1. **Create a folder and name it traffic on your system.**
2. **go to cmd and change the directory to the newly created folder using the below command.**

* cd <path>

1. **After changing the path to the newly created folder execute the below command in cmd.**

* git clone <https://github.com/AlexeyAB/darknet>
* Above command will download darknet into your current folder.

1. **Download the pre-trained weights from google using below link**

* <https://pjreddie.com/media/files/darknet53.conv.74>

**5.we have to make changes to the file we have downloaded, This include steps as follows:**

Open darknet-master folder which we have just downloaded and from that open cfg folder now in the cfg folder make a copy of the file yolov3.cfg now rename the copy file to yolov3\_traffic\_train.cfg

* Open the file yolov3\_traffic\_train.cfg and change max\_batches to (classes\*2000),if you have 6 object classes change max\_batches=12000. As we have 4 classes change max\_batches=8000
* Then change the line steps to (0.8\*max\_batches ,0.9\*max\_batches) ie; if you have 6 classes steps=9600,10800.
* Set network size width=416 height=416. . As we have 4 classes change steps=6400,7200.
* Change line classes=80 to your number of objects in each of 3 yolo layers. i.e since in this project we are having only 4 class we will use classes=4
* Change [filters=255] to filters=(classes + 5)x3 in the 3 convolutional layer immediately before each 3 yolo layers. The number 5 is the count of parameters center\_x, center\_y, width, height, and objectness Score.
* If you have 6 classes filters=33. In this project we have 4 classes so filters=27

We need to create “**traffic.names**” which its name implies that it contains names of classes, and the file “**traffic\_data.data**” which contains parameters needed for training, change the path as you save in the folder.

Execute the image\_path\_to\_train\_test\_txt\_files.py file to generate train.txt and test.txt files by changing the path to the path where the input images are stored change the split percentage as per your requirement.

Store the input images folder in the data folder let the python file be in the darknet root folder and execute it.

Save all the files and upload it to the google drive and execute the training file in google colab by changing the runtime to gpu.