In [1]:

```
!pip install torch torchvision torchaudio --extra-index-url https://download.pytorch.org
```

Looking in indexes: https://pypi.org/simple, (https://pypi.org/simple,) ht
tps://download.pytorch.org/whl/cu116 (https://download.pytorch.org/whl/cu1
16)
Requirement already satisfied: torch in c:\users\logie\anaconda3\lib\site-
packages (1.13.1+cu116)
Requirement already satisfied: torchvision in c:\users\logie\anaconda3\lib
\site-packages (0.14.1+cu116)
Requirement already satisfied: torchaudio in c:\users\logie\anaconda3\lib
\site-packages (0.13.1+cu116)
Requirement already satisfied: typing-extensions in c:\users\logie\anacond
a3\lib\site-packages (from torch) (4.3.0)
Requirement already satisfied: numpy in c:\users\logie\anaconda3\lib\site-
packages (from torchvision) (1.21.5)
Requirement already satisfied: requests in c:\users\logie\anaconda3\lib\si
te-packages (from torchvision) (2.28.1)
Requirement already satisfied: pillow!=8.3.*,>=5.3.0 in c:\users\logie\ana
conda3\lib\site-packages (from torchvision) (9.2.0)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\logie
\anaconda3\lib\site-packages (from requests->torchvision) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in c:\users\logie\anaconda3\li
b\site-packages (from requests->torchvision) (3.3)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\logie\ana
conda3\lib\site-packages (from requests->torchvision) (1.26.11)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\logie\anacon
da3\lib\site-packages (from requests->torchvision) (2022.9.14)

In [2]:

```
!git clone https://github.com/ultralytics/yolov5
```

fatal: destination path 'yolov5' already exists and is not an empty direct
ory.

```
!cd yolov5 & pip install -r requirements.txt
```

Requirement already satisfied: gitpython>=3.1.30 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 5)) (3.1.31)
Requirement already satisfied: matplotlib>=3.2.2 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 6)) (3.5.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 7)) (1.21.5)
Requirement already satisfied: opencv-python>=4.1.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 8)) (4.7.0.72)
Requirement already satisfied: Pillow>=7.1.2 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 9)) (9.2.0)
Requirement already satisfied: psutil in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 10)) (5.9.0)
Requirement already satisfied: PyYAML>=5.3.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 11)) (6.0)
Requirement already satisfied: requests>=2.23.0 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 12)) (2.28.1)
Requirement already satisfied: scipy>=1.4.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 13)) (1.9.1)
Requirement already satisfied: thop>=0.1.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 14)) (0.1.1.post2209072238)
Requirement already satisfied: torch>=1.7.0 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 15)) (1.13.1+cu116)
Requirement already satisfied: torchvision>=0.8.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 16)) (0.14.1+cu116)
Requirement already satisfied: tqdm>=4.64.0 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 17)) (4.64.1)
Requirement already satisfied: tensorboard>=2.4.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 21)) (2.12.0)
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Requirement already satisfied: seaborn>=0.11.0 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 27)) (0.11.2)
Requirement already satisfied: setuptools>=65.5.1 in c:\users\logie\anaconda3\lib\site-packages (from -r requirements.txt (line 41)) (67.6.0)
Requirement already satisfied: gitdb<5,>=4.0.1 in c:\users\logie\anaconda3\lib\site-packages (from gitpython>=3.1.30->-r requirements.txt (line 5)) (4.0.10)
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Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\logie\anaconda3\lib\site-packages (from requests>=2.23.0->-r requirements.txt (line 12)) (1.26.11)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\logie\anaconda3\lib\site-packages (from requests>=2.23.0->-r requirements.txt (line 12)) (2022.9.14)

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Requirement already satisfied: idna<4,>=2.5 in c:\users\logie\anaconda3\li
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(4.3.0)
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Requirement already satisfied: absl-py>=0.4 in c:\users\logie\anaconda3\li
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Requirement already satisfied: wheel>=0.26 in c:\users\logie\anaconda3\lib
\site-packages (from tensorboard>=2.4.1->-r requirements.txt (line 21))
(0.37.1)
Requirement already satisfied: pytz>=2020.1 in c:\users\logie\anaconda3\li
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Requirement already satisfied: smmap<6,>=3.0.1 in c:\users\logie\anaconda3
\lib\site-packages (from gitdb<5,>=4.0.1->gitpython>=3.1.30->-r requiremen
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conda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard>=2.4.1->
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Requirement already satisfied: pyasn1<0.5.0,>=0.4.6 in c:\users\logie\anac
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->tensorboard>=2.4.1->-r requirements.txt (line 21)) (0.4.8)
Requirement already satisfied: oauthlib>=3.0.0 in c:\users\logie\anaconda3
\lib\site-packages (from requests-oauthlib>=0.7.0->google-auth-oauthlib<0.
5,>=0.4.1->tensorboard>=2.4.1->-r requirements.txt (line 21)) (3.2.2)
```

