

```
!pip install ultralytics
```

```
!pip install roboflow
```

```
from roboflow import Roboflow
rf = Roboflow(api_key="Ime1ggrxFEKYl2QnzPOU")
project = rf.workspace("vultur-x01i3").project("kabras")
version = project.version(2)
dataset = version.download("yolov8")

loading Roboflow workspace...
loading Roboflow project...
Dependency ultralytics==8.0.196 is required but found version=8.2.11, to fix: `pip install ultralytics==8.0.196`
Downloading Dataset Version Zip in Kabras-2 to yolov8:: 100%|██████████| 213383/213383 [00:04<00:00, 46249.11it/s]

Extracting Dataset Version Zip to Kabras-2 in yolov8:: 100%|██████████| 8253/8253 [00:01<00:00, 5934.51it/s]
```

```
!yolo task=detect mode=train model=yolov8m.pt data=/content/Kabras-2/data.yaml epochs=20 imgsz=640
```

Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
12/20	7.26G	0.6249	0.3847	1.031	33	640: 100% 238/238 [02:13<00:00, 1.78it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.06it/s]
	all	318	1255	0.989	0.982	0.993 0.866
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
13/20	7.35G	0.5901	0.3574	1.006	32	640: 100% 238/238 [02:10<00:00, 1.83it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.04it/s]
	all	318	1255	0.987	0.978	0.994 0.876
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
14/20	7.29G	0.5453	0.3326	0.9739	53	640: 100% 238/238 [02:12<00:00, 1.79it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.03it/s]
	all	318	1255	0.985	0.986	0.994 0.891
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
15/20	7.37G	0.5118	0.3118	0.9538	29	640: 100% 238/238 [02:11<00:00, 1.81it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.06it/s]
	all	318	1255	0.993	0.99	0.995 0.914
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
16/20	7.28G	0.4743	0.2915	0.9285	21	640: 100% 238/238 [02:11<00:00, 1.81it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:05<00:00, 1.87it/s]
	all	318	1255	0.994	0.99	0.995 0.919
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
17/20	7.35G	0.445	0.2719	0.915	40	640: 100% 238/238 [02:10<00:00, 1.82it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.04it/s]
	all	318	1255	0.998	0.988	0.995 0.93
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
18/20	7.29G	0.4182	0.2551	0.8954	55	640: 100% 238/238 [02:12<00:00, 1.80it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:06<00:00, 1.49it/s]
	all	318	1255	0.999	0.989	0.995 0.943
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
19/20	7.33G	0.3854	0.2356	0.879	32	640: 100% 238/238 [02:11<00:00, 1.81it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:04<00:00, 2.04it/s]
	all	318	1255	0.998	0.991	0.995 0.95
Epoch	GPU_mem	box_loss	cls_loss	dfl_loss	Instances	Size
20/20	7.24G	0.3622	0.225	0.87	39	640: 100% 238/238 [02:14<00:00, 1.77it/s]
	Class	Images	Instances	Box(P	R	mAP50 mAP50-95): 100% 10/10 [00:05<00:00, 1.74it/s]
	all	318	1255	0.999	0.992	0.995 0.96

20 epochs completed in 0.799 hours.

Optimizer stripped from runs/detect/train2/weights/last.pt, 52.0MB

Optimizer stripped from runs/detect/train2/weights/best.pt, 52.0MB

Validating runs/detect/train2/weights/best.pt...

Ultralytics YOLOv8.2.11 Python-3.10.12 torch-2.2.1+cu121 CUDA:0 (Tesla T4, 15102MiB)

Model summary (fused): 218 layers, 25840339 parameters, 0 gradients, 78.7 GFLOPs

Class	Images	Instances	Box(P	R	mAP50	mAP50-95): 100% 10/10 [00:12<00:00, 1.26s/it]
all	318	1255	0.999	0.992	0.995	0.96

Speed: 0.4ms preprocess, 11.4ms inference, 0.0ms loss, 5.8ms postprocess per image

Results saved to runs/detect/train2

💡 Learn more at <https://docs.ultralytics.com/modes/train>

```
!yolo task=detect mode=val model=/content/runs/detect/train2/weights/best.pt data=/content/Kabras-2/data.yaml
```

Ultralytics YOLOv8.2.11 🚀 Python-3.10.12 torch-2.2.1+cu121 CUDA:0 (Tesla T4, 15102MiB)  
Model summary (fused): 218 layers, 25840339 parameters, 0 gradients, 78.7 GFLOPs  
**val:** Scanning /content/Kabras-2/valid/labels.cache... 318 images, 0 backgrounds, 0 corrupt: 100% 318/318 [00:00<?, ?it/s]  
Class Images Instances Box(P R mAP50 mAP50-95): 100% 20/20 [00:19<00:00, 1.04it/s]  
all 318 1255 0.999 0.992 0.995 0.959  
Speed: 3.2ms preprocess, 22.6ms inference, 0.5ms loss, 10.7ms postprocess per image  
Results saved to runs/detect/val  
💡 Learn more at <https://docs.ultralytics.com/modes/val>

Start coding or [generate](#) with AI.