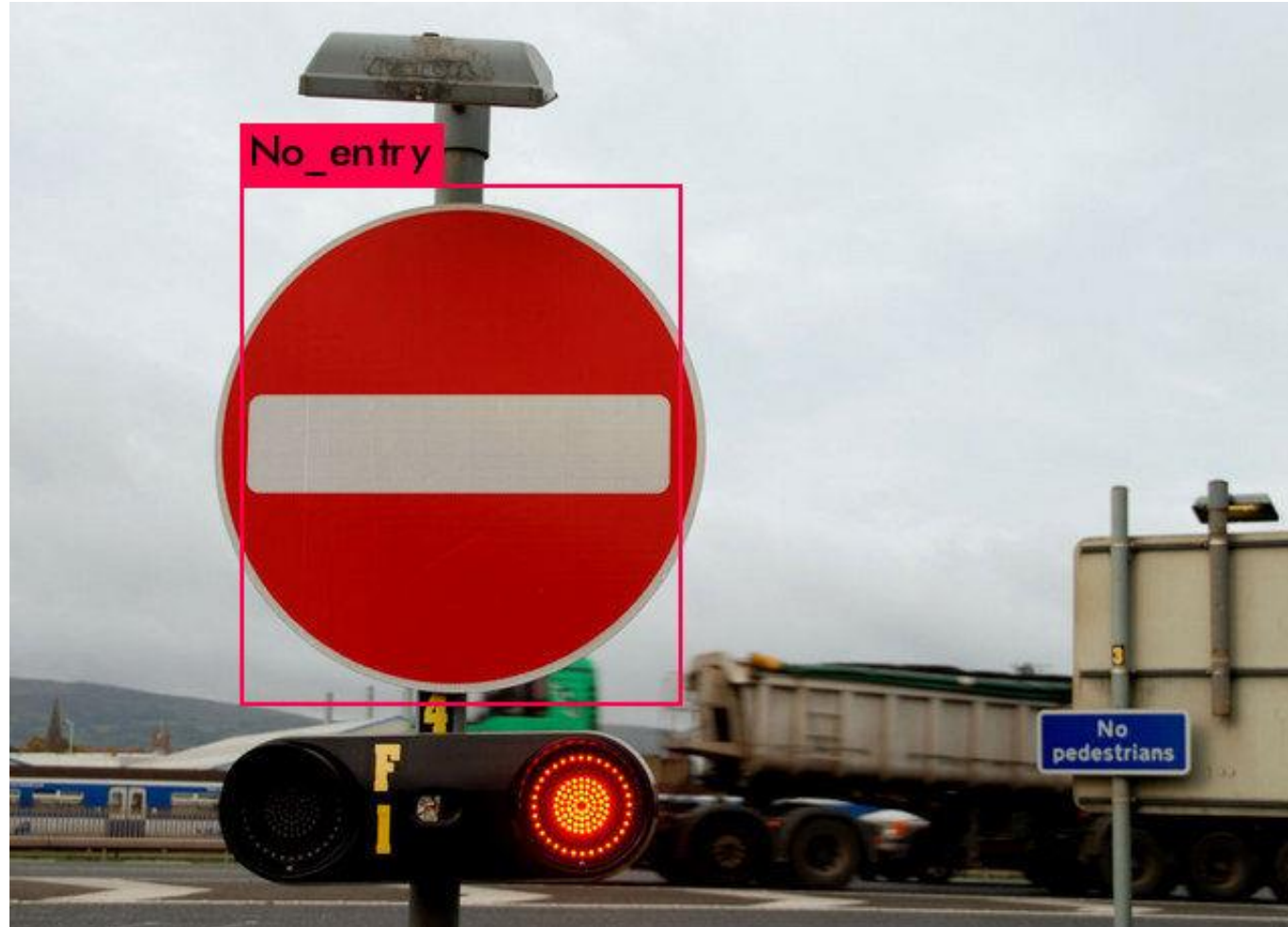


Traffic Signs Detection



Object Detection

Classification



STOP sign, DETOUR sign