```
!cd yolov5 & pip install -r requirements.txt
```

Requirement already satisfied: gitpython>=3.1.30 in c:\users\logie\anacond a3\lib\site-packages (from -r requirements.txt (line 5)) (3.1.31)
Requirement already satisfied: matplotlib>=3.2.2 in c:\users\logie\anacond a3\lib\site-packages (from -r requirements.txt (line 6)) (3.5.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\logie\anaconda3\l ib\site-packages (from -r requirements.txt (line 7)) (1.21.5)
Requirement already satisfied: opencv-python>=4.1.1 in c:\users\logie\anac onda3\lib\site-packages (from -r requirements.txt (line 8)) (4.7.0.72)
Requirement already satisfied: Pillow>=7.1.2 in c:\users\logie\anaconda3\l ib\site-packages (from -r requirements.txt (line 9)) (9.2.0)
Requirement already satisfied: psutil in c:\users\logie\anaconda3\lib\site -packages (from -r requirements.txt (line 10)) (5.9.0)
Requirement already satisfied: PyYAML>=5.3.1 in c:\users\logie\anaconda3\l ib\site-packages (from -r requirements.txt (line 11)) (6.0)
Requirement already satisfied: requests>=2.23.0 in c:\users\logie\anaconda 3\lib\site-packages (from -r requirements.txt (line 12)) (2.28.1)
Requirement already satisfied: scipy>=1.4.1 in c:\users\logie\anaconda3\li b\site-packages (from -r requirements.txt (line 13)) (1.9.1)
Requirement already satisfied: thop>=0.1.1 in c:\users\logie\anaconda3\lib \site-packages (from -r requirements.txt (line 14)) (0.1.1.post2209072238)
Requirement already satisfied: torch>=1.7.0 in c:\users\logie\anaconda3\li b\site-packages (from -r requirements.txt (line 15)) (1.13.1+cu116)
Requirement already satisfied: torchvision>=0.8.1 in c:\users\logie\anacon da3\lib\site-packages (from -r requirements.txt (line 16)) (0.14.1+cu116)
Requirement already satisfied: tqdm>=4.64.0 in c:\users\logie\anaconda3\li b\site-packages (from -r requirements.txt (line 17)) (4.64.1)
Requirement already satisfied: tensorboard>=2.4.1 in c:\users\logie\anacon da3\lib\site-packages (from -r requirements.txt (line 21)) (2.12.0)
Requirement already satisfied: pandas>=1.1.4 in c:\users\logie\anaconda3\l ib\site-packages (from -r requirements.txt (line 26)) (1.4.4)
Requirement already satisfied: seaborn>=0.11.0 in c:\users\logie\anaconda3 \lib\site-packages (from -r requirements.txt (line 27)) (0.11.2)
Requirement already satisfied: setuptools>=65.5.1 in c:\users\logie\anacon da3\lib\site-packages (from -r requirements.txt (line 41)) (67.6.0)
Requirement already satisfied: gitdb<5,>=4.0.1 in c:\users\logie\anaconda3 \lib\site-packages (from gitpython>=3.1.30->-r requirements.txt (line 5)) (4.0.10)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\logie\anaconda 3\lib\site-packages (from matplotlib>=3.2.2->-r requirements.txt (line 6)) (3.0.9)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\logie\anac onda3\lib\site-packages (from matplotlib>=3.2.2->-r requirements.txt (line 6)) (2.8.2)
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Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\logie\anacond a3\lib\site-packages (from matplotlib>=3.2.2->-r requirements.txt (line 6)) (1.4.2)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\logie\anacon da3\lib\site-packages (from requests>=2.23.0->-r requirements.txt (line 1 2)) (2022.9.14)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\logie\ana conda3\lib\site-packages (from requests>=2.23.0->-r requirements.txt (line 12)) (1.26.11)

Requirement already satisfied: idna<4,>=2.5 in c:\users\logie\anaconda3\li
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Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\logie
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(line 12)) (2.0.4)
Requirement already satisfied: typing-extensions in c:\users\logie\anacond
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Requirement already satisfied: colorama in c:\users\logie\anaconda3\lib\si
te-packages (from tqdm>=4.64.0->-r requirements.txt (line 17)) (0.4.5)
Requirement already satisfied: protobuf>=3.19.6 in c:\users\logie\anaconda
3\lib\site-packages (from tensorboard>=2.4.1->-r requirements.txt (line 2
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Requirement already satisfied: werkzeug>=1.0.1 in c:\users\logie\anaconda3
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Requirement already satisfied: wheel>=0.26 in c:\users\logie\anaconda3\lib
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Requirement already satisfied: absl-py>=0.4 in c:\users\logie\anaconda3\li
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Requirement already satisfied: google-auth<3,>=1.6.3 in c:\users\logie\ana
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Requirement already satisfied: grpcio>=1.48.2 in c:\users\logie\anaconda3
\lib\site-packages (from tensorboard>=2.4.1->-r requirements.txt (line 2
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Requirement already satisfied: tensorboard-plugin-wit>=1.6.0 in c:\users\l
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Requirement already satisfied: markdown>=2.6.8 in c:\users\logie\anaconda3
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Requirement already satisfied: pytz>=2020.1 in c:\users\logie\anaconda3\li
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Requirement already satisfied: smmap<6,>=3.0.1 in c:\users\logie\anaconda3
\lib\site-packages (from gitdb<5,>=4.0.1->gitpython>=3.1.30->-r requiremen
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-r requirements.txt (line 21)) (0.2.8)
Requirement already satisfied: cachetools<6.0,>=2.0.0 in c:\users\logie\an
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onda3\lib\site-packages (from pyasn1-modules>=0.2.1->google-auth<3,>=1.6.3
->tensorboard>=2.4.1->-r requirements.txt (line 21)) (0.4.8)
Requirement already satisfied: oauthlib>=3.0.0 in c:\users\logie\anaconda3
\lib\site-packages (from requests-oauthlib>=0.7.0->google-auth-oauthlib<0.
5,>=0.4.1->tensorboard>=2.4.1->-r requirements.txt (line 21)) (3.2.2)
```

