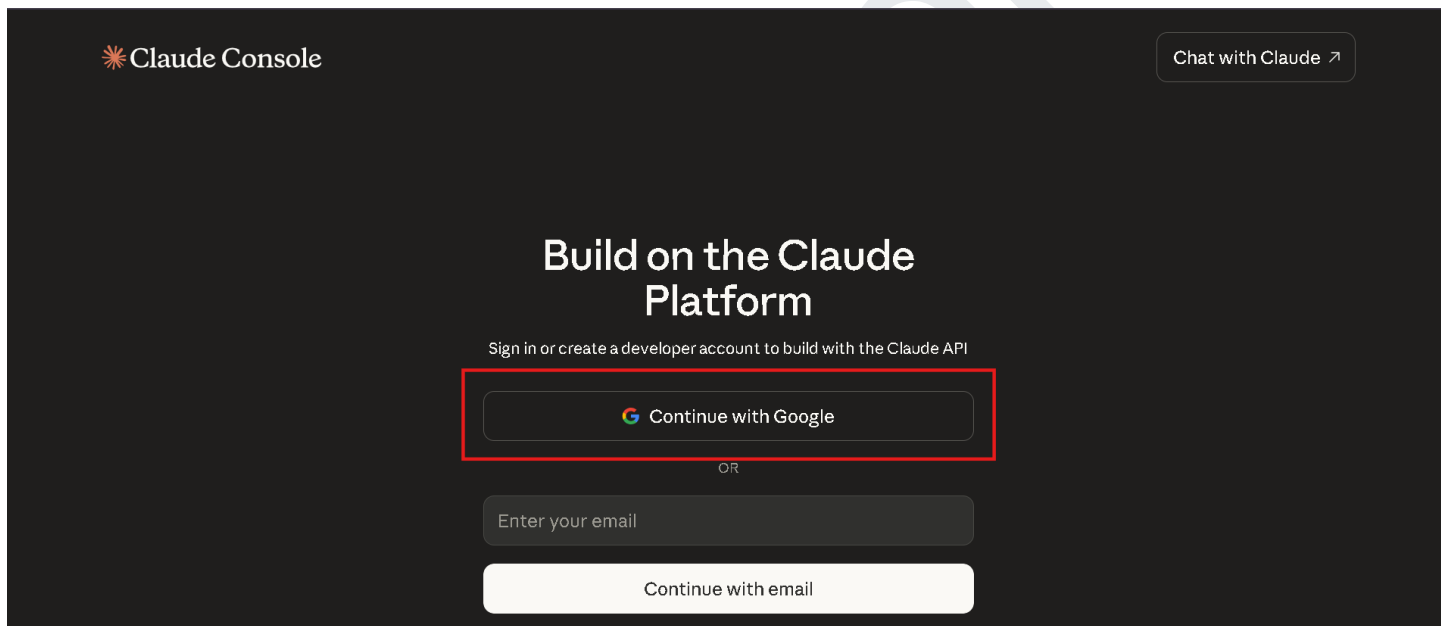
Note: Do not share this token with anyone, as it grants access to your account. This token is completely free, and there are no charges to use it, as you have created a free trial account.

