

## Work report

5 Aug 2021

I have started training the pp-Yolo model on 1000 instances.

I have kept the setting as follows:

Batch size=8

Learning rate=0.000417

Epoch = 1970

the loss is fluctuating between 35.0 to 49.75

Due to the google collab limit, GPU is disconnected

### 1. Evaluation on test images:

```
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
[08/05 03:35:43] ppdet.metrics.coco_utils INFO: Start evaluate...
Loading and preparing results...
DONE (t=0.65s)
creating index...
index created!
Running per image evaluation...
Evaluate annotation type *bbox*
DONE (t=1.16s).
Accumulating evaluation results...
DONE (t=0.24s).
Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.011
Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.029
Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.007
Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.013
Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.012
Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.008
Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.029
Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.089
Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.119
Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.088
Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.144
Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.107
[08/05 03:35:45] ppdet.engine INFO: Total sample number: 177, average FPS: 6.688793458806777
```

## 2. Evaluation on train images:

```
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
[08/05 12:32:44] pcdet.metrics.coco_utils INFO: Start evaluate...
Loading and preparing results...
DONE (t=0.18s)
creating index...
index created!
Running per image evaluation...
Evaluate annotation type *bbox*
DONE (t=1.51s).
Accumulating evaluation results...
DONE (t=0.25s).
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.013
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.034
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.008
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.012
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.018
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.019
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.032
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.095
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.143
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.098
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.180
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.152
[08/05 12:32:46] pcdet.engine INFO: Total sample number: 177, average FPS: 16.65591763306568
[08/05 12:32:46] pcdet.engine INFO: Best test bbox ap is 0.013.
```