Localization

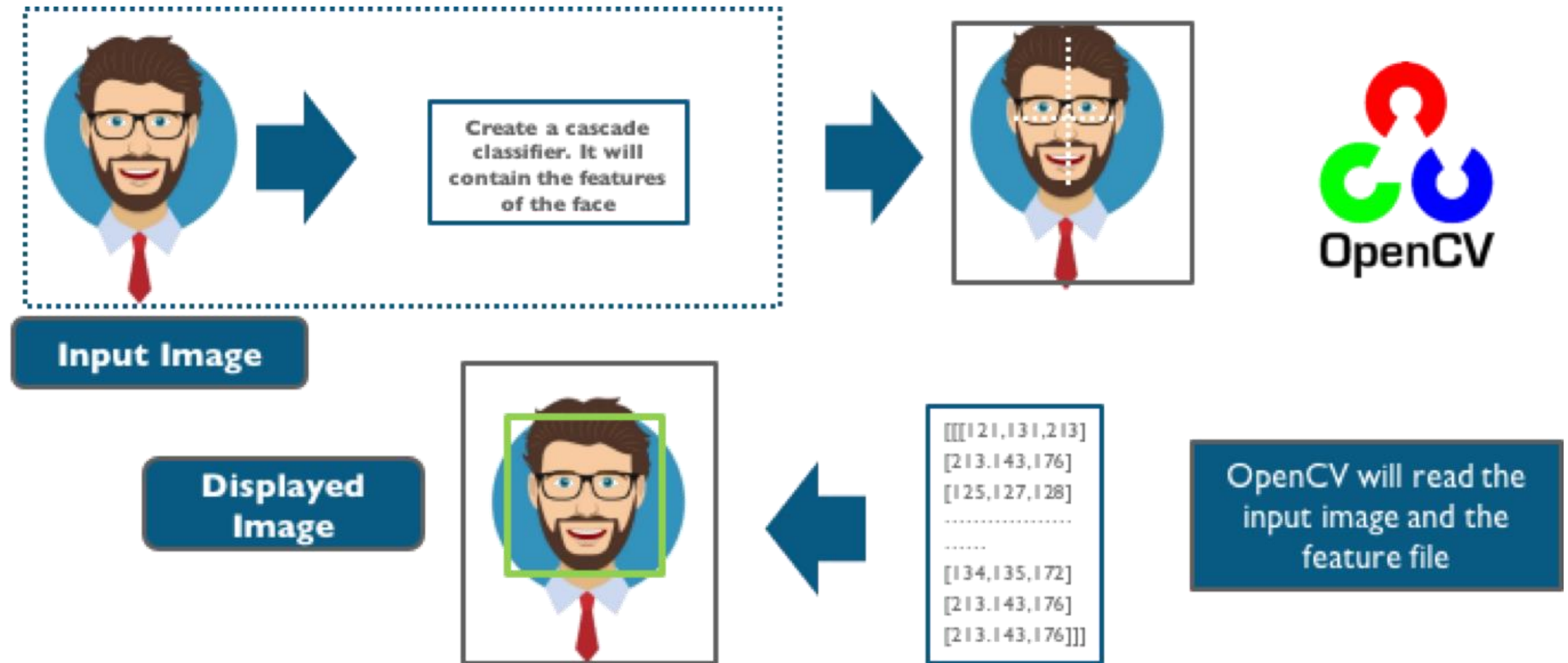


Object detection

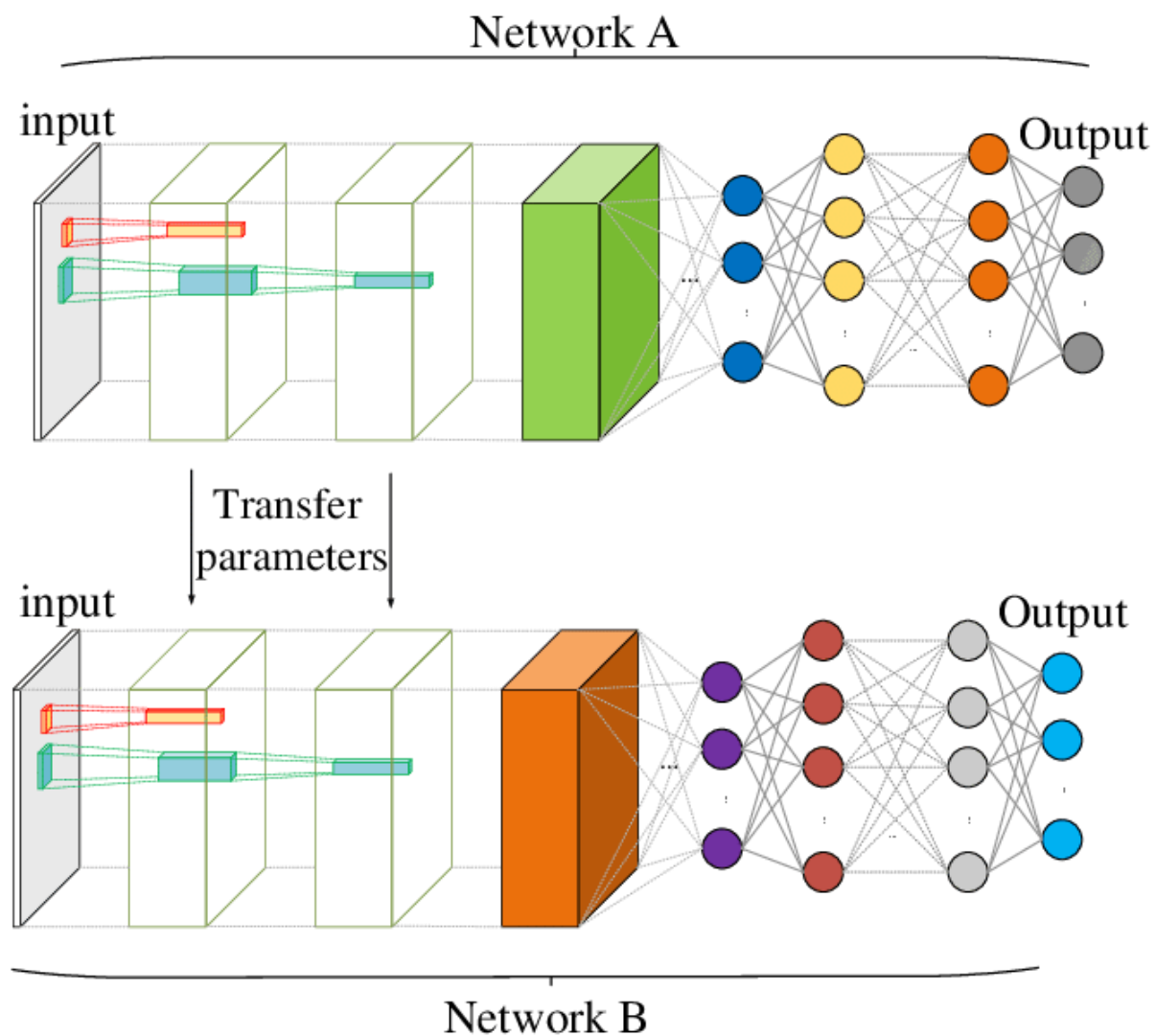


