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(011/09/2021)

Today i had trained faster rcnn model upto 159499 iterations with more augmemtation.And also evaluated with both training and test data set.

Previous Checkpoint: 138000
Test :
Augmentation : Resize(1024), HFlip

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[09/09 03:58:44 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.02 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.384
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.565
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.415
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.232
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.503
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.552
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.221
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.541
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.581
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.404
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.688
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.819
[09/09 03:58:44 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
38.352	56.507	41.474	23.209	50.253	55.211

```
[09/09 03:58:44 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	64.450	car	26.561	chair	30.293
cow	58.988	person	20.008	traffic_light	29.813

```
Total inference time: 0:02:17.554629 (0.743539 s / iter per device, on 1 devices)
Total inference pure compute time: 0:02:16 (0.740199 s / iter per device, on 1 devices)
```

Train :

```
[09/09 04:08:01 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.05 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.656
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.865
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.733
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.565
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.743
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.825
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.306
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.717
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.756
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.667
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.827
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.912
[09/09 04:08:01 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
65.610	86.528	73.318	56.502	74.312	82.524

```
[09/09 04:08:01 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	88.144	car	57.644	chair	67.827
cow	74.917	person	55.569	traffic_light	49.560

```
OrderedDict([('bbox',
```

```
Total inference time: 0:08:27.085180 (0.741353 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:24 (0.738200 s / iter per device, on 1 devices)
```

Previous Chechpoints : 149500 itr
Augmetation : Resize(1024),Hflip ,Random brightness , Random Rotation , Random crop

Test :

```
[09/09 14:34:01 d2.evaluation.fast_eval_api]: Evaluate annotation type *bbox*
[09/09 14:34:02 d2.evaluation.fast_eval_api]: COCOeval_opt.evaluate() finished in 0.11 seconds.
[09/09 14:34:02 d2.evaluation.fast_eval_api]: Accumulating evaluation results...
[09/09 14:34:02 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.02 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.203
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.520
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.086
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.156
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.287
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.287
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.127
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.338
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.374
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.295
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.426
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.498
[09/09 14:34:02 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
|   AP   |  AP50  |  AP75  |  APs   |  APm   |  APl   |
|:------:|:------:|:------:|:------:|:------:|:------:|
| 20.263 | 52.047 | 8.584  | 15.602 | 28.665 | 28.670 |
[09/09 14:34:02 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category    | AP     | category   | AP     | category      | AP     |
|:------------|:-------|:-----------|:-------|:--------------|:-------|
| aeroplane   | 27.905 | car        | 16.978 | chair         | 16.489 |
| cow         | 23.104 | person     | 13.267 | traffic_light | 23.835 |
OrderedDict([('bbox',
```

```
 Total inference time: 0:02:26.119563 (0.789835 s / iter per device, on 1 devices)
 Total inference pure compute time: 0:02:21 (0.763777 s / iter per device, on 1 devices)
```

Train :

```
[09/09 15:03:50 d2.evaluation.fast_eval_api]: Accumulating evaluation results...
[09/09 15:03:50 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.07 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.321
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.801
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.116
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.311
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.375
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.392
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.163
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.413
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.447
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.412
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.478
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.518
[09/09 15:03:50 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
|   AP   |  AP50  |  AP75  |  APs   |  APm   |  APl   |
|:------:|:------:|:------:|:------:|:------:|:------:|
| 32.063 | 80.082 | 11.644 | 31.081 | 37.548 | 39.221 |
[09/09 15:03:50 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category    | AP     | category   | AP     | category      | AP     |
|:------------|:-------|:-----------|:-------|:--------------|:-------|
| aeroplane   | 31.379 | car        | 30.986 | chair         | 36.573 |
| cow         | 35.506 | person     | 23.276 | traffic_light | 34.657 |
 OrderedDict([('bbox',
```

```
Inference done 686/689. Dataloading: 0.0023 s/iter. Inference: 0.7593 s/iter. Eval: 0.0003
Total inference time: 0:08:41.578473 (0.762542 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:39 (0.759366 s / iter per device, on 1 devices)
```

Current Checkpoints : 159500 itr

Test:

```
[09/12 02:03:09 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.02 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.180
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.509
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.062
 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 ] = 0.258
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.255
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.115
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.312
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.348
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.271
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.397
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.475
[09/12 02:03:09 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
17.967	50.904	6.185	14.321	25.769	25.460

```
[09/12 02:03:09 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	22.703	car	16.018	chair	14.871
cow	21.525	person	11.191	traffic_light	21.497

```
OrderedDict([('bbox',
```

```
Total inference time: 0:02:22.004286 (0.767591 s / iter per device, on 1 devices)
Total inference pure compute time: 0:02:21 (0.764274 s / iter per device, on 1 devices)
```

Train :

```
[09/12 02:11:59 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.07 seconds.
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.282
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.785
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.064
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.278
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.332
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.347
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.146
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.372
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.408
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.377
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.438
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.470
[09/12 02:11:59 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
28.240	78.504	6.387	27.821	33.190	34.669

```
[09/12 02:11:59 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	24.856	car	28.422	chair	32.137
cow	32.960	person	20.032	traffic_light	31.035

```
OrderedDict([('bbox',
```

```
Inference done 686/689. Dataloading: 0.0024 s/iter. Inference: 0.7601 s/iter. Eval: 0.000
Total inference time: 0:08:42.158078 (0.763389 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:39 (0.760207 s / iter per device, on 1 devices)
tion]: Preparing results for COCO format
```