In [17]:

```python
import torch
from matplotlib import pyplot as plt
import numpy as np
import pandas as pd
dataset = pd.read_csv("Annotation file.csv")
import cv2
```

In [18]:

```python
model = torch.hub.load('ultralytics/yolov5', 'yolov5s')
```

```
Using cache found in C:\Users\logie/.cache\torch\hub\ultralytics_yolov5_ma
ster
YOLOv5  2023-3-12 Python-3.9.13 torch-1.8.1+cu111 CUDA:0 (NVIDIA GeForce R
TX 3050 Laptop GPU, 4096MiB)

Fusing layers...
YOLOv5s summary: 213 layers, 7225885 parameters, 0 gradients, 16.4 GFLOPs
Adding AutoShape...
```

```
model
```

```
AutoShape(
  (model): DetectMultiBackend(
    (model): DetectionModel(
      (model): Sequential(
        (0): Conv(
          (conv): Conv2d(3, 32, kernel_size=(6, 6), stride=(2, 2), padding
=(2, 2))
          (act): SiLU(inplace=True)
        )
        (1): Conv(
          (conv): Conv2d(32, 64, kernel_size=(3, 3), stride=(2, 2), paddin
g=(1, 1))
          (act): SiLU(inplace=True)
        )
        (2): C3(
          (cv1): Conv(
            (conv): Conv2d(64, 32, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (cv2): Conv(
            (conv): Conv2d(64, 32, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (cv3): Conv(
            (conv): Conv2d(64, 64, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (m): Sequential(
            (0): Bottleneck(
              (cv1): Conv(
                (conv): Conv2d(32, 32, kernel_size=(1, 1), stride=(1, 1))
                (act): SiLU(inplace=True)
              )
              (cv2): Conv(
                (conv): Conv2d(32, 32, kernel_size=(3, 3), stride=(1, 1),
padding=(1, 1))
                (act): SiLU(inplace=True)
              )
            )
          )
        )
        (3): Conv(
          (conv): Conv2d(64, 128, kernel_size=(3, 3), stride=(2, 2), paddi
ng=(1, 1))
          (act): SiLU(inplace=True)
        )
        (4): C3(
          (cv1): Conv(
            (conv): Conv2d(128, 64, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (cv2): Conv(
            (conv): Conv2d(128, 64, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (cv3): Conv(
            (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1, 1))
            (act): SiLU(inplace=True)
          )
          (m): Sequential(
            (0): Bottleneck(
```

```
        (cv1): Conv(
          (conv): Conv2d(64, 64, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
          (conv): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1),
padding=(1, 1))
          (act): SiLU(inplace=True)
        )
      )
      (1): Bottleneck(
        (cv1): Conv(
          (conv): Conv2d(64, 64, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
          (conv): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1),
padding=(1, 1))
          (act): SiLU(inplace=True)
        )
      )
    )
  )
  (5): Conv(
    (conv): Conv2d(128, 256, kernel_size=(3, 3), stride=(2, 2), padd
ing=(1, 1))
    (act): SiLU(inplace=True)
  )
  (6): C3(
    (cv1): Conv(
      (conv): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1))
      (act): SiLU(inplace=True)
    )
    (cv2): Conv(
      (conv): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1))
      (act): SiLU(inplace=True)
    )
    (cv3): Conv(
      (conv): Conv2d(256, 256, kernel_size=(1, 1), stride=(1, 1))
      (act): SiLU(inplace=True)
    )
    (m): Sequential(
      (0): Bottleneck(
        (cv1): Conv(
          (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1,
1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
          (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
          (act): SiLU(inplace=True)
        )
      )
      (1): Bottleneck(
        (cv1): Conv(
          (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1,
1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
```

```
            (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
            (act): SiLU(inplace=True)
          )
        )
