YOLOv4 Process

# Reference

<https://github.com/AlexeyAB/darknet>

<https://medium.com/ching-i/scaledyolov4-yolov4-csp-%E8%A8%93%E7%B7%B4%E6%95%99%E5%AD%B8-ee091598e503>

# Environment Version

Ubuntu : 18.04.5

Python : 3.6.9

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-rc3

# Install MISH-CUDA

pip3 install git+https://github.com/JunnYu/mish-cuda.git

# Git Clone

<https://github.com/WongKinYiu/ScaledYOLOv4/branches/yolov4-csp>

# Prepare Dataset

pip3 install beautifulsoup4

download, setting and run reference file

python3 xml\_covert\_to\_yolo.py

# Make

* export PATH=/usr/local/cuda-11.1/bin${PATH:+:${PATH}}
* sudo ln -s /usr/lib/x86\_64-linux-gnu/libcuda.so.1 /usr/local/cuda/lib64/libcuda.so

# How to train (to detect your custom objects)

<https://github.com/AlexeyAB/darknet#how-to-train-to-detect-your-custom-objects>

./darknet detector train ../datasets/MobilePhonesPascalVOC/cfg/obj.data ../datasets/MobilePhonesPascalVOC/cfg/yolov4-tiny-obj.cfg ../datasets/MobilePhonesPascalVOC/cfg/yolov4-tiny.conv.29

or

sudo python3 train.py --device 0 --batch-size 8 --data data/yolov4-csp\_512.yaml --cfg models/yolov4-csp\_512.cfg --weights '' --name ScaledYOLOv4-yolov4-csp

# Detect

python3 detect.py --weights runs/exp01\_ScaledYOLOv4-yolov4-csp/weights/last\_ScaledYOLOv4-yolov4-csp.pt --source inference/images/001.jpg --cfg models/yolov4-csp\_512.cfg --names data/yolov4-csp\_512.names

# Isuue Reference

<https://forum.qt.io/topic/119109/using-pyqt5-with-opencv-python-cv2-causes-error-could-not-load-qt-platform-plugin-xcb-even-though-it-was-found/7>