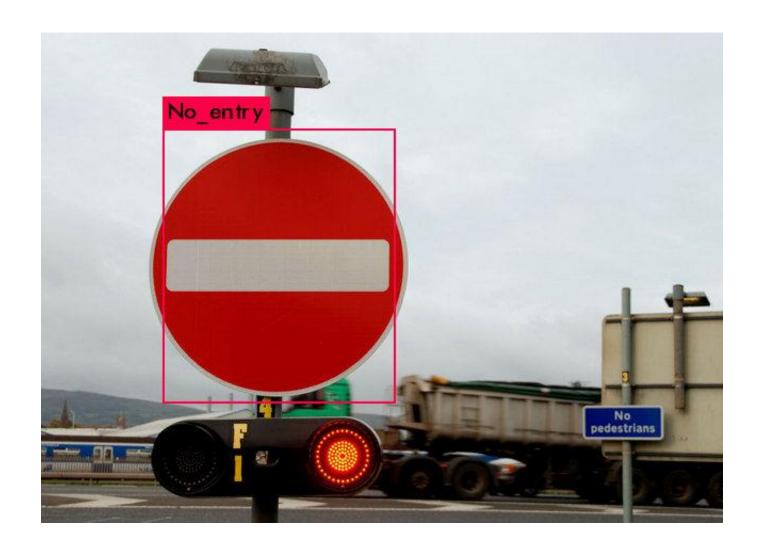
# Traffic Signs Detection



# Object Detection

Classification



STOP sign, DETOUR sign

Localization

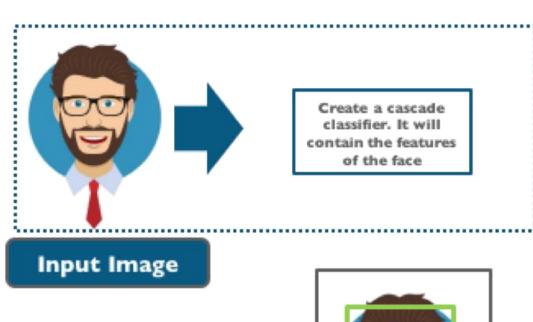


Object detection



STOP sign, DETOUR sign

#### Haar Cascade







Displayed Image

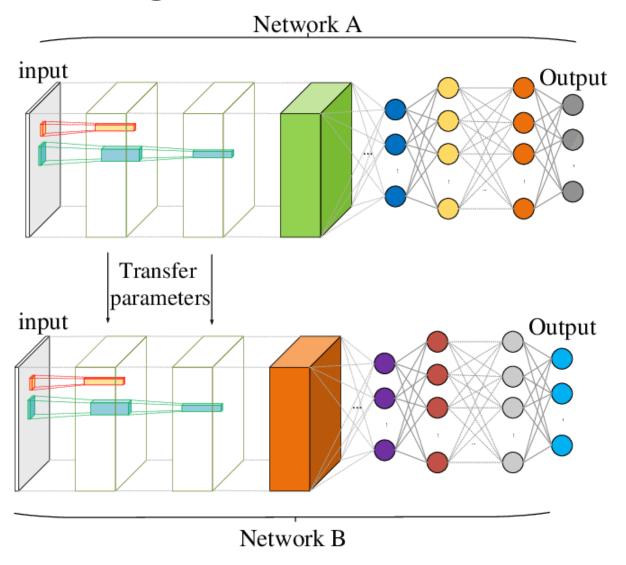




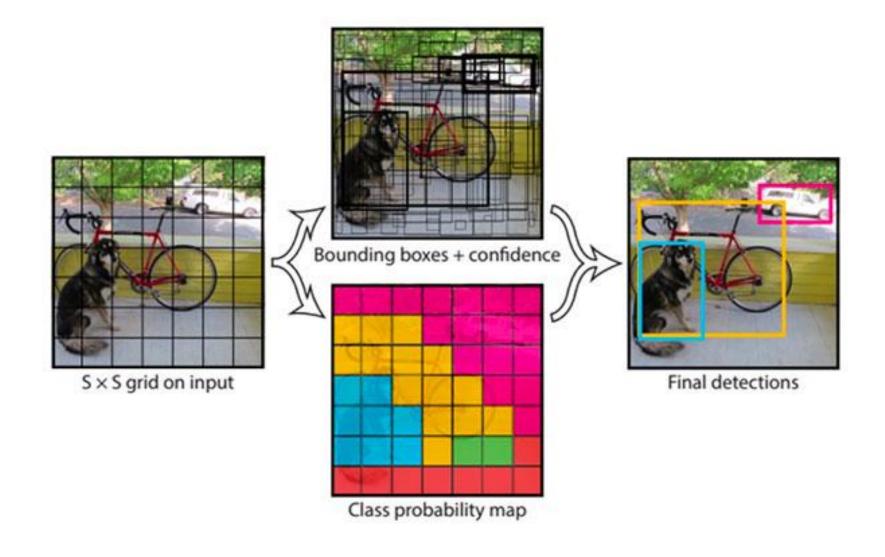
[[[121,131,213] [213.143,176] [125,127,128]

[134,135,172] [213.143,176] [213.143,176]]] OpenCV will read the input image and the feature file