        (2): Bottleneck(
          (cv1): Conv(
            (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1,
1))
            (act): SiLU(inplace=True)
          )
          (cv2): Conv(
            (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
            (act): SiLU(inplace=True)
          )
        )
      )
    )
    (7): Conv(
      (conv): Conv2d(256, 512, kernel_size=(3, 3), stride=(2, 2), padd
ing=(1, 1))
      (act): SiLU(inplace=True)
    )
    (8): C3(
      (cv1): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv2): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv3): Conv(
        (conv): Conv2d(512, 512, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (m): Sequential(
        (0): Bottleneck(
          (cv1): Conv(
            (conv): Conv2d(256, 256, kernel_size=(1, 1), stride=(1,
1))
            (act): SiLU(inplace=True)
          )
          (cv2): Conv(
            (conv): Conv2d(256, 256, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
            (act): SiLU(inplace=True)
          )
        )
      )
    )
    (9): SPPF(
      (cv1): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv2): Conv(
        (conv): Conv2d(1024, 512, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
```

```
        (m): MaxPool2d(kernel_size=5, stride=1, padding=2, dilation=1, c
eil_mode=False)
      )
      (10): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (11): Upsample(scale_factor=2.0, mode=nearest)
      (12): Concat()
      (13): C3(
        (cv1): Conv(
          (conv): Conv2d(512, 128, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
          (conv): Conv2d(512, 128, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv3): Conv(
          (conv): Conv2d(256, 256, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (m): Sequential(
          (0): Bottleneck(
            (cv1): Conv(
              (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1,
1))
              (act): SiLU(inplace=True)
            )
            (cv2): Conv(
              (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
              (act): SiLU(inplace=True)
            )
          )
        )
      )
      (14): Conv(
        (conv): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (15): Upsample(scale_factor=2.0, mode=nearest)
      (16): Concat()
      (17): C3(
        (cv1): Conv(
          (conv): Conv2d(256, 64, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv2): Conv(
          (conv): Conv2d(256, 64, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (cv3): Conv(
          (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1, 1))
          (act): SiLU(inplace=True)
        )
        (m): Sequential(
          (0): Bottleneck(
            (cv1): Conv(
              (conv): Conv2d(64, 64, kernel_size=(1, 1), stride=(1, 1))
              (act): SiLU(inplace=True)
```

```
          )
          (cv2): Conv(
            (conv): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1),
padding=(1, 1))
            (act): SiLU(inplace=True)
          )
        )
      )
    )
    (18): Conv(
      (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(2, 2), padd
ing=(1, 1))
      (act): SiLU(inplace=True)
    )
    (19): Concat()
    (20): C3(
      (cv1): Conv(
        (conv): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv2): Conv(
        (conv): Conv2d(256, 128, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv3): Conv(
        (conv): Conv2d(256, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
```

In [ ]:
```
      (m): Sequential(
        (0): Bottleneck(
          (cv1): Conv(
            (conv): Conv2d(128, 128, kernel_size=(1, 1), stride=(1,
1))
```

In [ ]:
```
            (act): SiLU(inplace=True)
          )
          (cv2): Conv(
            (conv): Conv2d(128, 128, kernel_size=(3, 3), stride=(1,
1), padding=(1, 1))
```

In [27]:
```
            (act): SiLU(inplace=True)
          )
img='images.jpeg'
          )
```