STOP sign, DETOUR sign

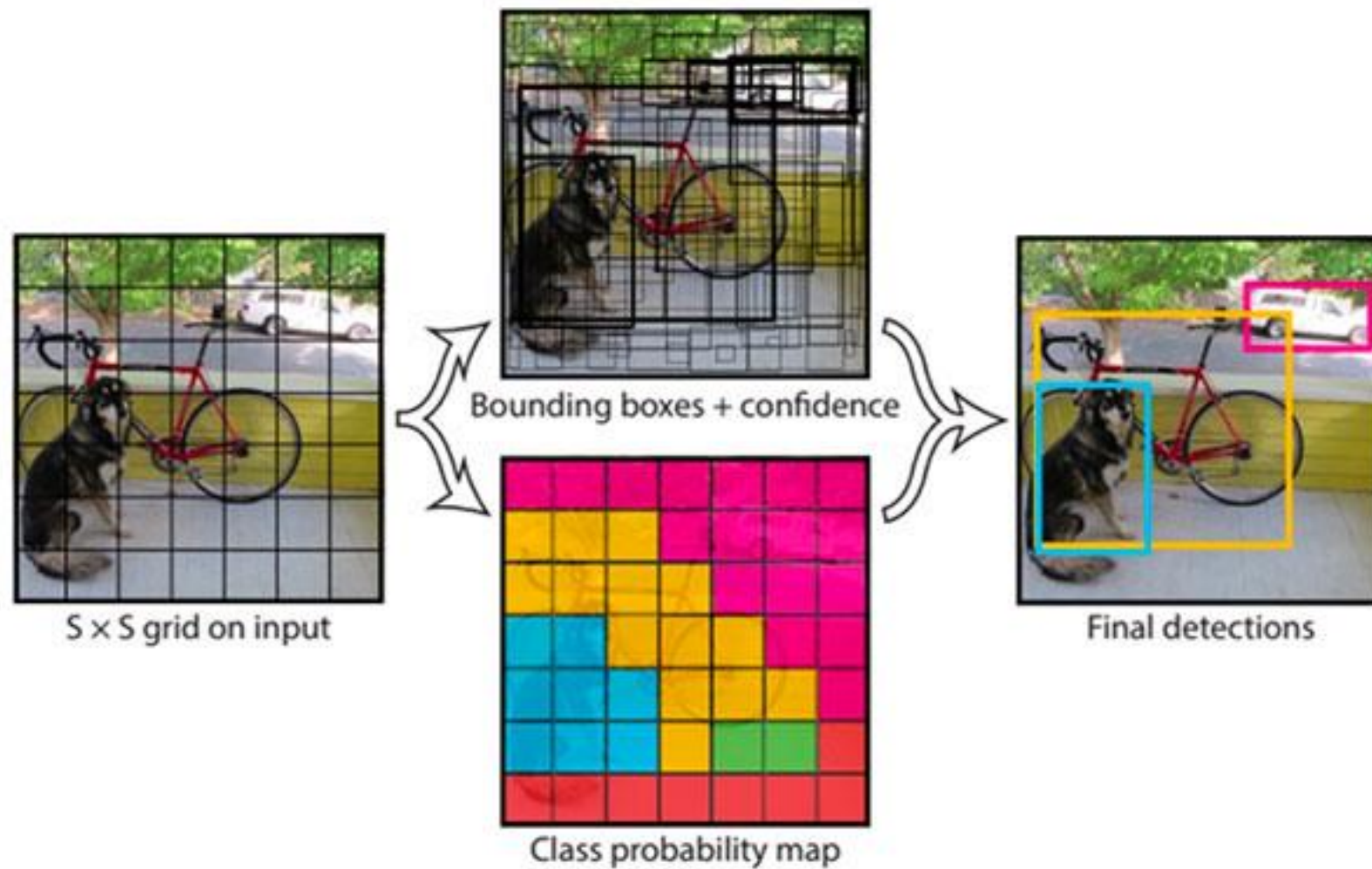
Haar Cascade



Transfer Learning



