

```
!pip install ultralytics opencv-python
```

```

Requirement already satisfied: nvidia-cusparselt-cu12==0.6.2 in /usr/local/lib/python3.11/dist-packages (from torch>=1.8.0->ultralytics)
Requirement already satisfied: nvidia-nccl-cu12==2.21.5 in /usr/local/lib/python3.11/dist-packages (from torch>=1.8.0->ultralytics) (2)
Requirement already satisfied: nvidia-nvtx-cu12==12.4.127 in /usr/local/lib/python3.11/dist-packages (from torch>=1.8.0->ultralytics)
Collecting nvidia-nvjitlink-cu12==12.4.127 (from torch>=1.8.0->ultralytics)
  Downloading nvidia_nvjitlink_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Requirement already satisfied: triton==3.2.0 in /usr/local/lib/python3.11/dist-packages (from torch>=1.8.0->ultralytics) (3.2.0)
Requirement already satisfied: sympy==1.13.1 in /usr/local/lib/python3.11/dist-packages (from torch>=1.8.0->ultralytics) (1.13.1)
Requirement already satisfied: mpmath<1.4,>=1.1.0 in /usr/local/lib/python3.11/dist-packages (from sympy==1.13.1->torch>=1.8.0->ultralytics)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.11/dist-packages (from python-dateutil>=2.7->matplotlib>=3.3.0->ultralytics)
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.11/dist-packages (from jinja2->torch>=1.8.0->ultralytics) (3.
  Downloading ultralytics-8.3.91-py3-none-any.whl (949 kB)
    949.2/949.2 kB 14.0 MB/s eta 0:00:00
  Downloading nvidia_cublas_cu12-12.4.5.8-py3-none-manylinux2014_x86_64.whl (363.4 MB)
    363.4/363.4 MB 4.4 MB/s eta 0:00:00
  Downloading nvidia_cuda_cupti_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (13.8 MB)
    13.8/13.8 MB 43.9 MB/s eta 0:00:00
  Downloading nvidia_cuda_nvrtc_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (24.6 MB)
    24.6/24.6 MB 44.0 MB/s eta 0:00:00
  Downloading nvidia_cuda_runtime_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (883 kB)
    883.7/883.7 kB 28.5 MB/s eta 0:00:00
  Downloading nvidia_cudnn_cu12-9.1.0.70-py3-none-manylinux2014_x86_64.whl (664.8 MB)
    664.8/664.8 MB 1.4 MB/s eta 0:00:00
  Downloading nvidia_cufft_cu12-11.2.1.3-py3-none-manylinux2014_x86_64.whl (211.5 MB)
    211.5/211.5 MB 6.2 MB/s eta 0:00:00
  Downloading nvidia_curand_cu12-10.3.5.147-py3-none-manylinux2014_x86_64.whl (56.3 MB)
    56.3/56.3 MB 8.1 MB/s eta 0:00:00
  Downloading nvidia_cusolver_cu12-11.6.1.9-py3-none-manylinux2014_x86_64.whl (127.9 MB)
    127.9/127.9 MB 7.6 MB/s eta 0:00:00
  Downloading nvidia_cusparselt_cu12-12.3.1.170-py3-none-manylinux2014_x86_64.whl (207.5 MB)
    207.5/207.5 MB 5.6 MB/s eta 0:00:00
  Downloading nvidia_nvjitlink_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (21.1 MB)
    21.1/21.1 MB 48.3 MB/s eta 0:00:00
  Downloading ultralytics_thop-2.0.14-py3-none-any.whl (26 kB)
Installing collected packages: nvidia-nvjitlink-cu12, nvidia-curand-cu12, nvidia-cufft-cu12, nvidia-cuda-runtime-cu12, nvidia-cuda-nv
  Attempting uninstall: nvidia-nvjitlink-cu12
    Found existing installation: nvidia-nvjitlink-cu12 12.5.82
    Uninstalling nvidia-nvjitlink-cu12-12.5.82:
      Successfully uninstalled nvidia-nvjitlink-cu12-12.5.82
  Attempting uninstall: nvidia-curand-cu12
    Found existing installation: nvidia-curand-cu12 10.3.6.82
    Uninstalling nvidia-curand-cu12-10.3.6.82:
      Successfully uninstalled nvidia-curand-cu12-10.3.6.82
  Attempting uninstall: nvidia-cufft-cu12
    Found existing installation: nvidia-cufft-cu12 11.2.3.61
    Uninstalling nvidia-cufft-cu12-11.2.3.61:
      Successfully uninstalled nvidia-cufft-cu12-11.2.3.61
  Attempting uninstall: nvidia-cuda-runtime-cu12
    Found existing installation: nvidia-cuda-runtime-cu12 12.5.82
    Uninstalling nvidia-cuda-runtime-cu12-12.5.82:
      Successfully uninstalled nvidia-cuda-runtime-cu12-12.5.82
  Attempting uninstall: nvidia-cuda-nvrtc-cu12
    Found existing installation: nvidia-cuda-nvrtc-cu12 12.5.82
    Uninstalling nvidia-cuda-nvrtc-cu12-12.5.82:
      Successfully uninstalled nvidia-cuda-nvrtc-cu12-12.5.82
  Attempting uninstall: nvidia-cuda-cupti-cu12
    Found existing installation: nvidia-cuda-cupti-cu12 12.5.82
    Uninstalling nvidia-cuda-cupti-cu12-12.5.82:
      Successfully uninstalled nvidia-cuda-cupti-cu12-12.5.82
!mkdir -p cricket_data
!wget -P cricket_data https://github.com/ultralytics/yolov5/releases/download/v1.0/coco128.zip
!unzip cricket_data/coco128.zip -d cricket_data

```

```
inflatng: cricket_data/coco128/labels/train2017/000000000529.txt
inflatng: cricket_data/coco128/labels/train2017/000000000073.txt
inflatng: cricket_data/coco128/labels/train2017/000000000113.txt
inflatng: cricket_data/coco128/labels/train2017/000000000488.txt
inflatng: cricket_data/coco128/labels/train2017/000000000338.txt
inflatng: cricket_data/coco128/labels/train2017/000000000072.txt
inflatng: cricket_data/coco128/labels/train2017/000000000502.txt
inflatng: cricket_data/coco128/labels/train2017/000000000149.txt
inflatng: cricket_data/coco128/labels/train2017/000000000389.txt
inflatng: cricket_data/coco128/labels/train2017/000000000404.txt
inflatng: cricket_data/coco128/labels/train2017/000000000438.txt
inflatng: cricket_data/coco128/labels/train2017/000000000612.txt
inflatng: cricket_data/coco128/labels/train2017/000000000564.txt
inflatng: cricket_data/coco128/labels/train2017/000000000572.txt
inflatng: cricket_data/coco128/labels/train2017/000000000599.txt
inflatng: cricket_data/coco128/labels/train2017/000000000360.txt
inflatng: cricket_data/coco128/labels/train2017/000000000349.txt
inflatng: cricket_data/coco128/labels/train2017/000000000605.txt
inflatng: cricket_data/coco128/labels/train2017/000000000201.txt
inflatng: cricket_data/coco128/labels/train2017/000000000629.txt
inflatng: cricket_data/coco128/labels/train2017/000000000359.txt
inflatng: cricket_data/coco128/labels/train2017/000000000370.txt
inflatng: cricket_data/coco128/labels/train2017/000000000589.txt
inflatng: cricket_data/coco128/labels/train2017/000000000562.txt
inflatng: cricket_data/coco128/labels/train2017/000000000560.txt
inflatng: cricket_data/coco128/labels/train2017/000000000164.txt
inflatng: cricket_data/coco128/labels/train2017/000000000400.txt
inflatng: cricket_data/coco128/labels/train2017/000000000428.txt
inflatng: cricket_data/coco128/labels/train2017/000000000415.txt
inflatng: cricket_data/coco128/labels/train2017/000000000165.txt
inflatng: cricket_data/coco128/labels/train2017/000000000575.txt
inflatng: cricket_data/coco128/labels/train2017/000000000544.txt
inflatng: cricket_data/coco128/labels/train2017/000000000034.txt
inflatng: cricket_data/coco128/labels/train2017/000000000626.txt
inflatng: cricket_data/coco128/labels/train2017/000000000154.txt
inflatng: cricket_data/coco128/labels/train2017/000000000395.txt
inflatng: cricket_data/coco128/labels/train2017/000000000394.txt
inflatng: cricket_data/coco128/labels/train2017/000000000431.txt