In [28]:
```
        )
      )
results =2model(img)
results.print()Conv2d(256, 256, kernel_size=(3, 3), stride=(2, 2), padd
ing=(1, 1))
image 1/1: 213x236iSiLU(inplace=True)t
Speed: 20.5ms pre-process, 131.0ms inference, 10.0ms NMS per image at shap
e (1, 3, (608, 640)at()
    (23): C3(
      (cv1): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv2): Conv(
        (conv): Conv2d(512, 256, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
      )
      (cv3): Conv(
        (conv): Conv2d(512, 512, kernel_size=(1, 1), stride=(1, 1))
        (act): SiLU(inplace=True)
```
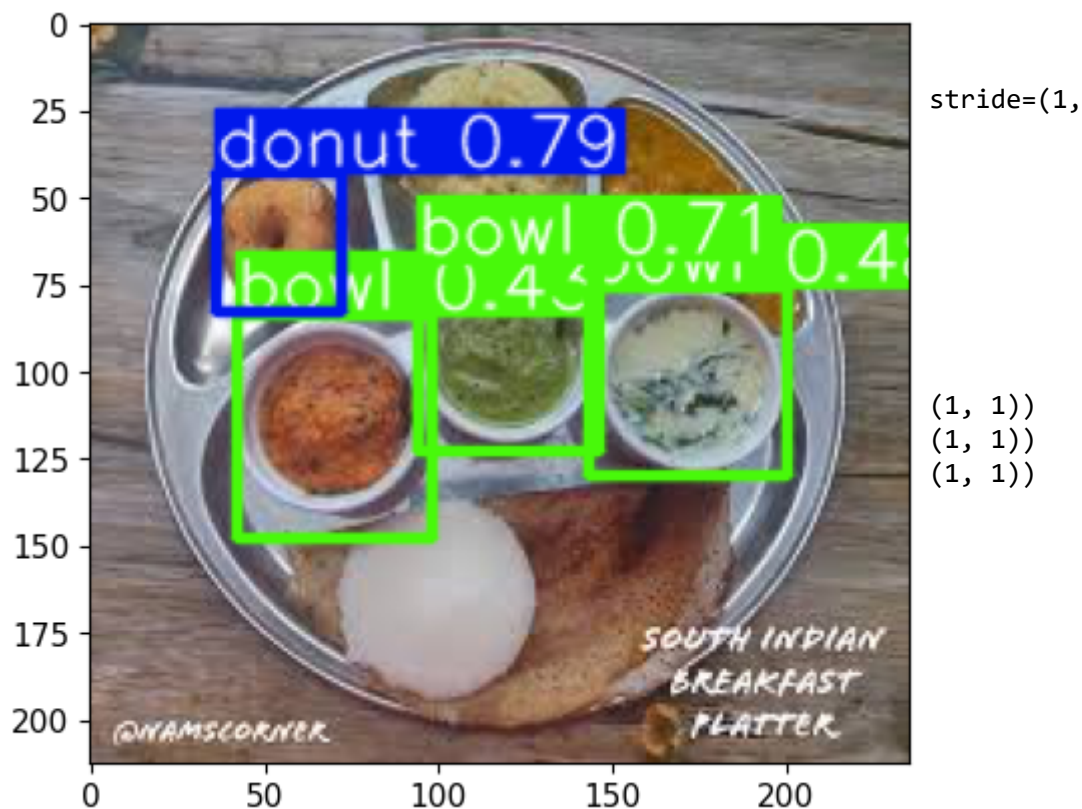
In [29]:

```
%matplotlib inline
plt.imshow(np.squeeze(results.render()))
plt.show()
```

```
        )
    (m): Sequential(
        (0): Bottleneck(
            (cv1): Conv(
                (conv): Conv2d(256, 256, kernel_size=(1, 1), stride=(1,
1))
```


stride=(1,

(1, 1))
(1, 1))
(1, 1))

In [30]:

```
results.render()
```

Out[30]:

```
[array([[[160, 118,  60],
         [174, 133,  77],
         [192, 155, 103],
         ...,
         [102,  93,  86],
         [102,  93,  86],
         [101,  92,  85]],

        [[181, 138,  83],
         [155, 114,  60],
         [158, 120,  71],
         ...,
         [115, 106,  99],
         [114, 105,  98],
         [113, 104,  97]],

        [[137,  97,  46],
         [122,  84,  35],
```

```python
cap = cv2.VideoCapture(0)
while cap.isOpened():
    ret, frame = cap.read()

    # Make detections
    results = model(frame)

    cv2.imshow('YOLO', np.squeeze(results.render()))

    if cv2.waitKey(10) & 0xFF == ord('q'):
        break
cap.release()
cv2.destroyAllWindows()
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: