

Aero2Astro

Panneerselvam N

(01/09/2021)

I had trained Faster Rcnnc model upto 83499 iterations. And also evaluated with both train and test dataset.

Model:(Faster Rcnnc)

Backbone = Faster_rcnn_X_101_32x8d_FPN_3x

bs = 4

lr = 0.001

ins = 500

Previous Checkpoint :63000

Threshold : 0.65

Test :

```
[08/31 01:17:57 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 ] = 0.391
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.565
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.425
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.239
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.510
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.586
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.225
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 ] = 0.598
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.426
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.708
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.836
```

```
[08/31 01:17:57 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
39.059	56.456	42.543	23.928	51.012	58.612

```
[08/31 01:17:57 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	66.429	car	26.645	chair	31.826
cow	57.842	person	21.211	traffic_light	30.402

```
[08/31 01:17:56 d2.evaluation.evaluator]: Total inference time: 0:02:26.060791 (0.789518 s / iter per device, on 1 devices)
```

```
[08/31 01:17:56 d2.evaluation.evaluator]: Total inference pure compute time: 0:02:25 (0.785907 s / iter per device, on 1 devices)
```

Train :

```
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.627
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.831
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.691
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.531
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.728
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.806
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 ] = 0.706
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.749
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.657
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.825
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.902
```

```
[08/31 01:34:04 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
62.707	83.108	69.066	53.105	72.798	80.626

```
[08/31 01:34:05 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	87.507	car	54.173	chair	65.477
cow	73.538	person	48.830	traffic_light	46.718

```
[08/31 01:34:04 d2.evaluation.evaluator]: Total inference time: 0:08:55.796066 (0.783328 s / iter per device, on 1 devices)
[08/31 01:34:04 d2.evaluation.evaluator]: Total inference pure compute time: 0:08:53 (0.779987 s / iter per device, on 1 devices)
```

Threshold : 0.85

Test :

```
[08/31 01:37:56 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 ] = 0.391
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.565
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.425
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.239
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.510
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.586
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.225
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 ] = 0.598
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.426
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.708
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.836
```

```
[08/31 01:37:56 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
39.059	56.456	42.543	23.928	51.012	58.612

```
[08/31 01:37:56 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	66.429	car	26.645	chair	31.826
cow	57.842	person	21.211	traffic_light	30.402

```
[08/31 01:37:56 d2.evaluation.evaluator]: Total inference time: 0:02:26.036216 (0.789385 s / iter per device, on 1 devices)
[08/31 01:37:56 d2.evaluation.evaluator]: Total inference pure compute time: 0:02:25 (0.785748 s / iter per device, on 1 devices)
```

Train :

```
[08/31 01:48:11 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 ] = 0.627
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.831
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.691
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.531
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.728
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.806
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 ] = 0.706
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.749
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.657
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.825
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.902
```

```
[08/31 01:48:11 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
62.707	83.108	69.066	53.105	72.798	80.626

```
[08/31 01:48:11 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	87.507	car	54.173	chair	65.477
cow	73.538	person	48.830	traffic_light	46.718

```
[08/31 01:48:10 d2.evaluation.evaluator]: Total inference time: 0:08:55.733116 (0.783236 s / iter per device, on 1 devices)
[08/31 01:48:10 d2.evaluation.evaluator]: Total inference pure compute time: 0:08:53 (0.779973 s / iter per device, on 1 devices)
```


Last Checkpoint : 83500 itr

Threshold : 0.85

Test :

```
[09/01 11:00:32 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.05 second
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.388
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.563
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.416
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.234
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.506
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.555
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.222
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.547
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.590
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.417
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.698
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.834
[09/01 11:00:32 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 38.774 | 56.323 | 41.635 | 23.398 | 50.569 | 55.524 |
[09/01 11:00:32 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 66.686 | car | 25.895 | chair | 31.846 |
| cow | 57.283 | person | 20.700 | traffic_light | 30.234 |
```

```
Total inference time: 0:02:15.337548 (0.731554 s / iter per device, on 1 devices)
Total inference pure compute time: 0:02:14 (0.728070 s / iter per device, on 1 devices)
```

Train :

```
[09/01 11:13:20 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.05 second
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.641
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.845
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.709
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.548
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.737
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.822
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.309
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.714
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.755
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.665
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 ] = 0.915
[09/01 11:13:20 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 64.101 | 84.488 | 70.862 | 54.822 | 73.704 | 82.153 |
[09/01 11:13:20 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 88.188 | car | 55.989 | chair | 67.044 |
| cow | 73.846 | person | 51.198 | traffic_light | 48.340 |
```

```
Total inference time: 0:08:20.223715 (0.731321 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:18 (0.728191 s / iter per device, on 1 devices)
*only: Preparing results for COCO format
```

Threshold : 0.65

Test :

```
[09/01 11:24:43 d2.evaluation.fast_eval_api]: Accumulating evaluation results...
[09/01 11:24:43 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 ] = 0.388
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.563
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.416
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.234
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.506
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.555
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.222
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.547
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.590
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.417
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.698
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.834
[09/01 11:24:43 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
| :-----: | :-----: | :-----: | :-----: | :-----: | :-----: |
| 38.774 | 56.323 | 41.635 | 23.398 | 50.569 | 55.524 |
[09/01 11:24:43 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
| :-----: | :-----: | :-----: | :-----: | :-----: | :-----: |
| aeroplane | 66.686 | car | 25.895 | chair | 31.846 |
| cow | 57.283 | person | 20.700 | traffic_light | 30.234 |
OrderedDict([('bbox',
```

```
: Total inference time: 0:02:16.642567 (0.738608 s / iter per device, on 1 devices)
: Total inference pure compute time: 0:02:15 (0.735123 s / iter per device, on 1 devices)
```

Train :

```
[09/01 11:35:26 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 ] = 0.641
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.845
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.709
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.548
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.737
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.822
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.309
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.714
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.755
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.665
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 ] = 0.915
[09/01 11:35:26 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
| :-----: | :-----: | :-----: | :-----: | :-----: | :-----: |
| 64.101 | 84.488 | 70.862 | 54.822 | 73.704 | 82.153 |
[09/01 11:35:26 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
| :-----: | :-----: | :-----: | :-----: | :-----: | :-----: |
| aeroplane | 88.188 | car | 55.989 | chair | 67.044 |
| cow | 73.846 | person | 51.198 | traffic_light | 48.340 |
OrderedDict([('bbox',
```

```
Total inference time: 0:08:12.162782 (0.719536 s / iter per device, on 1 devices)
Total inference pure compute time: 0:08:10 (0.716395 s / iter per device, on 1 devices)
ionl: Preparing results for COCO format
```