Faster R-CNN + Inception v2

Coco metrics:

mAP@.50IOU: 0.498137

classification_loss: 0.034073

localization_loss: 0.034354

objectness_loss: 0.079878

PASCAL VOC metrics:

AP: 68.10% (Green)

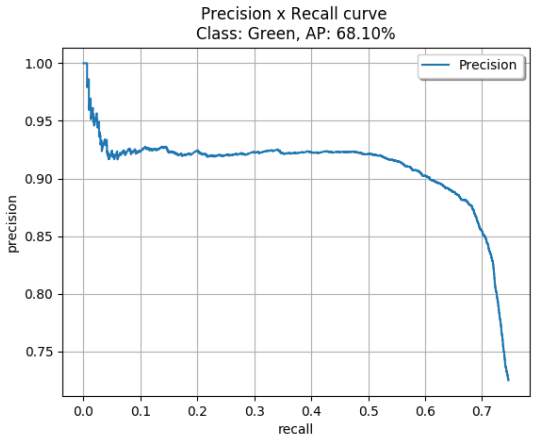
AP: 60.98% (Red)

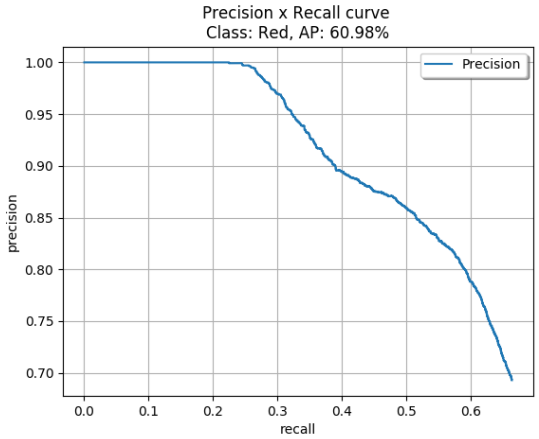
AP: 65.43% (Yellow)

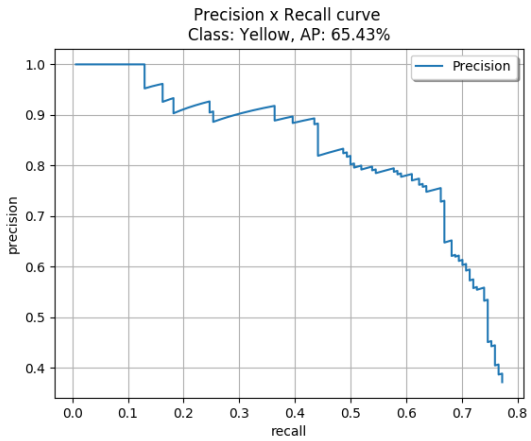
AP: 0.05% (off)

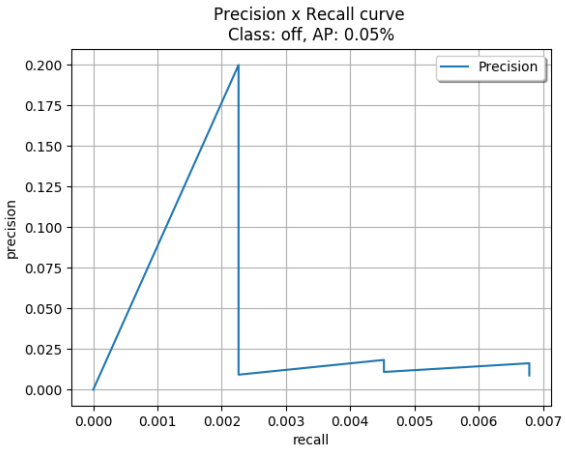
mAP: 48.64%

Precision x Recall curves at 0.5 IoU:





