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I had trained Faster Rcnn model upto 26000 iterations. And also evaluated with both train and test dataset.

Model -1 (PP-yolo v1)

ins = 1000 bs = 8 lr = 0.0002

Training Data:

```
Accumulating evaluation results...
DONE (t=0.85s)
                               IoU=0.50:0.95 |
Average Precision
                                                                 maxDets=100
 Average Precision
                      (AP) @[
                               IoU=0.50
                                                                 maxDets=100
                                                                                  = 0.751
                                                  area=
Average Precision
                      (AP) @[
                               IoU=0.75
                                                  area=
                                                          all
                                                                 maxDets=100
                                                                                  = 0.499
Average Precision
                      (AP) @[
                               IoU=0.50:0.95
                                                 area= small
                                                                 maxDets=100
                                                                                 = 0.359
Average Precision
                      (AP) @[
                               IoU=0.50:0.95
                                                  area=medium
                                                                 maxDets=100
                                                                                  = 0.588
Average Precision
                      (AP)
                               IoU=0.50:0.95
                                                                                ] = 0.579
                                                  area= large
                                                                 maxDets=100
                                                                 maxDets= 1
maxDets= 10
Average Recall
                      (AR)
                           ]
]
]
                               IoU=0.50:0.95
                                                                                 = 0.173
                                                  area=
                                                           all
Average Recall
                               IoU=0.50:0.95
                                                                                ] = 0.479
                      (AR)
                                                  area=
                                                           all
                                                                               ] = 0.580
] = 0.498
Average Recall
                           ]
]
]
                               IoU=0.50:0.95
                                                                 maxDets=100
                      (AR)
                                                  area=
                                                          all
                                                  area= small
Average Recall
                               IoU=0.50:0.95
                      (AR)
                                                                 maxDets=100
                                                                               ] = 0.699
                                                 area=medium | maxDets=100
area= large | maxDets=100
                      (AR) @[ IoU=0.50:0.95
(AR) @[ IoU=0.50:0.95
                                                | area=medium
| area= large
Average Recall
Average Recall
[08/15 07:11:53] ppdet.metrics.coco_utils INFO: Per-category of bbox AP:
                     | category | AP |
 category | AP
                                           | category | AP
                                  | 0.315 | bottle
| 0.616 | person
            | 0.451 | book
| 0.173 | chair
                                                      | 0.601
| 0.567
 bird
[08/15 07:11:53] ppdet.metrics.coco_utils INFO: per-category PR curve has output
.
[08/15 07:11:53] ppdet.engine INFO: Total sample number: 1093, averge FPS: 18.4354342262
```

Test Data:

```
ccumulating evaluation results...
DONE (t=0.15s).
 Average Precision (AP) @[ IoU=0.50:0.95 | area=
                                                       all | maxDets=100 ] = 0.056
 Average Precision (AP) @[ IoU=0.50
                                                            | maxDets=100
                                              area=
                                                                           ] = 0.113
 Average Precision (AP) @[ IoU=0.75
                                                                           ] = 0.049
                                              area=
                                                       all
                                                            maxDets=100
Average Precision
                                                                           1 = 0.044
                                              area= small
                                                            maxDets=100
                    (AP) @[ IoU=0.50:0.95
 Average Precision (AP) @[ IoU=0.50:0.95
                                             | area=medium
                                                             maxDets=100
                                                                           ] = 0.066
                                                            | maxDets=100
| maxDets= 1
 Average Precision
                    (AP) @[ IoU=0.50:0.95
                                             area= large
Average Recall
                     (AR) @[ IoU=0.50:0.95
                                             area= all
                                                                           ] = 0.051
                                                            | maxDets= 10
| maxDets=100
                                                                          ] = 0.134
] = 0.179
                     (AR) @[ IoU=0.50:0.95
 Average Recall
                                              area=
 Average Recall
                     (AR) @[
                             IoU=0.50:0.95
                                              area=
Average Recall
                     (AR) @[ IoU=0.50:0.95
                                             | area= small
                                                                           ] = 0.144
                                                             maxDets=100
                     (AR) @[ IoU=0.50:0.95 | area=medium (AR) @[ IoU=0.50:0.95 | area= large
                                                           | maxDets=100
| maxDets=100
Average Recall
                                                                           1 = 0.231
                                                                           1 = 0.201
 Average Recall
[08/13 14:25:45] ppdet.metrics.coco utils INFO: Per-category of bbox AP:
 category | AP
                    | category | AP
                                        | category | AP
           | 0.146 | book
                                | 0.007 | bottle
                                | 0.000 | chair
           | 0.007 | person
                                                     0.000
 car
[08/13 14:25:45] ppdet.metrics.coco_utils INFO: per-category PR curve has output to bbox_pr_curve folder.
[08/13 14:25:45] ppdet.engine INFO: Total sample number: 177, averge FPS: 18.61171957113853
```