inflatng: cricket_data/coco128/labels/train2017/000000000357.txt
inflatng: cricket_data/coco128/labels/train2017/000000000419.txt
inflatng: cricket_data/coco128/labels/train2017/000000000196.txt
inflatng: cricket_data/coco128/labels/train2017/000000000009.txt
```

```
!mkdir -p cricket_data
!wget -P cricket_data https://ultralytics.com/assets/coco128.zip
!unzip cricket_data/coco128.zip -d cricket_data
```



```
inflating: cricket_data/coco128/labels/train2017/000000000560.txt
inflating: cricket_data/coco128/labels/train2017/000000000164.txt
inflating: cricket_data/coco128/labels/train2017/000000000400.txt
inflating: cricket_data/coco128/labels/train2017/000000000428.txt
inflating: cricket_data/coco128/labels/train2017/000000000415.txt
inflating: cricket_data/coco128/labels/train2017/000000000165.txt
inflating: cricket_data/coco128/labels/train2017/000000000575.txt
inflating: cricket_data/coco128/labels/train2017/000000000544.txt
inflating: cricket_data/coco128/labels/train2017/000000000034.txt
inflating: cricket_data/coco128/labels/train2017/000000000626.txt
inflating: cricket_data/coco128/labels/train2017/000000000154.txt
inflating: cricket_data/coco128/labels/train2017/000000000395.txt
inflating: cricket_data/coco128/labels/train2017/000000000394.txt
inflating: cricket_data/coco128/labels/train2017/000000000431.txt
inflating: cricket_data/coco128/labels/train2017/000000000357.txt
inflating: cricket_data/coco128/labels/train2017/000000000419.txt
inflating: cricket_data/coco128/labels/train2017/000000000196.txt
inflating: cricket_data/coco128/labels/train2017/000000000009.txt
inflating: cricket_data/coco128/labels/train2017/000000000584.txt
inflating: cricket_data/coco128/labels/train2017/000000000590.txt
inflating: cricket_data/coco128/labels/train2017/000000000143.txt
inflating: cricket_data/coco128/labels/train2017/000000000625.txt
inflating: cricket_data/coco128/labels/train2017/000000000001.txt
```

```
import os
print(os.listdir("cricket_data"))
```

```
['coco128.zip.1', 'coco128', 'coco128.zip']
```

```
import os
print(os.listdir("cricket_data/coco128"))
```

```
['labels', 'LICENSE', 'images', 'README.txt']
```

```
model.train(data="coco128.yaml", epochs=10, imgsz=640, batch=8)
```



```

0.78779, 0.78879, 0.78979, 0.79079, 0.79179,
0.79279, 0.79379, 0.79479, 0.7958, 0.7968, 0.7978, 0.7988, 0.7998, 0.8008,
0.8018, 0.8028, 0.8038, 0.8048, 0.80581, 0.80681, 0.80781, 0.80881, 0.80981, 0.81081,
0.81181, 0.81281, 0.81381, 0.81481, 0.81582,
0.81682, 0.81782, 0.81882, 0.81982, 0.82082, 0.82182, 0.82282, 0.82382, 0.82482,
0.82583, 0.82683, 0.82783, 0.82883, 0.82983, 0.83083, 0.83183, 0.83283, 0.83383, 0.83483,
0.83584, 0.83684, 0.83784, 0.83884, 0.83984,
0.84084, 0.84184, 0.84284, 0.84384, 0.84484, 0.84585, 0.84685, 0.84785, 0.84885,
0.84985, 0.85085, 0.85185, 0.85285, 0.85385, 0.85485, 0.85586, 0.85686, 0.85786, 0.85886,
0.85986, 0.86086, 0.86186, 0.86286, 0.86386,
0.86486, 0.86587, 0.86687, 0.86787, 0.86887, 0.86987, 0.87087, 0.87187, 0.87287,
0.87387, 0.87487, 0.87588, 0.87688, 0.87788, 0.87888, 0.87988, 0.88088, 0.88188, 0.88288,
0.88388, 0.88488, 0.88589, 0.88689, 0.88789,
0.88889, 0.88989, 0.89089, 0.89189, 0.89289, 0.89389, 0.89489, 0.8959, 0.8969,
0.8979, 0.8989, 0.8999, 0.9009, 0.9019, 0.9029, 0.9039, 0.9049, 0.90591, 0.90691,
0.90791, 0.90891, 0.90991, 0.91091, 0.91191,
0.91291, 0.91391, 0.91491, 0.91592, 0.91692, 0.91792, 0.91892, 0.91992, 0.92092.