9 CREATE ANTHROPIC API KEY

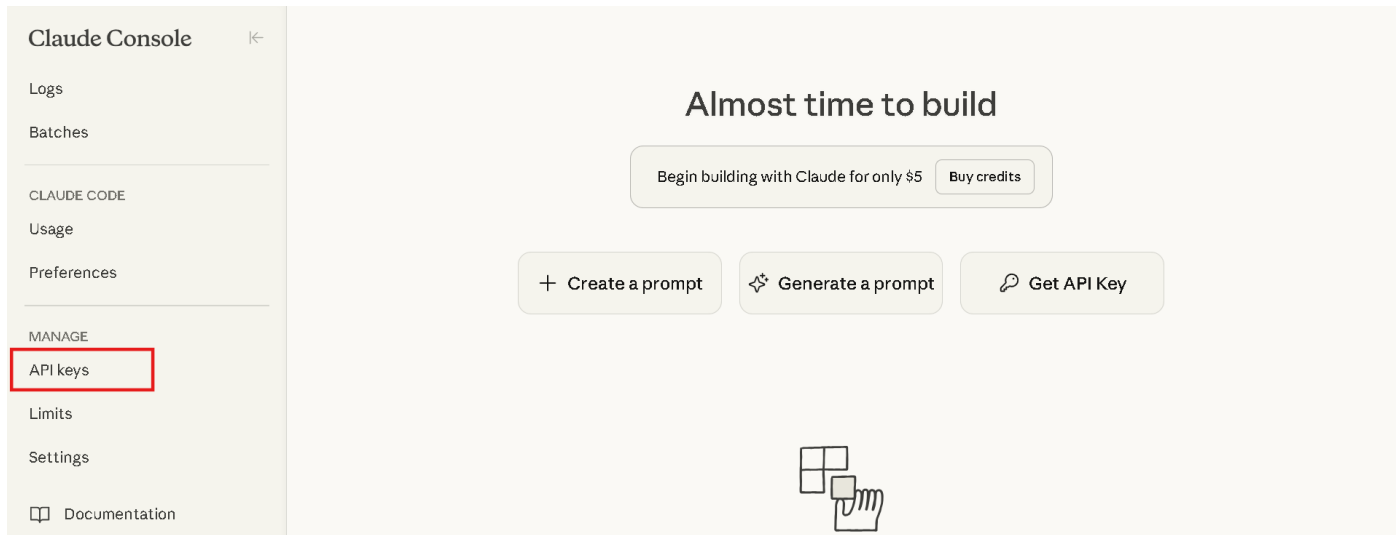
Anthropic is a platform that provides advanced AI Models like Claude. To interact with Anthropic's services, you'll need to create an API Key.

Here's how you can generate and use an Anthropic API Key:

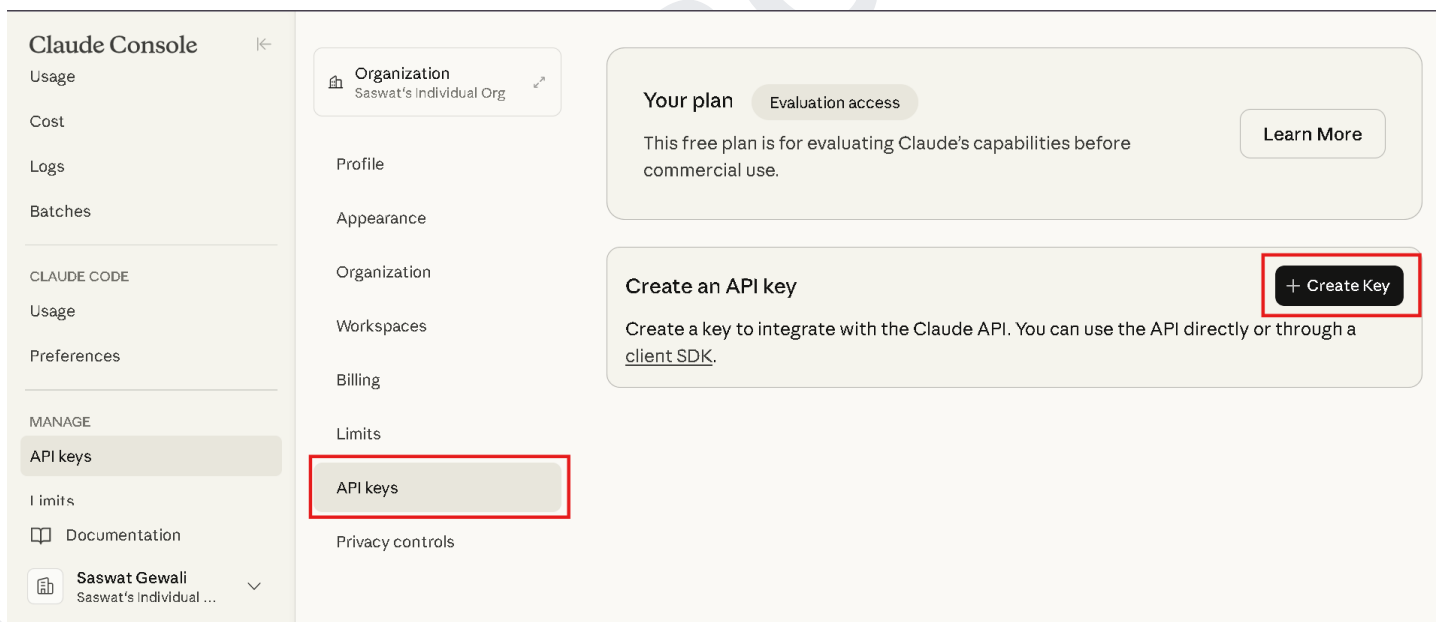
1. Click on the link to visit the Anthropic (Claude) Console: <https://platform.claude.com/>
2. Log in using your Google Account or Email.