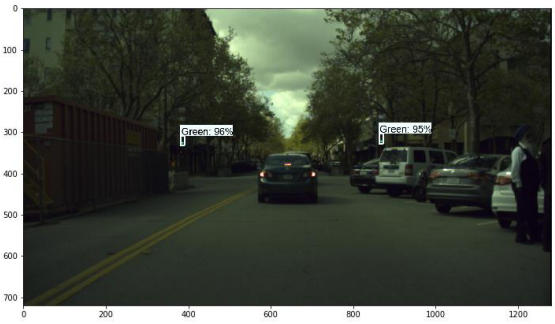


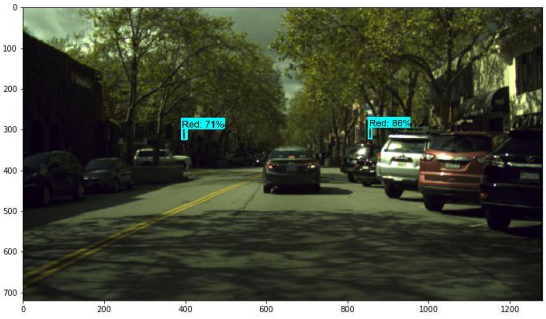


Trained the model for 100k iterations

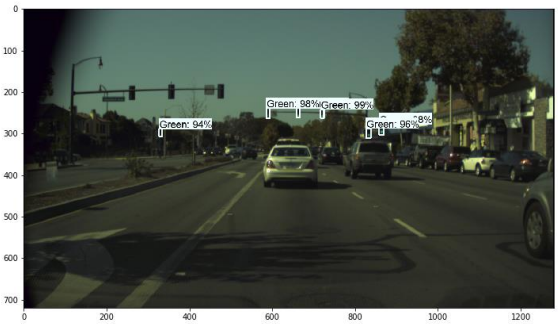
Detections:

Test set images

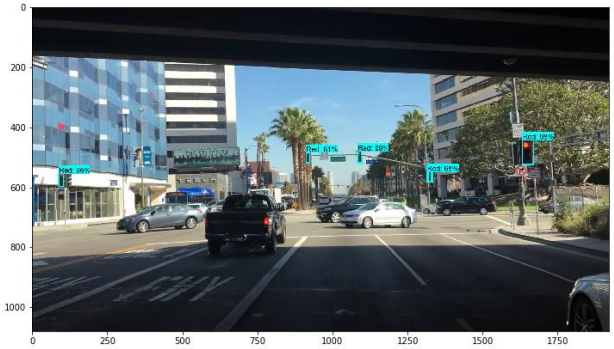




Train set images



Tested on a random video feed



Faster R-CNN + Resnet101

PASCAL VOC metrics:

AP: 61.30% (Green)

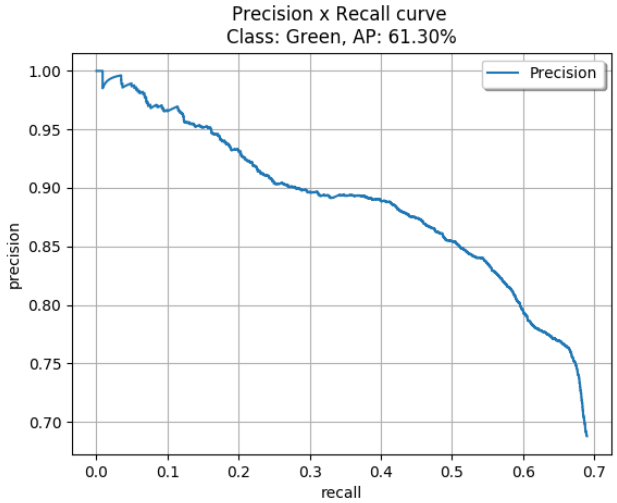
AP: 61.22% (Red)

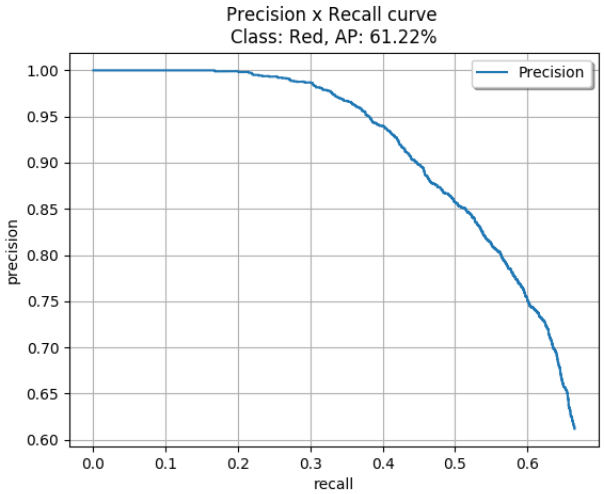
AP: 57.75% (Yellow)

