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(03/08/2021)

I had trained pp yolo v2 upto 550 epochs. The loss fluctuates in between 28 to 40. Minimum loss is 28. And also performed evaluation , accuracy was improved with compared previous result.

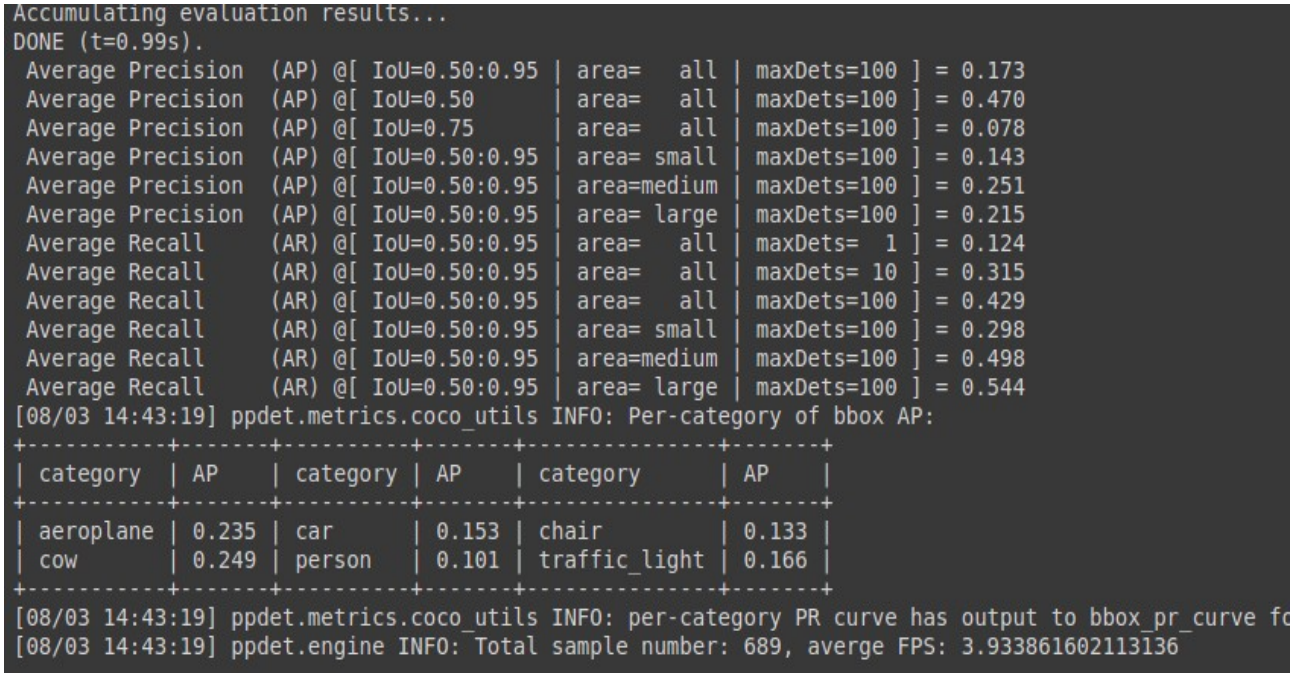
```
loss_obj: 14.340092 loss_cls: 4.314476 loss: 33.293438 eta: 2 days, 13:25:57 batch_cost: 0.9145 data_cost: 0.0003 ips: 4.3739 images/s
loss_obj: 13.520577 loss_cls: 3.591302 loss: 32.405403 eta: 2 days, 13:26:44 batch_cost: 0.9986 data_cost: 0.0003 ips: 4.0056 images/s
loss_obj: 15.201720 loss_cls: 3.794295 loss: 31.951542 eta: 2 days, 13:26:21 batch_cost: 0.8779 data_cost: 0.0002 ips: 4.5565 images/s
loss_obj: 15.967843 loss_cls: 5.129282 loss: 36.215820 eta: 2 days, 13:26:21 batch_cost: 0.9170 data_cost: 0.0002 ips: 4.3623 images/s
loss_obj: 13.705120 loss_cls: 3.410297 loss: 31.936790 eta: 2 days, 13:26:02 batch_cost: 0.9264 data_cost: 0.0004 ips: 4.3179 images/s
loss_obj: 12.401969 loss_cls: 3.713546 loss: 29.600580 eta: 2 days, 13:26:07 batch_cost: 0.9260 data_cost: 0.0002 ips: 4.3195 images/s
loss_obj: 14.648861 loss_cls: 3.377335 loss: 31.473503 eta: 2 days, 13:26:03 batch_cost: 0.9095 data_cost: 0.0002 ips: 4.3980 images/s
loss_obj: 13.745201 loss_cls: 3.330415 loss: 30.080605 eta: 2 days, 13:25:39 batch_cost: 0.8773 data_cost: 0.0002 ips: 4.5594 images/s
loss_obj: 14.097230 loss_cls: 3.470414 loss: 33.491280 eta: 2 days, 13:24:06 batch_cost: 0.7550 data_cost: 0.0002 ips: 5.2982 images/s
loss_obj: 14.850643 loss_cls: 4.569985 loss: 35.381256 eta: 2 days, 13:24:07 batch_cost: 0.9195 data_cost: 0.0002 ips: 4.3503 images/s
loss_obj: 12.019210 loss_cls: 3.950432 loss: 28.925861 eta: 2 days, 13:23:44 batch_cost: 0.8783 data_cost: 0.0002 ips: 4.5542 images/s
loss_obj: 16.447962 loss_cls: 3.775417 loss: 35.357254 eta: 2 days, 13:23:01 batch_cost: 0.8413 data_cost: 0.0002 ips: 4.7545 images/s
loss_obj: 14.050844 loss_cls: 3.938482 loss: 29.909962 eta: 2 days, 13:22:21 batch_cost: 0.8469 data_cost: 0.0002 ips: 4.7230 images/s
loss_obj: 12.812297 loss_cls: 3.307236 loss: 27.300827 eta: 2 days, 13:21:06 batch_cost: 0.7157 data_cost: 0.0002 ips: 5.5890 images/s
loss_obj: 14.116814 loss_cls: 3.392994 loss: 31.272781 eta: 2 days, 13:21:12 batch_cost: 0.9281 data_cost: 0.0002 ips: 4.3098 images/s
loss_obj: 15.449796 loss_cls: 3.485445 loss: 33.063759 eta: 2 days, 13:22:12 batch_cost: 1.0225 data_cost: 0.0002 ips: 3.9120 images/s
loss_obj: 17.083447 loss_cls: 3.625452 loss: 39.800117 eta: 2 days, 13:23:10 batch_cost: 1.0210 data_cost: 0.0002 ips: 3.9179 images/s
loss_obj: 16.754913 loss_cls: 4.003808 loss: 34.781372 eta: 2 days, 13:23:24 batch_cost: 0.9443 data_cost: 0.0006 ips: 4.2360 images/s
loss_obj: 15.448069 loss_cls: 3.939451 loss: 35.868652 eta: 2 days, 13:23:58 batch_cost: 0.9781 data_cost: 0.0002 ips: 4.0895 images/s
loss_obj: 13.337578 loss_cls: 3.478348 loss: 33.377975 eta: 2 days, 13:22:55 batch_cost: 0.8071 data_cost: 0.0002 ips: 4.9560 images/s
loss_obj: 11.522351 loss_cls: 3.077196 loss: 24.027199 eta: 2 days, 13:22:25 batch_cost: 0.8640 data_cost: 0.0005 ips: 4.6295 images/s
loss_obj: 12.312562 loss_cls: 2.924851 loss: 25.938591 eta: 2 days, 13:23:12 batch_cost: 1.0035 data_cost: 0.0003 ips: 3.9860 images/s
```