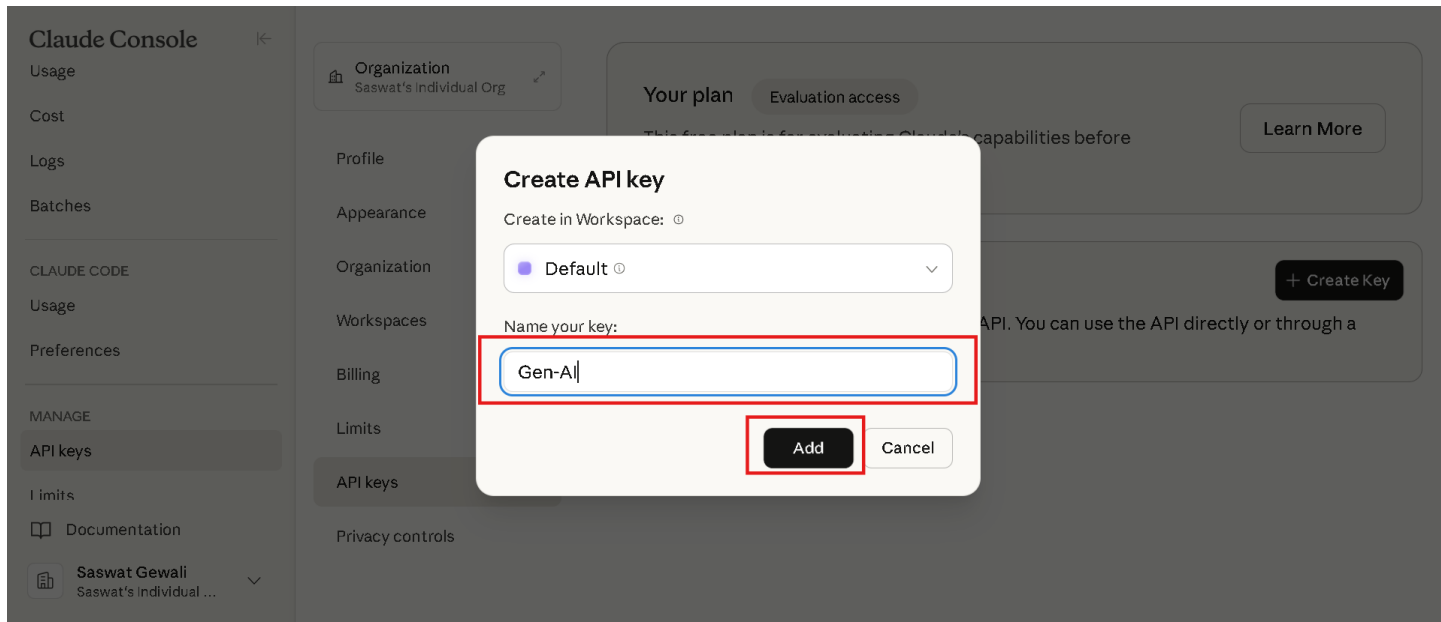
3. On the home page or dashboard menu, navigate to the API Keys section.



