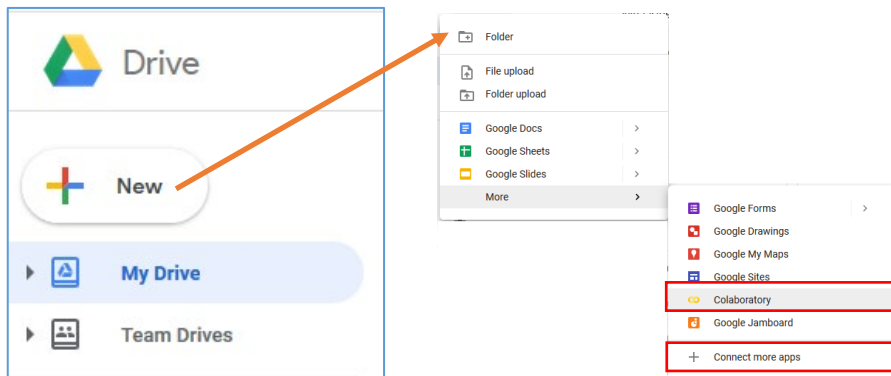# Short Course on Deep Learning and Convolutional Neural Network, VIT Chennai
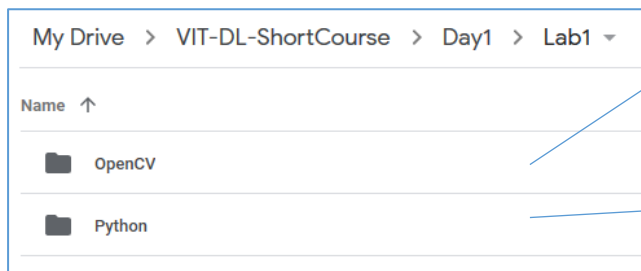
Day 1: Lab-1

Instructions:

Setup Google Colab and Google Drive:

-Login to your Google Drive using your email address

- Click 'New' to add 'Colaboratory' App if it is not already added. Use 'Connect more apps' option to add 'Colab'

- Under 'My Drive' , create a folder named "VIT-DL-ShortCourse"
- Under "VIT-DL-ShortCourse" folder, create a folder named "Day1/Lab1"

- From GitHub (https://github.com/nabinsharmaUTS/VIT-DL-ShortCourse), download the Python and OpenCV task notebooks and dataset, upload them to "Lab-1/Python" and "Lab-1/OpenCV" folder on your Google Drive. Your GDrive should look like as shown below:

'Intro to OpenCV.ipynb'

And the **dataset** folder with images

Lab1_Python-Warmup-Tasks.ipynb

Python Warmup Tasks:

1. Task -1: Loops and conditions
2. Task -2: Lists
3. Task -3: Maths functions
4. Task -4: More Maths functions!

Reference materials and self-learning notebooks are also available on GitHub.

OpenCV and Image Processing Introduction:

1. Basics of OpenCV library
2. Image read, write, and save
3. Split image into Red, Green, and Blue channels
4. Displaying/plotting images
5. Compute Image histogram
6. Image binarization and thresholding
7. Edge detection basics