Setting Up YoloV5 locally on windows

You look only once (YOLO) is a model commonly used for object detection. It is a fast, easy-to-use model. YOLOv5s is a pre-trained object detection model capable of detecting up to 80 classes.
Today we see step-by-step guidance on how to set this model locally on Windows.

The very first step is to ensure that Python is installed on your computer. To verify it, write the following command `python --version` or simply `python`. The output of these commands will indicate the installed version of python.

After confirming the Python and Pip installation, the next step is to clone/download Yolov5 from the official repository. Open this link and download the project as follows
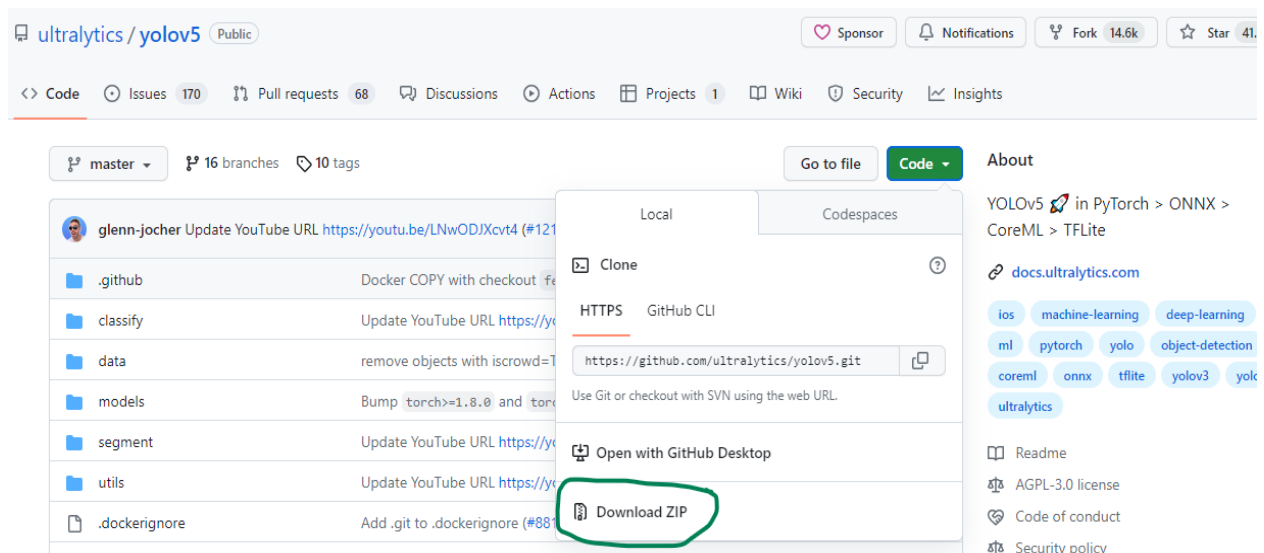
When the zip file is downloaded extract it anywhere (in any folder) you want. After extracting the files open the that folder and open the cmd in it.

Once cmd is open, check if pip is installed. PIP is used to install Python libraries.

```
C:\Users\HP\Desktop\IntrnshipProjects\SettingUpYolov5sLoclly\yolov5-master>pip --version
pip 23.2.1 from C:\Python310\lib\site-packages\pip (python 3.10)
```

Now write this command to install required libraries for Yolov5.

```
pip install -r requirements.txt
```

```
C:\Users\HP\Desktop\IntrnshipProjects\SettingUpYolov5sLoclly\yolov5-master>pip install -r requirements.txt
WARNING: Ignoring invalid distribution -ip (c:\python310\lib\site-packages)
Requirement already satisfied: gitpython>=3.1.30 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requireme
Requirement already satisfied: matplotlib>=3.3 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirement
Requirement already satisfied: numpy>=1.22.2 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.
Requirement already satisfied: opencv-python>=4.1.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requi
Requirement already satisfied: Pillow>=7.1.2 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements
Requirement already satisfied: psutil in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.txt (l
Requirement already satisfied: PyYAML>=5.3.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements
Requirement already satisfied: requests>=2.23.0 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requireme
Requirement already satisfied: scipy>=1.4.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.
Requirement already satisfied: thop>=0.1.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.t
Requirement already satisfied: torch>=1.8.0 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.
Requirement already satisfied: torchvision>=0.9.0 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r require
Requirement already satisfied: tqdm>=4.64.0 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements.
Requirement already satisfied: ultralytics>=8.0.147 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requi
Requirement already satisfied: pandas>=1.1.4 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requirements
Requirement already satisfied: seaborn>=0.11.0 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r requiremen
Requirement already satisfied: setuptools>=65.5.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from -r require
Requirement already satisfied: gitdb<5,>=4.0.1 in c:\users\hp\appdata\roaming\python\python310\site-packages (from gitpython>=3.
10)
```

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Once all the libraries are installed, you are done setting up YoloV5 locally. Now you can run the detect.py file locally to perform inference on images or videos.
As follows

```
python ./detect.py --weights <path to trainedmopdel> --source
<Path to image or video>
```

```
C:\Users\HP\Desktop\IntrnshipProjects\SettingUpYolov5sLoclly\yolov5-master>python ./detect.py --weights "yolov5s.pt" --source "C:\Users\HP\Desktop\IntrnshipProjects\web
camProject\webCamProj\yolov5\people.jpeg"
detect: weights=['yolov5s.pt'], source=C:\Users\HP\Desktop\IntrnshipProjects\webcamProject\webCamProj\yolov5\people.jpeg, data=data\coco128.yaml, imgsz=[640, 640], conf
_thres=0.25, iou_thres=0.45, max_det=1000, device=, view_img=False, save_txt=False, save_conf=False, save_crop=False, nosave=False, classes=None, agnostic_nms=False, au
gment=False, visualize=False, update=False, project=runs\detect, name=exp, exist_ok=False, line_thickness=3, hide_labels=False, hide_conf=False, half=False, dnn=False,
vid_stride=1
YOLOv5  2023-8-12 Python-3.10.6 torch-2.0.1+cpu CPU

Downloading https://github.com/ultralytics/yolov5/releases/download/v7.0/yolov5s.pt to yolov5s.pt...
100%|████████████████████████████████████████| 14.1M/14.1M [00:25<00:00, 585kB/s]

Fusing layers...
YOLOv5s summary: 213 layers, 7225885 parameters, 0 gradients
image 1/1 C:\Users\HP\Desktop\IntrnshipProjects\webcamProject\webCamProj\yolov5\people.jpeg: 448x640 5 persons, 1393.5ms
Speed: 66.9ms pre-process, 1393.5ms inference, 262.8ms NMS per image at shape (1, 3, 640, 640)
Results saved to runs\detect\exp
```

OUTPUTS

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