

# Google Colaboratry

## Introduction:

Google Colab is an online notebook-like coding environment that is well-suited for machine learning and data analysis.

It comes equipped with many Machine Learning libraries and offers GPU usage. It is mainly used by data scientists and ML engineers.

## Why to use Google Colab?

- Google Colab is Free
- Easy to get started
- Allows access to GPUs/TPUs
- Easy to share code with others
- Easy graphical visualizations in Notebooks

## Why not to use Google Colab?

- GPU/TPU usage is limited
- Not the most powerful GPU/TPU setups available
- Not the best de-bugging environment
- It is hard to work with big data
- Have to re-install extra dependencies every new runtime

## Google Colab for machine Learning.

With Colab you can import an image dataset, train an image classifier on it, and evaluate the model, all in just a few lines of code. Colab notebooks execute code on Google's cloud servers, meaning you can leverage the power of Google hardware, including GPUs and TPUs, regardless of the power of your machine. All you need is a browser.

Colab is used extensively in the **machine learning** community with applications including:

- Getting started with TensorFlow
- Developing and training neural networks
- Experimenting with TPUs
- Disseminating AI research
- Creating tutorials

## **Feasibility of Colab**

- Accessing GitHub from Google Colab
- Clone a GitHub repository
- Load individual files directly from GitHub
- Accessing Local File System to Google Colab
- Accessing local file system using Python code