

Introduction to Colab

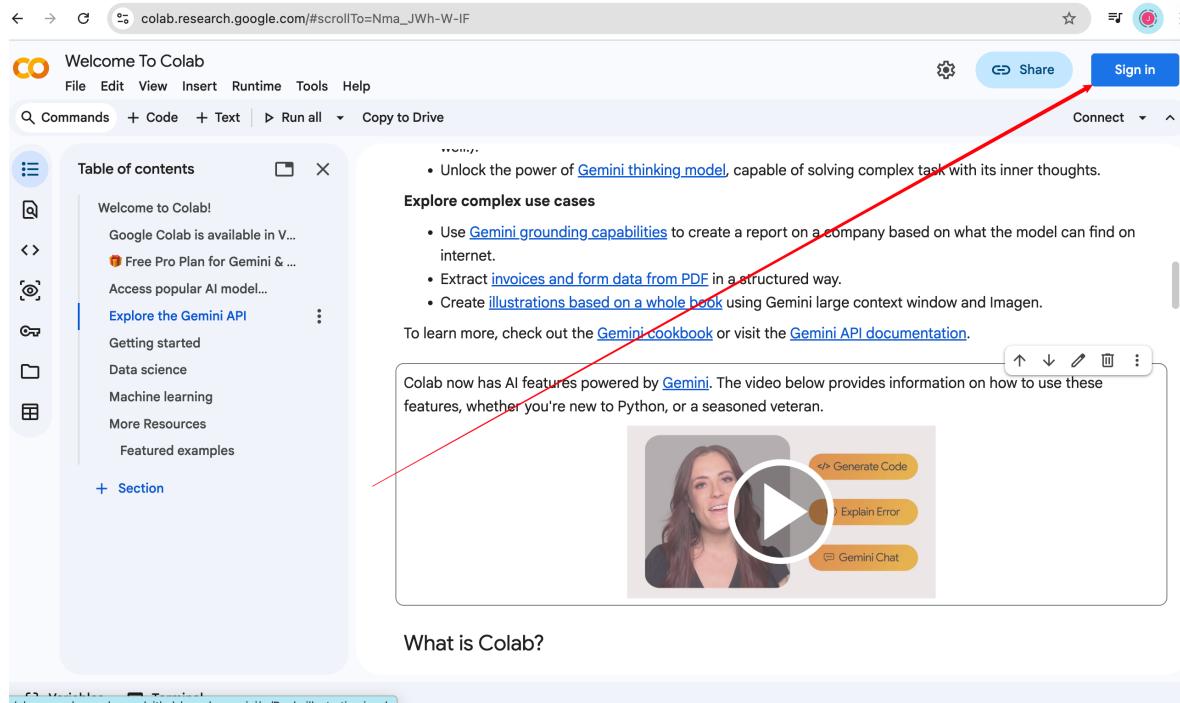
What is Google Colab?

Google Colab, short for "Colaboratory", is a free cloud-based Jupyter notebook environment that enables you to write, run, and share **Python/R** code from your browser.

- It's integrated with Google Drive, allowing you to easily store and access your Colab notebooks alongside your other files.
- You can also clone notebooks directly from GitHub repositories.

Step 1: Signing Up for Google Colab

To get started with Google Colab, head to the official website: colab.research.google.com.



Click on the "Sign In" button in the top-right corner of the page. This will prompt you to sign in with your Google account. If you don't have a Google account, click "Create account" and follow the instructions to set one up for free.

Once you've signed in, you'll be taken to the Colab homepage, which displays a list of your recently used notebooks (if any) and some sample notebooks you can explore.

Step 2: Creating a New Notebook

To create a new Colab notebook, click on "File" in the top-left corner of the page and select "New Notebook in drive". Or just click new notebook in the initial window.

Welcome To Colab

File Edit View Insert Runtime Tools Help

New notebook in Drive

Open notebook ⌘/Ctrl+O

Upload notebook

Rename

Save a copy in Drive

Save a copy as a GitHub Gist

Save a copy in GitHub

Save ⌘/Ctrl+S

Revision history

Notebook info

Download ▾

Print ⌘/Ctrl+P

Copy to Drive

Share Connect

Welcome to Colab!

Google Colab is available in VS Code!

Try the new [Google Colab extension](#) for Visual Studio Code. You can get up and running in just a few clicks:

- In VS Code, open the **Extensions** view and search for 'Google Colab' to install.
- Open the kernel selector by creating or opening any `.ipynb` notebook file in your local workspace and either running a cell or clicking the **Select Kernel** button in the top right.
- Click **Colab** and then select your desired runtime, sign in with your Google account, and you're all set!

See more details in our [announcement blog here](#).

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Variables Terminal

Your new notebook will open in a new tab. By default, it will be named "Untitled.ipynb". To rename it, click on the title at the top of the page and type in a new name.

Step 3: Select programming language (Important!)

Runtime -> Change runtime type -> Choose Python or R and hardware accelerator (just use CPU by default in our course)

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Commands + Code + Text Run all Copy to Drive Share Connect

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Change runtime type

Runtime type

Python 3

Python 3

R

Julia

H100 GPU

A100 GPU

v1-1 TPU

v6e-1 TPU

Want access to premium GPUs? [Purchase additional compute units](#)

Runtime version

Latest (recommended)

Cancel Save

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Step 4: Basic introduction to Colab

- Python version

https://colab.research.google.com/github/aqlkzf/STAT6205/blob/main/colab_intro/colab_intro_Python.ipynb

- R version

https://colab.research.google.com/github/aqlkzf/STAT6205/blob/main/colab_intro/colab_intro_R.ipynb

Step 5: Working with github

You can open any Jupyter notebook stored in GitHub in a Colab by replacing `github.com` with `githubbtocolab.com`.

It will redirect you to a Colab notebook.

`https://github.com/aqlkzf/STAT6205/blob/main/colab_intro/colab_intro_Python.ipynb` with
`https://githubbtocolab.com/aqlkzf/STAT6205/blob/main/colab_intro/colab_intro_Python.ipynb` (see [this blog post](#)).

I strongly recommend you to go through this blog. It contains some useful tips, Jupyter Notebook Keyboard Shortcuts, Jump to Class Definition, etc.

If you are using the Google Chrome browser, you can use "[Open in Colab](#)" Chrome extension to do the same with a single click.

Important notes

Please note that Colab sessions are temporary and may terminate after a period of inactivity. To avoid data loss, it is recommended to save important files regularly to Google Drive or download them to your local device.