```

```
!wget -O image.jpg "https://media.istockphoto.com/id/1263323602/vector/the-wooden-bat-wicket-the-ball-for-the-game-of-cricket-realistic-3d-v
```

```

--2025-03-16 20:20:15-- https://media.istockphoto.com/id/1263323602/vector/the-wooden-bat-wicket-the-ball-for-the-game-of-cricket-realistic-3d-v
Resolving media.istockphoto.com (media.istockphoto.com)... 13.35.116.23, 13.35.116.103, 13.35.116.52, ...
Connecting to media.istockphoto.com (media.istockphoto.com)|13.35.116.23|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 24890 (24K) [image/jpeg]
Saving to: 'image.jpg'

```

```
image.jpg      100%[=====] 24.31K  --.-KB/s   in 0.003s
```

```
2025-03-16 20:20:15 (7.66 MB/s) - 'image.jpg' saved [24890/24890]
```

```
!yolo task=detect mode=predict model=runs/detect/train3/weights/best.pt source='image.jpg'
```

```

Ultralytics 8.3.91 Python-3.11.11 torch-2.6.0+cu124 CPU (Intel Xeon 2.20GHz)
Model summary (fused): 72 layers, 11,156,544 parameters, 0 gradients, 28.6 GFLOPs

image 1/1 /content/image.jpg: 640x640 1 sports ball, 1069.8ms
Speed: 6.2ms preprocess, 1069.8ms inference, 2.6ms postprocess per image at shape (1, 3, 640, 640)
Results saved to runs/detect/predict5
🔗 Learn more at https://docs.ultralytics.com/modes/predict

```

```
!ls runs/detect/predict
```

```
image.jpg
```

```

from IPython.display import display
from PIL import Image

```

```

image_path = "runs/detect/predict/image.jpg" # Change this to the actual file name
display(Image.open(image_path))

```



```
!wget -O image3.jpg "https://freerangestock.com/sample/57335/person-eating-pizza-with-fork-and-knife.jpg"
```

```
--2025-03-16 20:19:08-- https://freerangestock.com/sample/57335/person-eating-pizza-with-fork-and-knife.jpg
Resolving freerangestock.com (freerangestock.com)... 104.25.56.65, 172.67.65.237, 104.25.55.65, ...
Connecting to freerangestock.com (freerangestock.com)|104.25.56.65|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [image/jpeg]
Saving to: 'image3.jpg'
```

```
image3.jpg [ <=> ] 55.06K --.-KB/s in 0.01s
```

```
2025-03-16 20:19:08 (4.98 MB/s) - 'image3.jpg' saved [56380]
```

```
!yolo task=detect mode=predict model=runs/detect/train3/weights/best.pt source='image3.jpg'
```