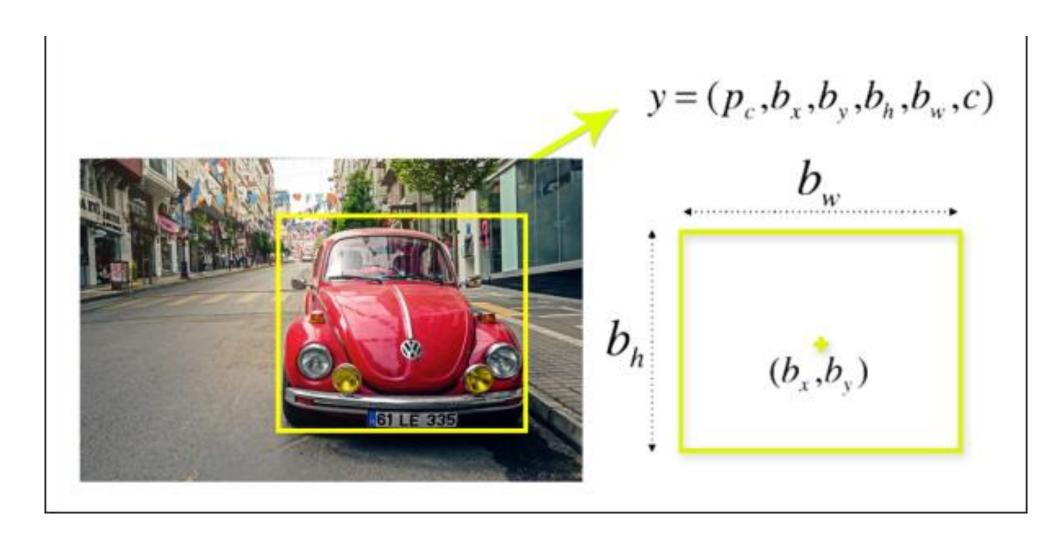
## Transfer Learning



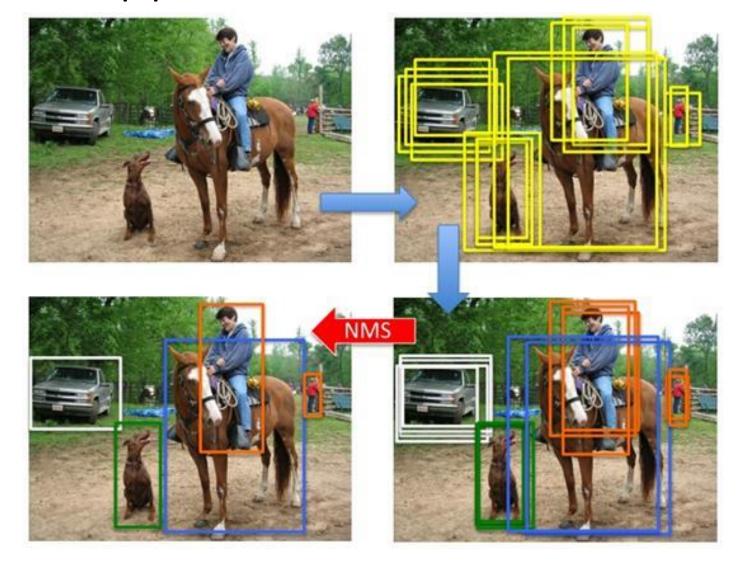
### Yolo V4



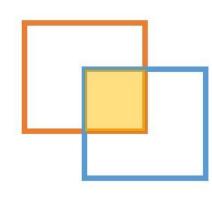
### Bounding Box



# Non-Max Suppression



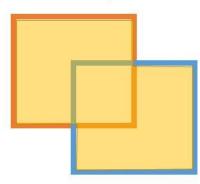
