YOLOv5

# Reference

<https://github.com/ultralytics/yolov5>

# Environment Version

Ubuntu : 18.04.5

Python : 3.8.8

GRAPHICS CARD : RTX3090

NVIDIA DRIVER : 455.32.00

CUDA : 11.1.1

cuDNN : 8.0.5.39-1

Pytorch : 1.7.1

TensorFlow : 2.4.0

# Prepare Dataset

pip3 install beautifulsoup4

pip3 install lxml

* Run reference file

python3 xml\_covert\_to\_yolo.py

# How to train

python3 train.py --img 256 --batch 512 --epochs 300 --data coco3.yaml --cfg models/yolov5s.yaml --weights yolov5s.pt

# Inference

python3 detect.py --source 0 # webcam

# DataSet Reference

* 1. COCO

<https://cocodataset.org/#download>

<https://chtseng.wordpress.com/2019/12/01/%E5%BE%9Ecoco-dataset%E5%8F%96%E5%87%BA%E7%89%B9%E5%AE%9A%E7%9A%84%E7%89%A9%E4%BB%B6%E6%A8%99%E8%A8%98/>

<https://blog.csdn.net/xiaobumi123/article/details/111711053?utm_medium=distribute.pc_relevant.none-task-blog-baidujs_title-6&spm=1001.2101.3001.4242>

* 1. VOC

<https://chtseng.wordpress.com/2019/12/01/__trashed-4/>

* 1. Open Image

<https://storage.googleapis.com/openimages/web/index.html>

<https://towardsdatascience.com/faster-r-cnn-object-detection-implemented-by-keras-for-custom-data-from-googles-open-images-125f62b9141a>

* 1. Pseudo-lableing

<https://github.com/AlexeyAB/darknet#how-to-use-on-the-command-line>

* 1. Datasets

<https://www.paperswithcode.com/datasets>