

MLDL 복습 STUDY 01

- Object Detection
- mAP
- FPS
- YOLO

```
lookup.KeyValue  
f.constant(['em  
=tf.constant([0  
ce = tf.lookup.StaticV  
init,  
num_oov_buckets=5)
```

```
lookup.StaticVocabular  
initializer  
num_oov_buckets  
lookup_key_dtype=None  
name=None,  
experimental_is_open
```

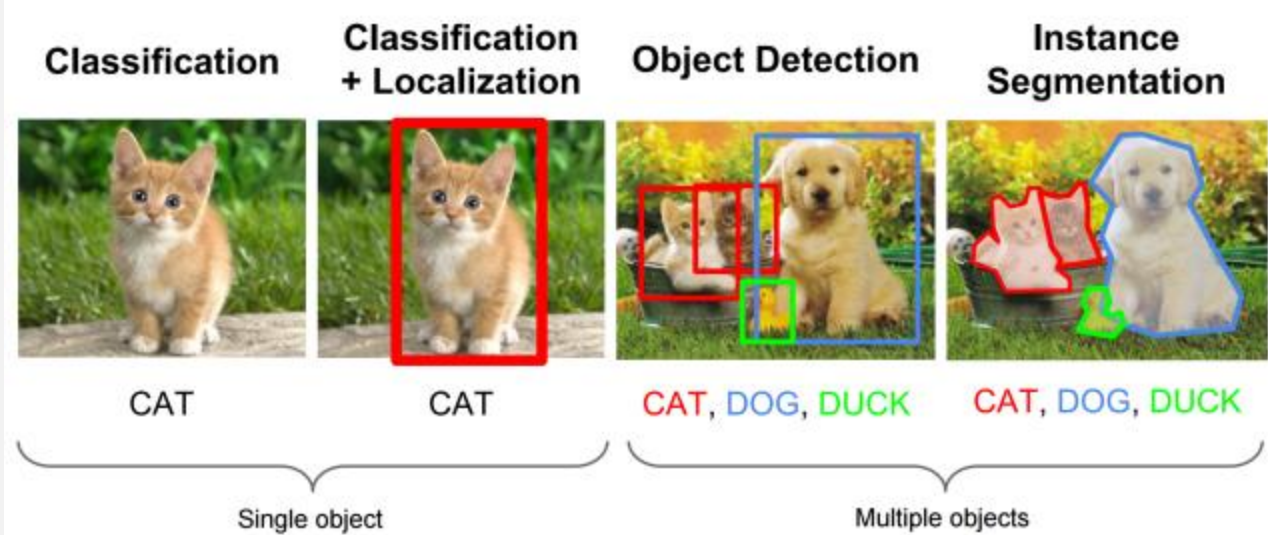


Object Detection

Object detection = Classification + Localization



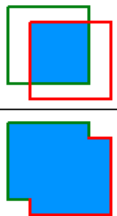
Object Detection



mAP, FPS

mAP (pascalvoc.py?)

IoU (Intersection of Union)

$$IOU = \frac{\text{area of overlap}}{\text{area of union}} = \frac{\text{area of overlap}}{\text{area of union}}$$


True Positive (TP) : 맞다고 추측하고 실제로 맞음

False Positive (FP) : 맞다고 추측하고 실제로 틀림

False Negative (FN) : 아니라고 추측하고 실제로 맞음

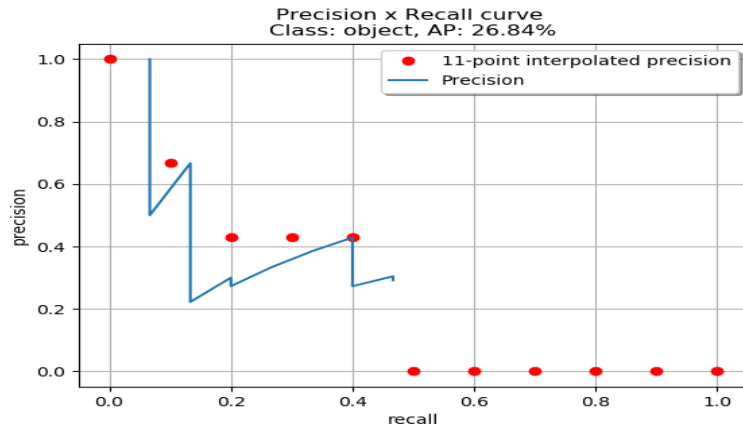
True Negative (TN) : 아니라고 추측하고 실제로 아님

정밀도 (Precision)

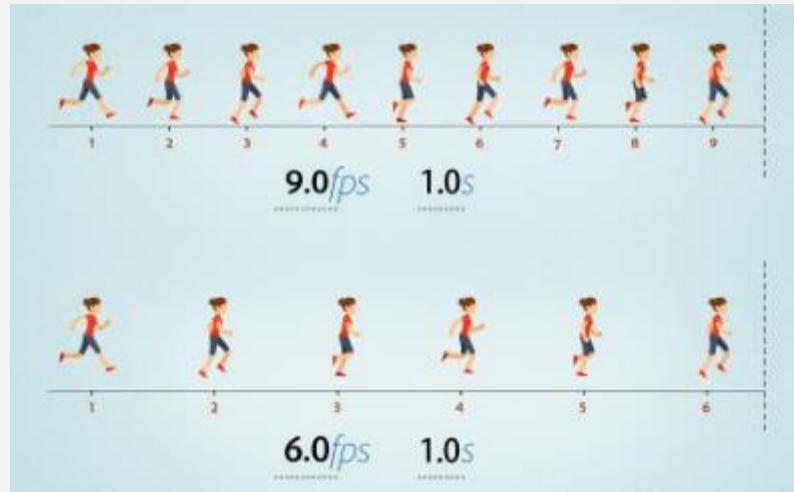
$$\text{Precision} = \frac{TP}{TP+FP} = \frac{TP}{\text{all Detection}}$$

재현율 (Recall)

$$\text{Recall} = \frac{TP}{TP+FN} = \frac{TP}{\text{all ground Truths}}$$



FPS(Frame Per Second)



YOLO

YOLO

