

**Aero2Astro**  
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**(13/10/2021)**

Today i had trained Yolo v4 model upto 8600 epochs with jitter = 0.45. And also evaluated with both training and test dataset.

Threshold\_IOU = 0.2

Train :

```
calculation mAP (mean average precision)...
Detection layer: 139 - type = 28
Detection layer: 150 - type = 28
Detection layer: 161 - type = 28
396
detections_count = 1550, unique_truth_count = 663
class_id = 0, name = tower_lattice, ap = 99.46%      (TP = 271, FP = 11)
class_id = 1, name = tower_tucohy, ap = 98.31%      (TP = 166, FP = 12)
class_id = 2, name = tower_wooden, ap = 99.05%      (TP = 212, FP = 13)

for conf_thresh = 0.25, precision = 0.95, recall = 0.98, F1-score = 0.96
for conf_thresh = 0.25, TP = 649, FP = 36, FN = 14, average IoU = 78.42 %

IoU threshold = 20 %, used Area-Under-Curve for each unique Recall
mean average precision (mAP@0.20) = 0.989399, or 98.94 %
Total Detection Time: 51 Seconds
```

Test:

```
calculation mAP (mean average precision)...
Detection layer: 139 - type = 28
Detection layer: 150 - type = 28
Detection layer: 161 - type = 28
124
detections_count = 547, unique_truth_count = 202
class_id = 0, name = tower_lattice, ap = 89.37%      (TP = 76, FP = 11)
class_id = 1, name = tower_tucohy, ap = 83.27%      (TP = 38, FP = 11)
class_id = 2, name = tower_wooden, ap = 63.03%      (TP = 38, FP = 12)

for conf_thresh = 0.25, precision = 0.82, recall = 0.75, F1-score = 0.78
for conf_thresh = 0.25, TP = 152, FP = 34, FN = 50, average IoU = 63.79 %

IoU threshold = 20 %, used Area-Under-Curve for each unique Recall
mean average precision (mAP@0.20) = 0.785535, or 78.55 %
Total Detection Time: 16 Seconds
Set -points flag:
```