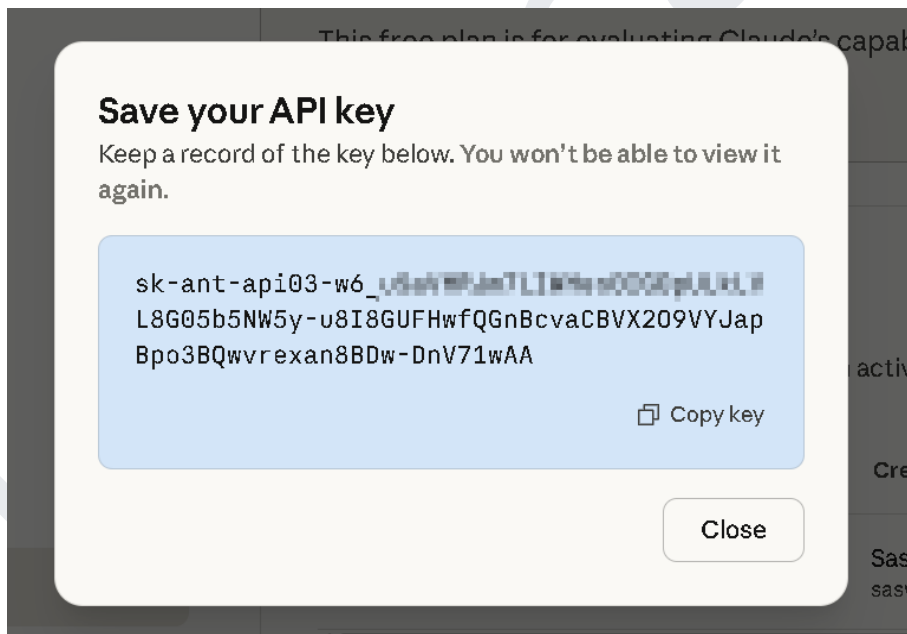
4. Click on Create Key



5. Enter a name for your API key (e.g. “Gen-AI”)



6. Make sure to copy and store your API Key right away in Notepad, as it can't be viewed again. If it's lost, you'll have to create a new one.



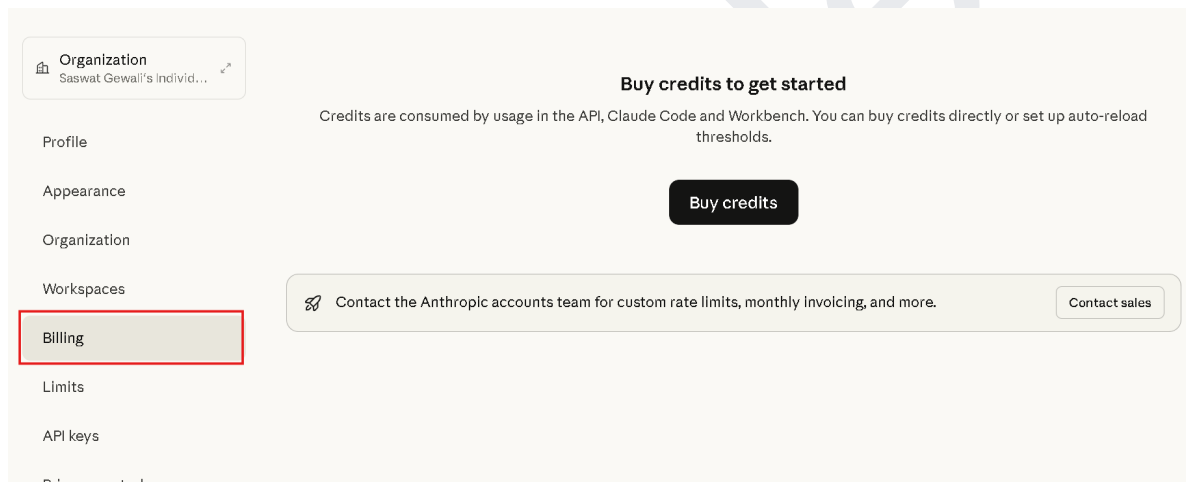
Note: Do not share this Key with anyone, as it grants access to your account. Keep this key secure to prevent any unauthorized usage or charges to your account.