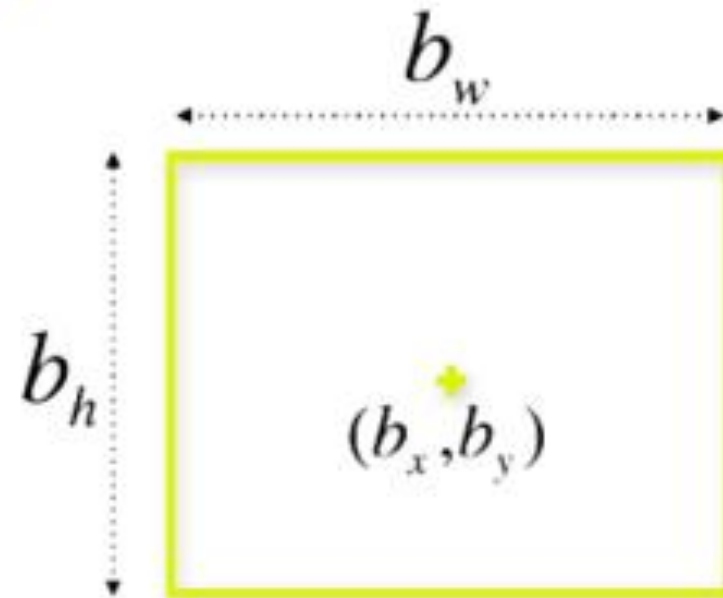
Yolo V4



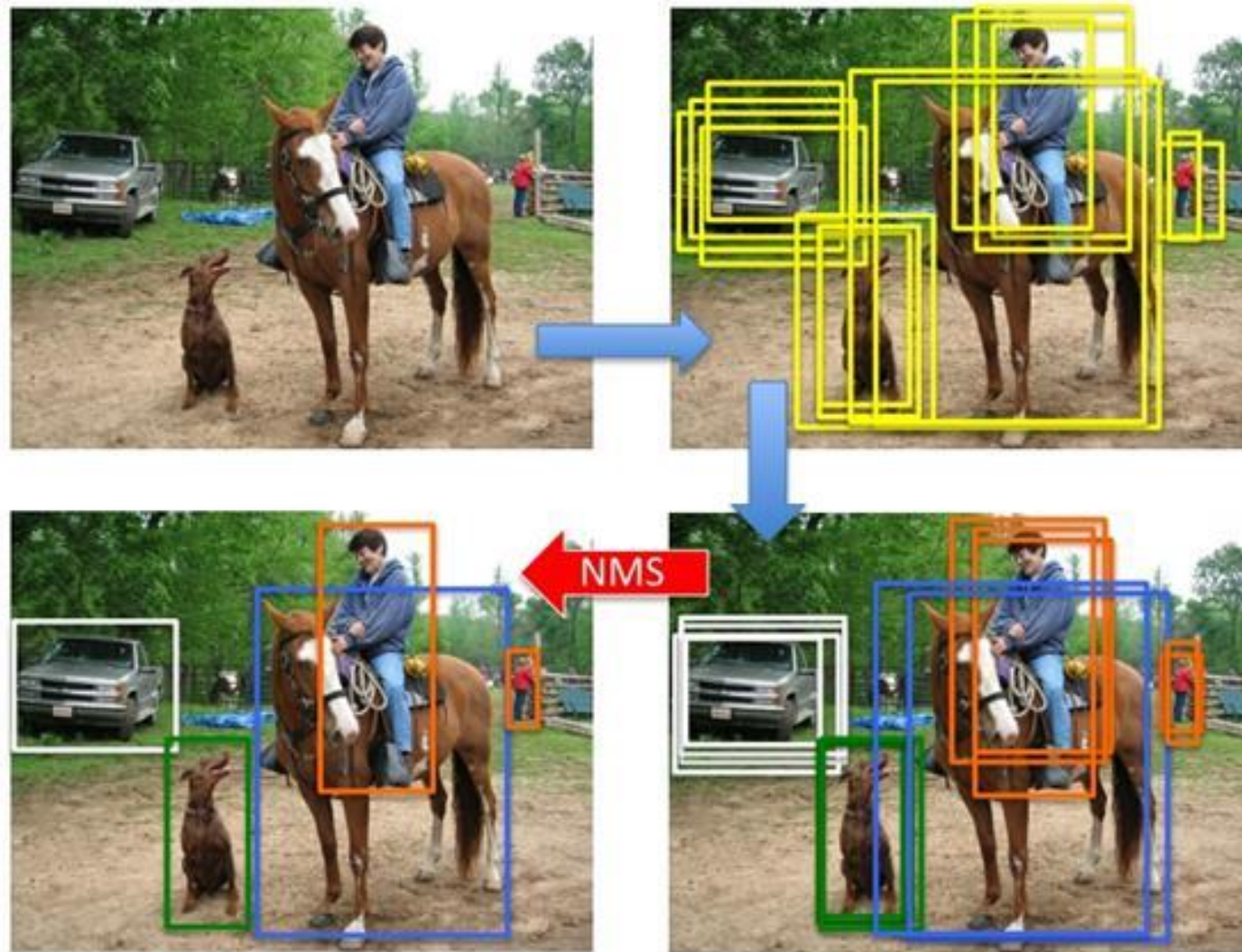
Bounding Box



$$y = (p_c, b_x, b_y, b_h, b_w, c)$$





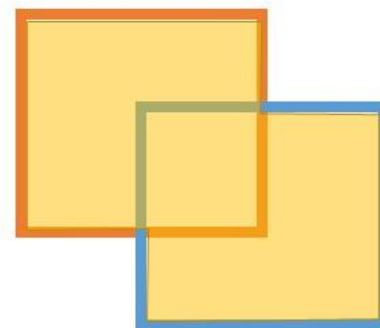
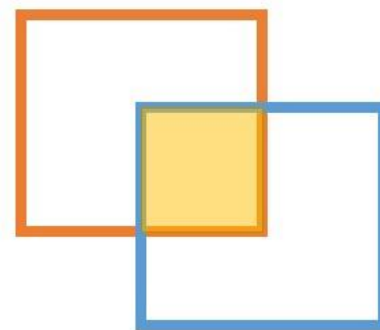
Non-Max Suppression



