%pip install matplotlib

%pip install opencv-python

import cv2

import matplotlib.pyplot as plt

config\_file='ssd\_mobilenet\_v3\_large\_coco\_2020\_01\_14.pbtxt'

frozen\_model='frozen\_inference\_graph.pb'

classlabels = []

file\_name = 'label.txt'

with open(file\_name,'rt') as fpt:

    classlabels=fpt.read().rstrip('\n').split('\n')

plt.show(classlabels)

model = cv2.dnn.DetectionModel(frozen\_model,config\_file)

model.setInputSize(320,320)

model.setInputScale(1.0/127.5)## 255/2=127.5

model.setInputMean((127.5,127.5,127.5))

model.setInputSwapRB(True)

cam =cv2.VideoCapture('project.mp4')

if not cam.isOpened():

    cam=VideoCapture()

if not cam.isOpened():

    raise IOError("can not open Video")

font\_scale=1

font=cv2.FONT\_HERSHEY\_PLAIN

while True:

    ret,frame=cam.read()

    ClassIndex,confidece,bbox=model.detect(frame)

    print(ClassIndex)

    if (len(ClassIndex)!=80):

        for ClassInd ,conf,boxes in zip(ClassIndex.flatten(),confidece.flatten(),bbox):

            if(ClassInd<=80):

                cv2.rectangle(frame,boxes,(255,0,0),2)

                cv2.putText(frame,classlabels[ClassInd-1],(boxes[0]+10,boxes[1]+40), font, *fontScale* = font\_scale,*color*=(0,255,0),*thickness*=2)

    cv2.imshow('Object Detection Tutorial ',frame)

    if cv2.waitKey(2) & *0x*FF ==ord('q'):

        break

cam.release()

cv2.destroyAllWindows()