Object Detection

# Reference

YOLO v4

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

Scaled YOLO v4

<https://alexeyab84.medium.com/scaled-yolo-v4-is-the-best-neural-network-for-object-detection-on-ms-coco-dataset-39dfa22fa982?source=friends_link&sk=c8553bfed861b1a7932f739d26f487c8>

# Environment Version

## dGPU

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

## Jetson

JetPack : 4.5.1

CUDA : 10.2

TensorRT : 7.1.3

# DeepStream

<https://github.com/marcoslucianops/DeepStream-Yolo>

## Path

cd /opt/nvidia/deepstream/deepstream-5.1/sources/yolo

## Build

CUDA\_VER=10.2 make -C nvdsinfer\_custom\_impl\_Yolo

## Run

deepstream-app -c deepstream\_app\_config.txt

# Computer Vision Annotation Tool

<https://github.com/openvinotoolkit/cvat>

# (可選)Convert PTH To ONNX To Engine

<https://medium.com/analytics-vidhya/using-yolov4-on-nvidia-deepstream-5-0-89d8c1e6fd1d>

/usr/src/tensorrt/bin/trtexec --onnx=yolov4\_1\_3\_224\_224\_static.onnx --workspace=4096 --fp16 --saveEngine=model\_b1\_gpu0\_fp16.engine