Panneerselvam N (18/09/2021)

Today i had trained faster rcnn model upto 201499 iterations with more augmentation. And also evaluated with both training and test data set.

Previous Checkpoint: 138000

Test:

Augmentation: Resize(1024), HFlip

```
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
                                    | area=
Average Precision (AP) @[ IoU=0.50
all | maxDets=100 ] = 0.565
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0. 
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:
           AP | category | AP | category | AP
 aeroplane
            64.450 | car
                                 | 26.561 | chair
                                                          30.293
             58.988 person
                                  20.008
                                                          29.813
 COW
                                           traffic light |
```

```
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)
```

```
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 Checkpoints: 159500 itr

Augmentation: Resize(1024), Hflip, Random brightness, Random Rotation,

Random crop

Test:

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:

```
:11:59 d2.evaluation.fast eval api]: COCOeval opt.accumulate() finished in 0.07 seconds.
Average Precision (AP) @[ IoU=0.50:0.95 | area=
Average Precision (AP) @[ IoU=0.50 | area=
                                                      all | maxDets=100 ] = 0.282
all | maxDets=100 ] = 0.785
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:
             I AP
                      category
                                    | AP
                                              | category | AP
 category
 aeroplane | 24.856 | car
                                      28.422 | 20.032 |
                                                                 32.137
               32.960
                        person
                                      20.032
                                               traffic light | 31.035
 COW
```

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)

Previous Checkpoints: 169500 itr

Test:

```
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.167
 Average Precision (AP) @[IOU=0.50] | area = all | maxDets=100 ] = 0.500
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.230

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.109

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.290

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.326

Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.251

Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.374

Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.428
 [09/14 02:53:59 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | AP1 |
|:----:|:----:|:----:|
| 16.709 | 49.991 | 5.477 | 12.857 | 23.986 | 23.576 |
 [09/14 02:53:59 d2.evaluation.coco_evaluation]: Per-category bbox AP:
OrderedDict([('bbox',
```

Inference done 180/190. Dataloading: 0.0025 s/iter. Inference: 0.7481 s/iter. Eval: 0.0003 Inference done 187/190. Dataloading: 0.0024 s/iter. Inference: 0.7473 s/iter. Eval: 0.0003 Total inference time: 0:02:18.911336 (0.750872 s / iter per device, on 1 devices) Total inference pure compute time: 0:02:18 (0.747379 s / iter per device, on 1 devices) Prenaring results for COCO format

```
[09/14 03:03:23 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.08 seconds.

Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.260

Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.768

Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.053

Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.253

Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.303

Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.331

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.135

Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.351

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 ] = 0.348

Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.415

Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.453

[09/14 03:03:23 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
  [09/14 03:03:23 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
   25.977 | 76.821 | 5.261 | 25.308 | 30.270 | 33.084 |
  [09/14 03:03:23 d2.evaluation.coco_evaluation]: Per-category bbox AP:
    category | AP  | category  | AP  | category  | AP  | category  | AP
      aeroplane | 20.833 | car | 26.889 | chair | 30.052
cow | 30.904 | person | 18.081 | traffic_light | 29.104
```

```
Inference done 685/689. Dataloading: 0.0025 s/iter. Inference: 0.7452 s/iter. Eval: 0.0003 s/
Total inference time: 0:08:31.961533 (0.748482 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:29 (0.745104 s / iter per device, on 1 devices)
```

Previous Checkpoint: 189000 itr

Test:

Performance after removing horizontal Flip: Previous checkpoints: 196500 itrs

Test:

```
[09/18 02:57:18 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 ] = 0.133
| area= all
Average Precision (AP) @[ IoU=0.50
                                            | maxDets=100 ] = 0.442
13.266 | 44.180 | 3.421 | 10.884 | 19.177 | 20.161
09/18 02:57:18 d2.evaluation.coco_evaluation]: Per-category bbox AP:
 category | AP | category | AP | category
 aeroplane | 13.545 | car
                            | 13.315 | chair
                                                 11.589
           15.771 | person
                            9.389
                                    traffic_light
                                                15.983
```

Current checkpoint: 201499 itr

Test: