```
!pip install ultralytics roboflow
```

Show hidden output

```
from roboflow import Roboflow
rf = Roboflow(api_key="wbMTym2fYBh3Kiwc5e51")
project = rf.workspace("ecoinnovate").project("ecoinnovators-solar-ind-2026")
version = project.version(2)
dataset = version.download("yolov8-obb")
```

Show hidden output

```
from ultralytics import YOLO

# 1. Load the 'Large' model for better accuracy (Recall/Precision)
model = YOLO('yolov8l-obb.pt')

# 2. Train
results = model.train(
    data=f"{dataset.location}/data.yaml",
    epochs=45,
    imgsz=640,
    name='solar_v8_obb_model'
)
```

```
                   all        426       2655       0.77      0.821      0.846      0.4
```

```
                   all        426       2655       0.77      0.821      0.846      0.6

      Epoch    GPU_mem   box_loss   cls_loss   dfl_loss  Instances       Size
      44/45      10.1G     0.6732     0.4651      1.162          8        640: 100% ──
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95
                   all        426       2655      0.782       0.82      0.851      0.67

      Epoch    GPU_mem   box_loss   cls_loss   dfl_loss  Instances       Size
      45/45      10.1G     0.6733     0.4629      1.161         45        640: 100% ──
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95
                   all        426       2655      0.783      0.814      0.848      0.67

45 epochs completed in 2.997 hours.
Optimizer stripped from /content/runs/obb/solar_v8_obb_model/weights/last.pt, 89.5MB
Optimizer stripped from /content/runs/obb/solar_v8_obb_model/weights/best.pt, 89.5MB

Validating /content/runs/obb/solar_v8_obb_model/weights/best.pt...
Ultralytics 8.3.235 🚀 Python-3.12.12 torch-2.9.0+cu126 CUDA:0 (Tesla T4, 15095MiB)
YOLOv8l-obb summary (fused): 121 layers, 44,455,830 parameters, 0 gradients, 168.5 GFL
                 Class     Images  Instances      Box(P          R      mAP50  mAP50-95
                   all        426       2655      0.782       0.82      0.851      0.67
Speed: 0.2ms preprocess, 16.9ms inference, 0.0ms loss, 4.0ms postprocess per image
Results saved to /content/runs/obb/solar_v8_obb_model
```