#### Intersection Over Union



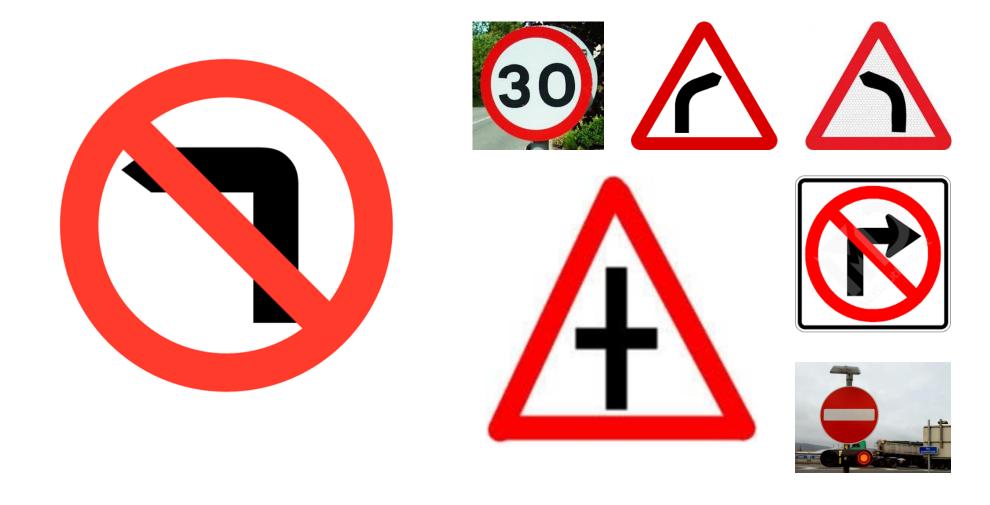
 $Intersection\ over\ Union\ (IoU)\ = \frac{Area\ of\ Overlap}{Area\ of\ Union}$ 

---- Prediction

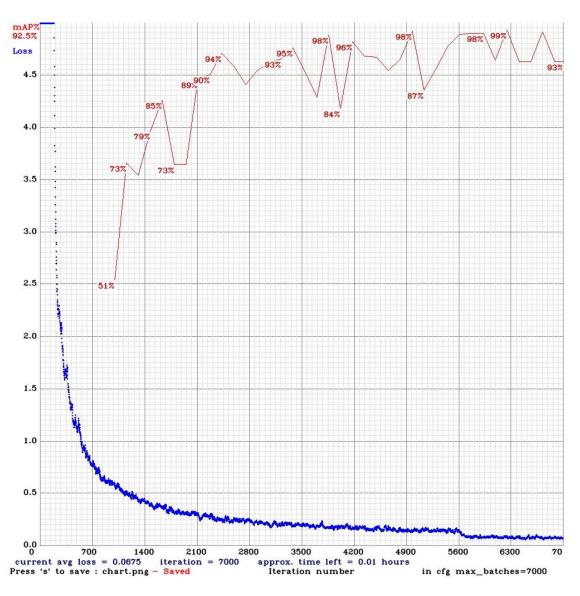
Ground-truth



## Dataset



#### Model Training Accuracy



## Testing & Real-Time Results

