Prior Knowledge

YOLO V3:

YOLOv3 Object detection:

YOLOv3 (You Only Look Once, Version 3) is **a real-time object detection algorithm that identifies specific objects in videos, live feeds, or images**. The YOLO machine learning algorithm uses features learned by a deep convolution neural network to detect an object.**YOLOv3 is the most recent variation of the You Only Look Once (YOLO) approaches**. This family of models is popular for real-time object detection which in 2015 was introduced in the paper "You Only Look Once: Unified, Real-Time Object Detection" by Joseph Redmon et al.

Fig: Real Time Object Detection

YOLO model in a windows environment:

- Create ***yolov3*** and ***training*** folders on your Desktop
- Open a command prompt and navigate to the "**yolov3**" folder
- Create and copy the **darknet.exe** file
- Create & copy the files we need for training (i.e. "**obj**" dataset, "**yolov3custom.cfg**", "**obj.data**", "**obj.names**" and "**process.py**") to your ***yolov3*** dir
- Copy the "**yolov3-custom.cfg**", "**obj.data**", "**obj.names**", and "**process.py**" files and the **"obj"** folder from the ***yolov3*** directory to the

darknet directory ➢ Run the **process.py** python script to create the **train.txt** & **test.txt** files

- Download the pre-trained **YOLOv3** weights
- Train the detector
- Check performance
- Test your custom Object Detector

Virtual python Environmental Builder