Important Note: You've created your first Anthropic API key, but you can't use it yet. First, you need to add funds to your account since this is a paid service and requires a balance to work. Please follow the steps below to add credits to your account.

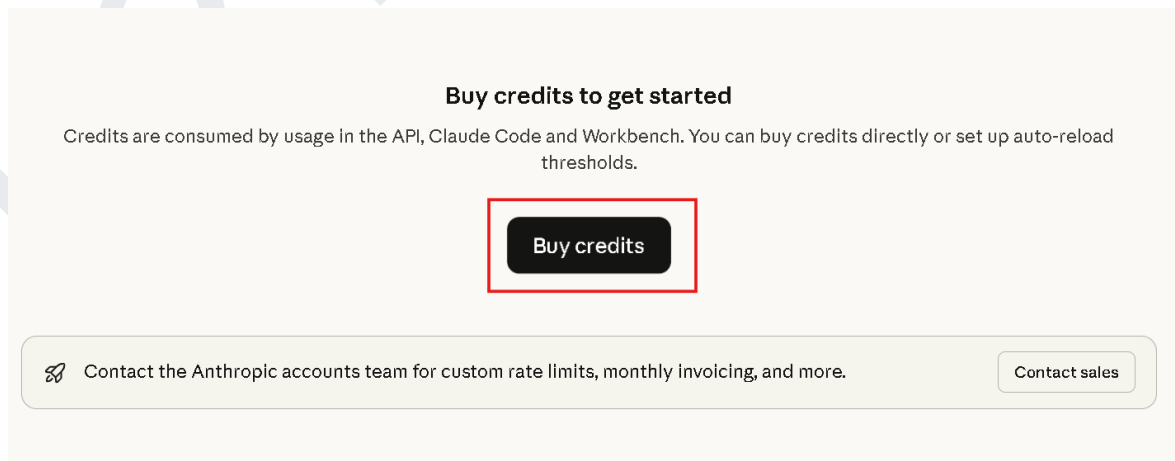
9.1 Add credits to your Anthropic account

Anthropic is a paid service (with usage-based pricing). The API calls you make will consume credits, so your account must have a balance before you can use the key. Without credits, requests will be rejected.

