

# 2023년 07월 19일

## 학습 방식

```
from ultralytics import YOLO
model = YOLO('yolov8n.pt') # load a pretrained YOLOv8n detection mode
model.train(data='/content/drive/MyDrive/eco_cup5/yolov8_1aug/data.yaml', epochs=200, patience=30, batch=32, imgsz=640)
```

epochs= 200 //학습 반복 횟수

patience = 30 //검증 성능이 30 epochs동안 개선되지 않으면 조기 종료

batch = 32 //배치 크기 32 높을 수록 학습이 빠르지만 많은 메모리 필요

imgsz = 640 //학습용 입력이미지 640

## 오늘학습한 모델 정보

Stopping training early as no improvement observed in last 30 epochs. Best results observed at epoch 142, best model saved as best.pt.

To update EarlyStopping(patience=30) pass a new patience value, i.e. `patience=300` or use `patience=0` to disable EarlyStopping.

172 epochs completed in 1.147 hours.

Optimizer stripped from runs/detect/train/weights/last.pt, 6.2MB

Optimizer stripped from runs/detect/train/weights/best.pt, 6.2MB

```
Validating runs/detect/train/weights/best.pt...
Ultralytics YOLOv8.0.137 Python-3.10.12 torch-2.0.1+cu118 CUDA:0 (NVIDIA A100-SXM4-40GB, 40514MiB)
Model summary (fused): 168 layers, 3006428 parameters, 0 gradients

```

Class	Images	Instances	Box(P)	R	mAP50	mAP50-95
all	427	550	0.909	0.94	0.957	0.889
cup(glass)	427	150	0.918	0.964	0.968	0.908
cup(paper)	427	112	0.896	0.938	0.962	0.912
cup(plastic)	427	166	0.884	0.964	0.95	0.873
tumbler	427	122	0.94	0.896	0.947	0.864

Speed: 1.2ms preprocess, 0.5ms inference, 0.0ms loss, 0.6ms postprocess per image

내일은 yolo8s.pt, yolo8n-seg.pt로 학습할 예정