Model - 2 : (PP-Yolo v2)

```
ins = 500
bs = 8
lr = 0.0002
```

Training Data:

Test data:

Current Model:(Faster Rcnn)

```
Backbone = Faster_rcnn_X_101_32x8d_FPN_3x
bs = 4
lr = 0.001
ins = 500
```

Previous Checkpoints:21399 itr

Threshold = 0.85

Test Data:

```
(AP) @[ IoU=0.50:0.95 | area=
 Average Precision
                                                                                       all
                                                                                                  maxDets=100 ] = 0.392
 Average Precision
                                (AP) @[ IoU=0.50
                                                                                                  maxDets=100
                                                                                                                        1 = 0.573
                                                                          area=
 Average Precision (AP) @[ IoU=0.75
                                                                        | area=
                                                                                        all I
                                                                                                  maxDets=100 | = 0.426
 Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.245

Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.517

Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.582

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.224
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.224

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=10 ] = 0.553

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.600

Average Recall (AR) @[ IoU=0.50:0.95 | area=small | maxDets=100 ] = 0.437

Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.710

Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.831
     AP | AP50 | AP75 | APs | APm | APl
  39.233 | 57.261 | 42.562 | 24.454 | 51.732 | 58.184
 08/20 10:59:48 d2.evaluation.coco evaluation]: Per-category bbox AP:
  category
                      | AP
                                     category
                                                                           category
                                                                                                         AP
                      67.082
                                                            | 26.753 | chair
| 22.428 | traffic_light |
                                                                                                         31.917
  aeroplane
                                     car
                        57.218 | person
                                                                                                          30.000
OrderedDict([('bbox',
```

[08/20 10:59:47 d2.evaluation.evaluator]: Total inference time: 0:00:48.845520 (0.264030 s / iter per device, on 1 devices)
[08/20 10:59:47 d2.evaluation.evaluator]: Total inference pure compute time: 0:00:48 (0.261345 s / iter per device, on 1 devices)

Train Data:

```
eval api]: COCOeval opt.accumulate()
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.592
Average Precision (AP) @[ IoU=0.50
                                                                all
                                                    area=
                                                                     | maxDets=100 ] = 0.801
Average Precision (AP) @[ IoU=0.75
                                                    area=
                                                               all | maxDets=100 ] = 0.659
Average Precision (AP) @[ IoU=0.50:0.95 | area= small Average Precision (AP) @[ IoU=0.50:0.95 | area=medium Average Precision (AP) @[ IoU=0.50:0.95 | area= large
                                                                     | maxDets=100
| maxDets=100
                                                                                      ] = 0.495
                                                                                       ] = 0.686
                                                                     | maxDets=100 ] = 0.773
Average Recall
                       (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.299
                                                                     | maxDets= 10 ] = 0.684
| maxDets=100 ] = 0.728
                      (AR) @[ IoU=0.50:0.95 | area=
Average Recall
Average Recall
                       (AR) @[ IoU=0.50:0.95 | area=
                                                               all
                                                     area= small
                       (AR) @[
                                 IoU=0.50:0.95 |
Average Recall
                                                                       maxDets=100
                                                                                       ] = 0.635
Average Recall
                       (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100
                                                                                      1 = 0.801
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0. 08/20 11:06:24 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
                       (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.884
AP | AP50 | AP75 | APs | APm | APl
:----:|:----:|:----:|:----:|:----:
59.158 | 80.120 | 65.930 | 49.466 | 68.642 | 77.273
                                                         APl
08/20 11:06:24 d2.evaluation.coco evaluation]: Per-category bbox AP:
                                          | AP
                          category
                                                  category
                                                                          I AP
 category
                 85.382
                                            50.095
                                                                            61.520
 aeroplane
                           car
                                                       chair
                 70.940
                            person
                                            43.778
                                                        traffic light
                                                                            43.236
```

Threshold = 0.65 Test:

```
: Total inference time: 0:00:50.954686 (0.275431 s / iter per device, on 1 devices)
: Total inference pure compute time: 0:00:50 (0.272801 s / iter per device, on 1 devices)
```

Train:

Total inference time: 0:03:08.707873 (0.275889 s / iter per device, on 1 devices)
Total inference pure compute time: 0:03:06 (0.273226 s / iter per device, on 1 devices)

Current Checkpoint: 26000 its

Threshold: 0.85

Test:

```
Total inference time: 0:00:50.160103 (0.271136 s / iter per device, on 1 devices)

Total inference pure compute time: 0:00:49 (0.268279 s / iter per device, on 1 devices)
```

Train:

```
Total inference time: 0:03:03.624267 (0.268457 s / iter per device, on 1 devices)

Total inference pure compute time: 0:03:02 (0.266105 s / iter per device, on 1 devices)
```

Threshold: 0.65

Test:

Train: