Setup

Clone repo, install dependencies and check PyTorch and GPU.

```
# !git clone https://github.com/ultralytics/yolov5  # clone
# %cd yolov5
from google.colab import drive
drive.mount('/content/drive')

import os
os.chdir('/content/drive/MyDrive/yolov5')
%pip install -qr requirements.txt  # install
!git pull
import torch
import utils
display = utils.notebook_init()  # checks

```

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--NORMAL--
```

```
YOLOv5 🚀 v6.1-207-g5774a15 Python-3.7.13 torch-1.11.0+cu113 CUDA:0 (Tesla T4
Setup complete ✅ (2 CPUs, 12.7 GB RAM, 38.7/78.2 GB disk)
```

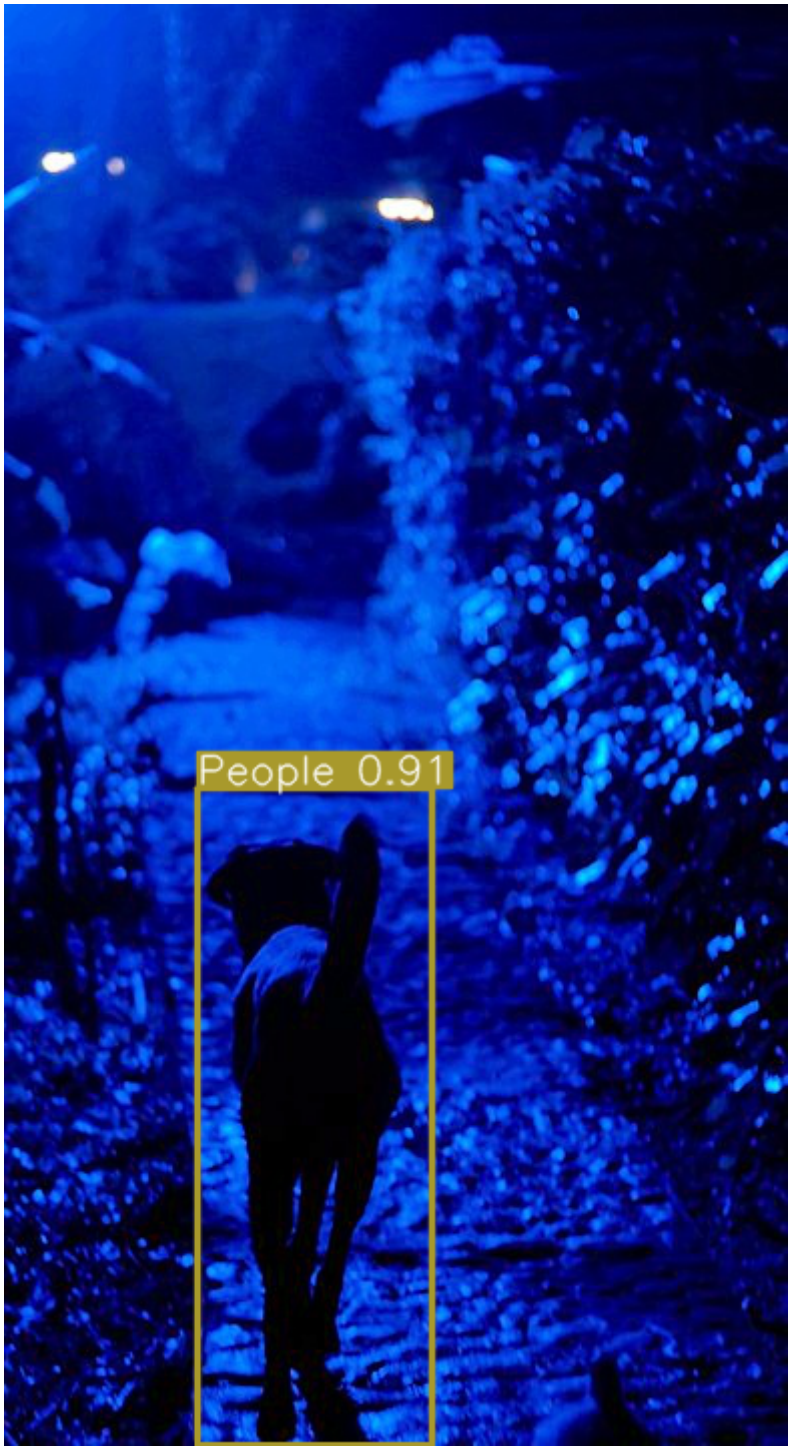
Testing model on randome 10 images.