```
Ultralytics 8.3.91 Python-3.11.11 torch-2.6.0+cu124 CPU (Intel Xeon 2.20GHz)
Model summary (fused): 72 layers, 11,156,544 parameters, 0 gradients, 28.6 GFLOPs

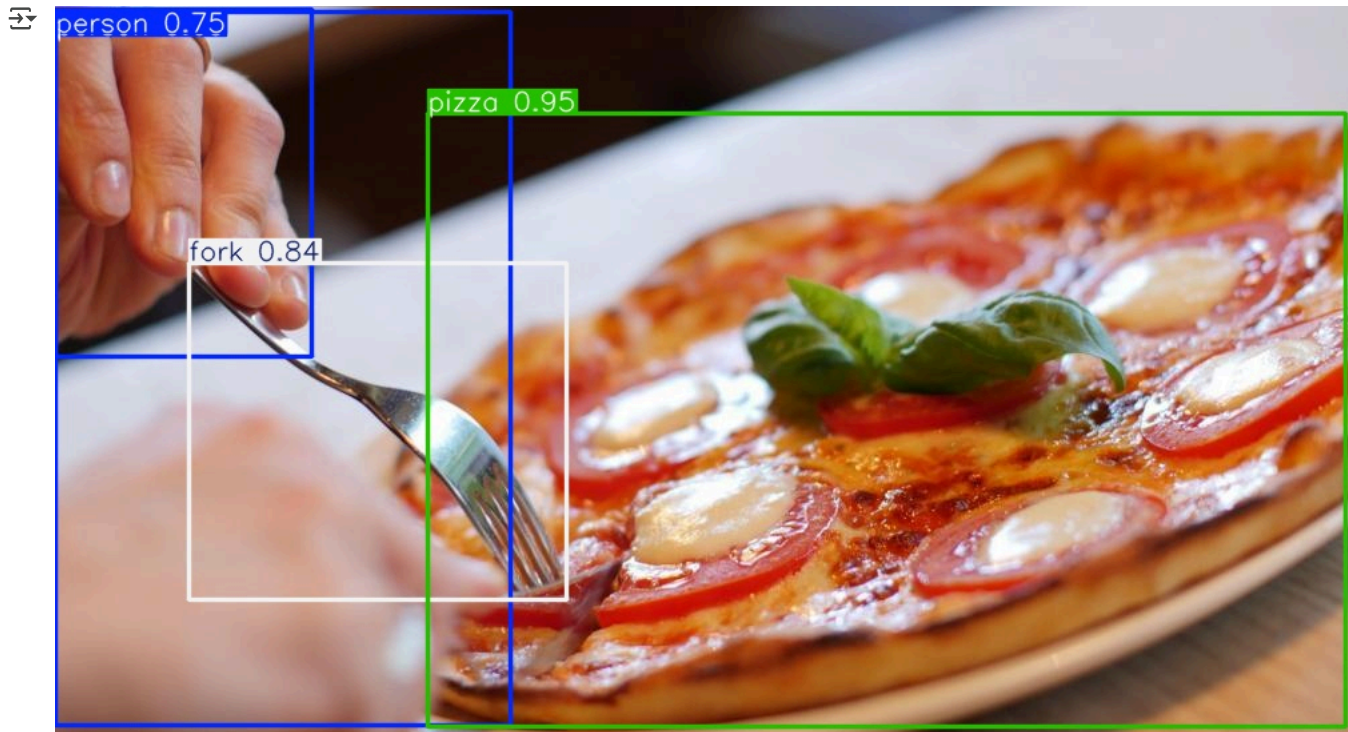
image 1/1 /content/image3.jpg: 384x640 2 persons, 1 fork, 1 pizza, 424.0ms
Speed: 3.8ms preprocess, 424.0ms inference, 1.8ms postprocess per image at shape (1, 3, 384, 640)
Results saved to runs/detect/predict4
Learn more at https://docs.ultralytics.com/modes/predict
```

```
!ls runs/detect/predict4
```

```
image3.jpg
```

```
from IPython.display import display
from PIL import Image
```

```
image_path = "runs/detect/predict4/image3.jpg" # Change this to the actual file name
display(Image.open(image_path))
```



```
!wget -O image5.jpg "https://cdn.vox-cdn.com/thumbor/9iLhsj7RWPT-WaPYL7GHcku9e0Q=/1400x1050/filters:format(jpeg)/cdn.vox-cdn.com/uploads/chc
```

```
--2025-03-16 20:30:18-- https://cdn.vox-cdn.com/thumbor/9iLhsj7RWPT-WaPYL7GHcku9e0Q=/1400x1050/filters:format(jpeg)/cdn.vox-cdn.com/upl
Resolving cdn.vox-cdn.com (cdn.vox-cdn.com)... 199.232.192.124, 199.232.196.124
Connecting to cdn.vox-cdn.com (cdn.vox-cdn.com)|199.232.192.124|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 174934 (171K) [image/jpeg]
Saving to: 'image5.jpg'
```

```
image5.jpg      100%[=====] 170.83K  --.-KB/s   in 0.03s
```

```
2025-03-16 20:30:19 (5.09 MB/s) - 'image5.jpg' saved [174934/174934]
```

```
!yolo task=detect mode=predict model=runs/detect/train3/weights/best.pt source='image5.jpg'
```

```
Ultralytics 8.3.91 Python-3.11.11 torch-2.6.0+cu124 CPU (Intel Xeon 2.20GHz)
Model summary (fused): 72 layers, 11,156,544 parameters, 0 gradients, 28.6 GFLOPs
```

```
image 1/1 /content/image5.jpg: 480x640 3 persons, 1 sports ball, 2 baseball bats, 499.7ms
Speed: 4.3ms preprocess, 499.7ms inference, 1.8ms postprocess per image at shape (1, 3, 480, 640)
Results saved to runs/detect/predict9
Learn more at https://docs.ultralytics.com/modes/predict
```

```
!ls runs/detect/predict9
```

```
image5.jpg
```

```
from IPython.display import display
from PIL import Image
```

```
image_path = "runs/detect/predict9/image5.jpg" # Change this to the actual file name
display(Image.open(image_path))
```