Evaluation(Test data)

```
Accumulating evaluation results...
DONE (t=0.25s).
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.113
 Average Precision  (AP) @[ IoU=0.50       | area=   all | maxDets=100 ] = 0.276
 Average Precision  (AP) @[ IoU=0.75       | area=   all | maxDets=100 ] = 0.064
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.070
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.162
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.195
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.096
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.238
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.331
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.185
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.387
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.592
[08/03 14:37:49] ppdet.metrics.coco_utils INFO: Per-category of bbox AP:
+-----------+-------+----------+-------+---------------+-------+
| category  | AP    | category | AP    | category      | AP    |
+-----------+-------+----------+-------+---------------+-------+
| aeroplane | 0.208 | car      | 0.082 | chair         | 0.059 |
| cow       | 0.189 | person   | 0.027 | traffic_light | nan   |
+-----------+-------+----------+-------+---------------+-------+
[08/03 14:37:49] ppdet.metrics.coco_utils INFO: per-category PR curve has output to bbox_pr_curve f
[08/03 14:37:49] ppdet.engine INFO: Total sample number: 190, averge FPS: 4.30293977702122
```

Traffic light class gives nan error , so I cross checked training data that gives normal AP values . So the problem is in test dataset, Now I am trying fix that.

Evaluation (Training dataset)



```
Accumulating evaluation results...
DONE (t=0.99s).
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.173
 Average Precision  (AP) @[ IoU=0.50       | area=   all | maxDets=100 ] = 0.470
 Average Precision  (AP) @[ IoU=0.75       | area=   all | maxDets=100 ] = 0.078
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.143
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.251
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.215
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.124
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.315
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.429
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.298
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.498
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.544
[08/03 14:43:19] ppdet.metrics.coco_utils INFO: Per-category of bbox AP:
+-----------+-------+----------+-------+--------------+-------+
| category  | AP    | category | AP    | category     | AP    |
+-----------+-------+----------+-------+--------------+-------+
| aeroplane | 0.235 | car      | 0.153 | chair        | 0.133 |
| cow       | 0.249 | person   | 0.101 | traffic_light | 0.166 |
+-----------+-------+----------+-------+--------------+-------+
[08/03 14:43:19] ppdet.metrics.coco_utils INFO: per-category PR curve has output to bbox_pr_curve fo
[08/03 14:43:19] ppdet.engine INFO: Total sample number: 689, averge FPS: 3.933861602113136
```