Intersection Over Union

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

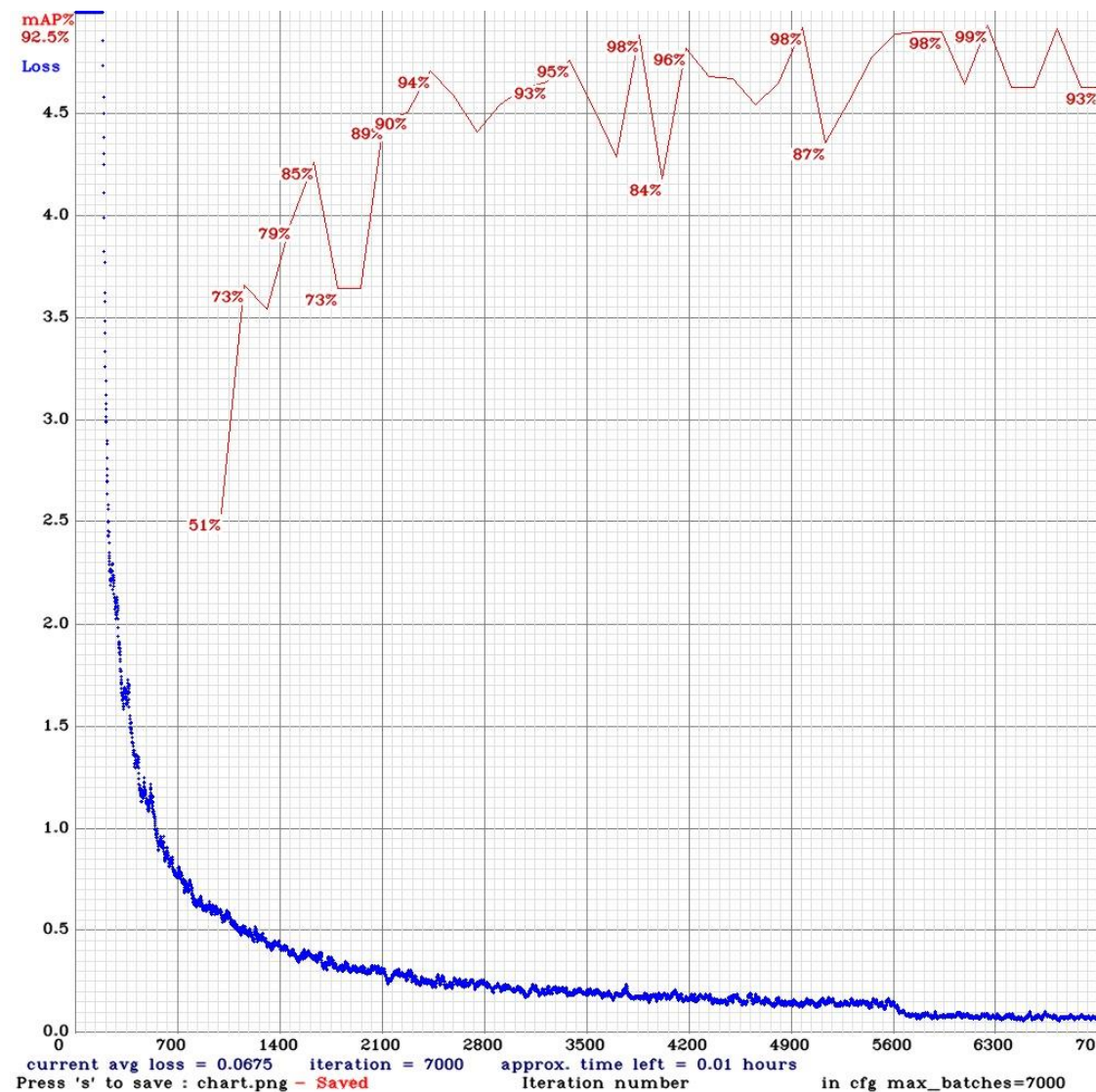
 Prediction
 Ground-truth



Dataset



Model Training Accuracy



Testing & Real-Time Results