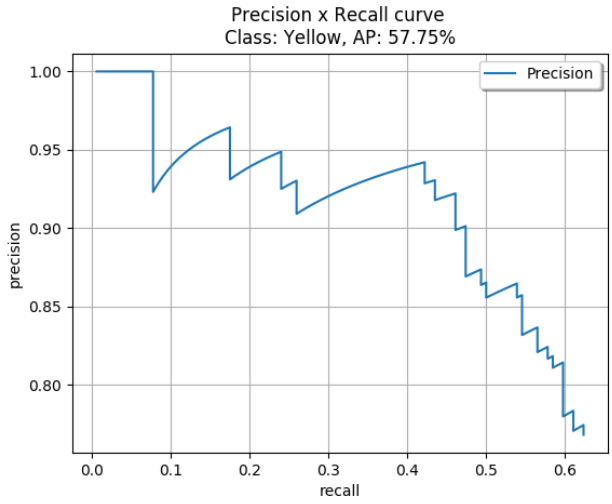
AP: 0.01% (off)

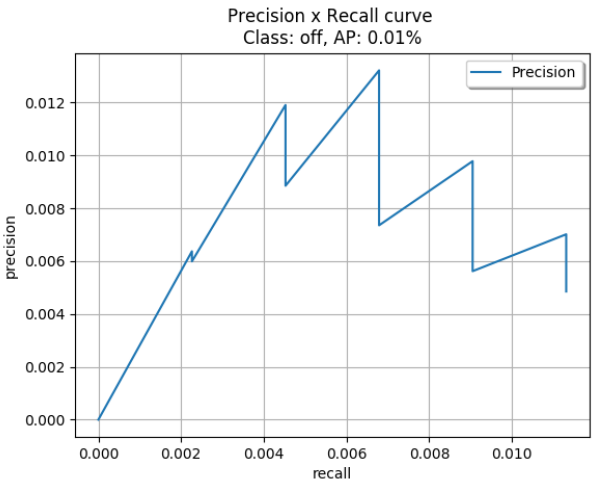
mAP: 45.07%

Precision x Recall curves at 0.5 IoU:





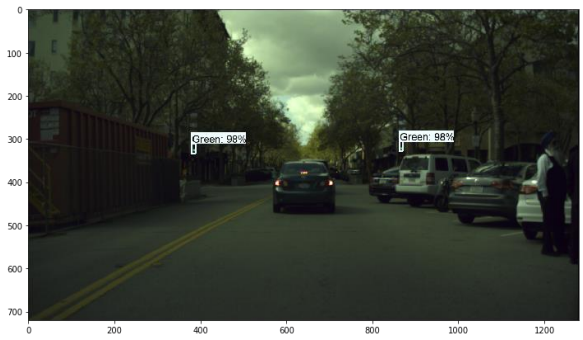


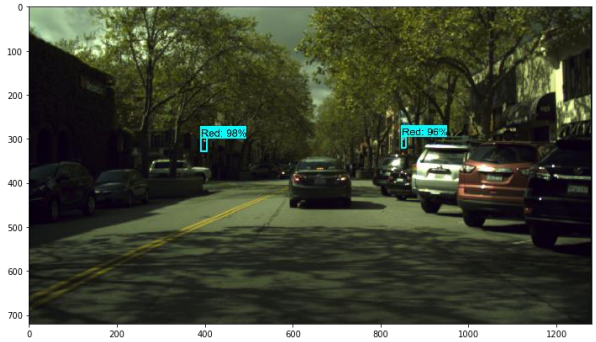


Trained the model for 50k iterations

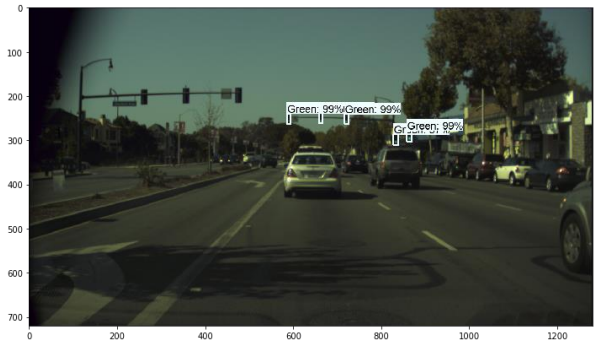
Detections:

Test set images





Train set images



Random video

Green: 98%
Green: 99%
Green: 98%
Red: 65%
TURNING VEHICLES
TO

off: 87%
Red: 99%
Green: 87%
Green: 99%
Green: 99%
Green: 97%