

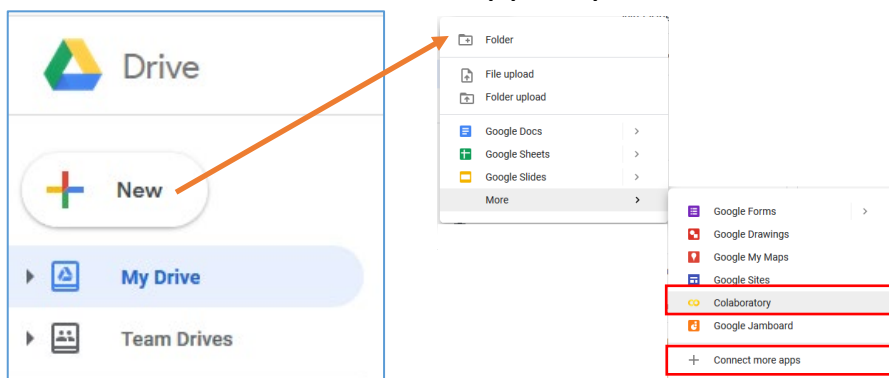
# 42028: Deep Learning and Convolutional Neural Network

## Week 1: Lab-1

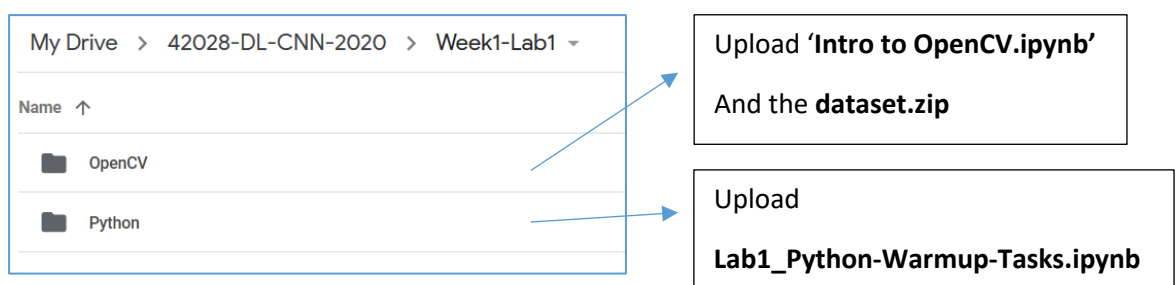
### Instructions:

#### Setup Google Colab and Google Drive:

- Login to your UTS Google Drive using your Student email address
- Click 'New' to add 'Colaboratory' App if it is not already added. Use 'Connect more apps' option to add 'Colab'



- Download the **GoogleDrive-Setup.ipynb** and upload into your GoogleDrive.
- Open the file using Colaboratory and run the code. It will setup the folder structure for the complete semester and Week-1 lab.
- From Canvas, download the Python and OpenCV task notebooks and dataset.zip, upload them to "Week1-Lab1" folder on your Google Drive. Your GDrive should look like as shown below:



## **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 Canvas.

## **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