```
model =torch.hub.load('ultralytics/yolov5','custom',path='/content/drive/MyDri
import numpy as np


model.conf = 0.30  # confidence threshold (0-1)
model.iou = 0.30  # NMS IoU threshold (0-1)
import cv2
from google.colab.patches import cv2_imshow
import glob
imglist = glob.glob('/content/drive/MyDrive/Images/*')
for img in imglist[15 : 20] :
  e=model(img,size=640)
  print(e.xyxyn)
  print()
  img=cv2.imread(img)
  cv2_imshow(np.squeeze(e.render()))


```

```
[tensor([[ 0.24586,  0.54428,  0.54544,  0.99963,  0.91397, 10.000
```



Creating lable for kaggel

```
import os
import torch
import glob
import pandas as pd

model =torch.hub.load('ultralytics/yolov5','custom',path='/content/drive/MyDri
# model.conf = 0.80  # confidence threshold (0-1)
# model.iou = 0.60  # NMS IoU threshold (0-1)
os.chdir('/content/drive/MyDrive/Images')


model.conf = 0.40  # confidence threshold (0-1)
model.iou = 0.40  # NMS IoU threshold (0-1)

paths = glob.glob('*')

line='ImageName,nBicycle,nBoat,nBottle,nBus,nCar,nCat,nChair,nCup,nDog,nMotorb

for i in paths:

  nBicycle=0
  nBoat=0
  nBottle=0
  nBus=0
  nCar=0
  nCat=0
  nChair=0
  nCup=0
  nDog=0
  nMotorbike=0
  nPeople=0
  nTable=0
  res = model(i)
  lenClass = len(res.pandas().xyxy[0]['class'].value_counts())

```

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 for h in range(lenClass):
   cur = res.pandas().xyxy[0]['class'].value_counts().index[h]
   if res.pandas().xyxy[0]['class'].value_counts().index[h]==0:
     nBicycle+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==1:
     nBoat+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==2:
     nBottle+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==3:
     nBus+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==4:
     nCar+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==5:
     nCat+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==6:
     nChair+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==7:
     nCup+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==8:
     nDog+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==9:
     nMotorbike+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==10:
     nPeople+=res.pandas().xyxy[0]['class'].value_counts()[cur]
   elif res.pandas().xyxy[0]['class'].value_counts().index[h]==11:
     nTable+=res.pandas().xyxy[0]['class'].value_counts()[cur]
  line += i +',' +str(nBicycle)+','+str(nBoat)+','+str(nBottle)+','+str(nBus)+


text_file = open("/content/drive/MyDrive/Mico40_iou_40.txt", "w")
#Opens or creates the .txt file, sharing the directory of the script#
text_file.write(line)
#Writes the variable into the .txt file#
text_file.close()


read_file = pd.read_csv (r'/content/drive/MyDrive/Mico40_iou_40.txt')
read_file.to_csv (r'/content/drive/MyDrive/Mico40_iou_40.csv', index=None)
```

```
Downloading: "https://github.com/ultralytics/yolov5/archive/master.zip" to /r
requirements: PyYAML>=5.3.1 not found and is required by YOLOv5, attempting a
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-
Requirement already satisfied: PyYAML>=5.3.1 in /usr/local/lib/python3.7/dist

requirements: 1 package updated per /content/drive/MyDrive/yolov5/requirement
requirements: ⚠ Restart runtime or rerun command for updates to take effect

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Fusing layers...
Model summary: 213 layers, 7042489 parameters, 0 gradients, 15.9 GFLOPs
Adding AutoShape...
```

```

```