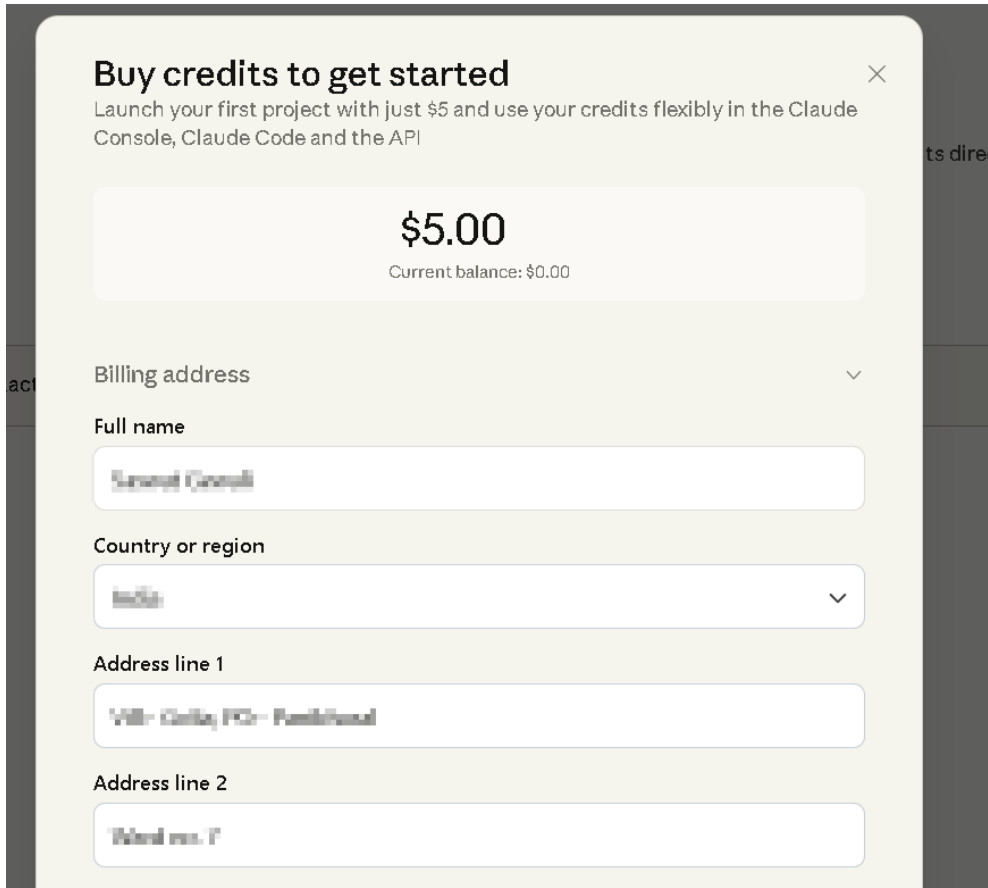
1. Go to the Billing section: <https://platform.claude.com/settings/billing>



2. Click on Buy Credits



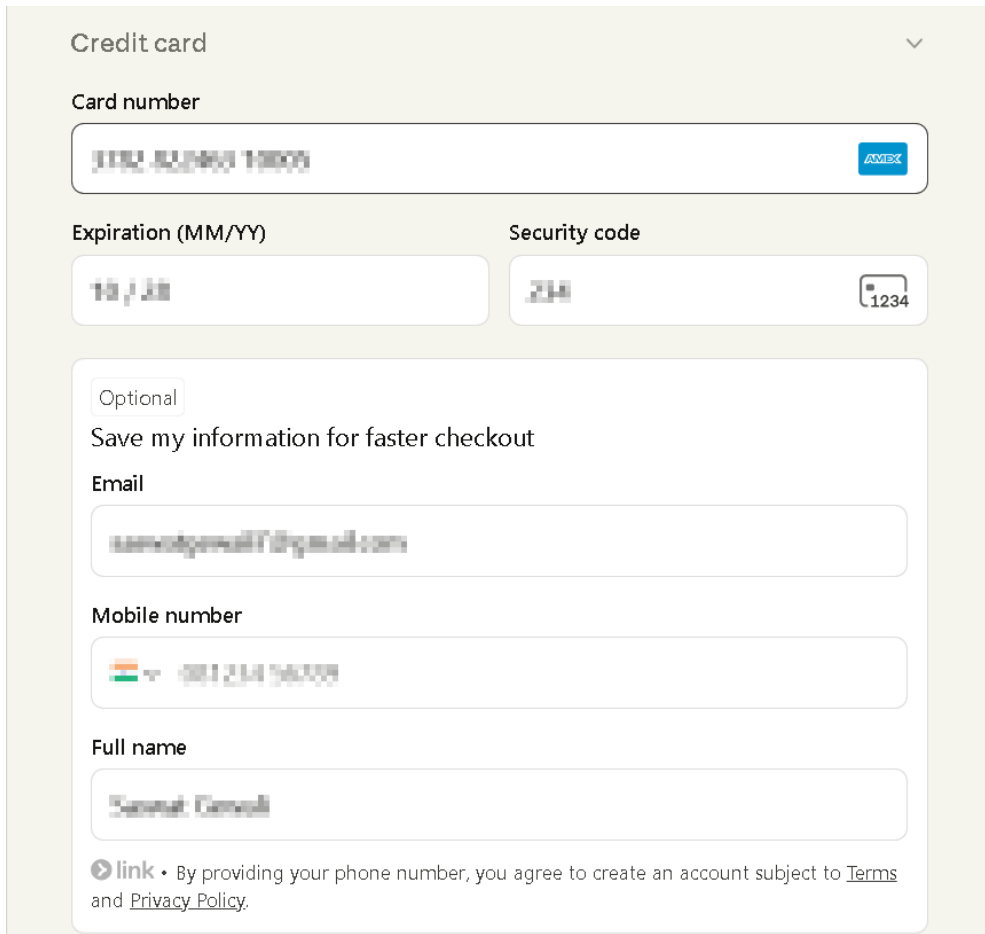
3. Provide your details.



The screenshot shows a modal window titled "Buy credits to get started" with a close button (X) in the top right corner. Below the title is a subtitle: "Launch your first project with just \$5 and use your credits flexibly in the Claude Console, Claude Code and the API". The main content area displays "\$5.00" in large text, with "Current balance: \$0.00" in smaller text below it. Below this, there is a section for "Billing address" with a dropdown arrow. The form includes the following fields: "Full name" (with a placeholder "Kunal Gargi"), "Country or region" (with a dropdown menu showing "India"), "Address line 1" (with a placeholder "Vill- Galla, PO- Panchkula"), and "Address line 2" (with a placeholder "Hous no. 7").

4. Enter your payment information.

- a. Credit Card Number
- b. Name on Card
- c. Billing Address



The screenshot shows a credit card payment form. At the top, it says "Credit card" with a dropdown arrow. Below this, there are three main sections: "Card number" with a field containing "3752 823456 78901" and an AMEX logo; "Expiration (MM/YY)" with a field containing "10 / 20"; and "Security code" with a field containing "234" and a card icon with "1234". Below these is an "Optional" section with the text "Save my information for faster checkout". This section contains three fields: "Email" with "sandeepmull7@gmail.com", "Mobile number" with a dropdown for India and the number "98765 43210", and "Full name" with "Sandeep K. Mehta". At the bottom of the optional section, there is a link icon and text: "By providing your phone number, you agree to create an account subject to [Terms](#) and [Privacy Policy](#)."

5. In the Add Funds section, enter **\$5**, ensure **auto-reload is disabled** to **prevent automatic deductions**, and click Continue.
6. Click Confirm Payment, then enter the **OTP** to complete the transaction.

You can now start using the API key in your labs.

10 TROUBLESHOOTING

Here, we will add some of the common errors encountered while performing the Lab activity.

Note: If you encounter any issues in performing this lab, then add your issue in the thread below this lab (linked to this thread in the community):

<https://www.skool.com/k21academy/issues-qa-creating-api-key-for-various-llm-models-post-here>

Lab 0: Creating API Key for Various LLM Models



Note: This is not a hands-on lab. Instead, it serves as a prerequisite guide, providing the necessary steps to generate API keys for authenticating LLM models. This material will be useful for upcoming labs where API keys are required to interact with various LLMs.

Check out the Step-by-step Activity Here >>> [Creating API Key for Various LLM Models](#)



Siram Karthik

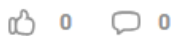
6m • Troubleshooting 🛠️💻



Issues | QA: Creating API Key for Various LLM Models: Post Here

Go through the guide & video at:

<https://www.skool.com/k21academy/classroom/0a7dc03d?>



11 SUMMARY

In this lab, we learned how to create and securely use API keys to access Large Language Models (LLMs) like Google Gemini.

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