

Aero2Astro

Panneerselvam N

(30/08/2021)

I had trained Faster Rcnm model upto 63000 iterations. And also evaluated with both train and test dataset.

Model:(Faster Rcnm)

Backbone = Faster_rcnn_X_101_32x8d_FPN_3x

bs = 4

lr = 0.001

ins = 500

Previous Checkpoint : 53499 itrs.

Threshold : 0.85

Test :

```
[08/28 15:33:56 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 ] = 0.392
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.567
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.428
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.241
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.513
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.584
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 ] = 0.555
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.601
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.434
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.705
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.835
[08/28 15:33:57 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 39.245 | 56.724 | 42.816 | 24.146 | 51.267 | 58.418 |
[08/28 15:33:57 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 66.618 | car | 27.145 | chair | 31.760 |
| cow | 58.161 | person | 21.778 | traffic_light | 30.010 |
```

Train :

```
[08/28 15:44:21 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.0
Average Precision (AP) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.618
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.824
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.682
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.521
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.716
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.799
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.302
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.699
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.742
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.650
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.816
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.898
[08/28 15:44:21 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 61.815 | 82.411 | 68.194 | 52.149 | 71.634 | 79.852 |
[08/28 15:44:21 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 86.636 | car | 53.264 | chair | 64.601 |
| cow | 72.933 | person | 47.411 | traffic light | 46.042 |
```

Threshold : 0.65

Test :

```
[08/28 15:48:42 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 ] = 0.392
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.567
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.428
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.241
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.513
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.584
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 ] = 0.555
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.601
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.434
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.705
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.835
[08/28 15:48:42 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 39.245 | 56.724 | 42.816 | 24.146 | 51.267 | 58.418 |
[08/28 15:48:42 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 66.618 | car | 27.145 | chair | 31.760 |
| cow | 58.161 | person | 21.778 | traffic_light | 30.010 |
OrderedDict([('bbox',
```

Train :

```
[08/28 15:59:13 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 ] = 0.618
Average Precision (AP) @[ IoU=0.50 | area= all | maxDets=100 ] = 0.824
Average Precision (AP) @[ IoU=0.75 | area= all | maxDets=100 ] = 0.682
Average Precision (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.521
Average Precision (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.716
Average Precision (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.799
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 1 ] = 0.302
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets= 10 ] = 0.699
Average Recall (AR) @[ IoU=0.50:0.95 | area= all | maxDets=100 ] = 0.742
Average Recall (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.650
Average Recall (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.816
Average Recall (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.898
[08/28 15:59:13 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
| AP | AP50 | AP75 | APs | APm | APl |
|-----|-----|-----|-----|-----|-----|
| 61.815 | 82.411 | 68.194 | 52.149 | 71.634 | 79.852 |
[08/28 15:59:13 d2.evaluation.coco_evaluation]: Per-category bbox AP:
| category | AP | category | AP | category | AP |
|-----|-----|-----|-----|-----|-----|
| aeroplane | 86.636 | car | 53.264 | chair | 64.601 |
| cow | 72.933 | person | 47.411 | traffic_light | 46.042 |
OrderedDict([('bbox',
```


Last Checkpoint :

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 |
OrderedDict([('bbox',
OrderedDict([('aeroplane', 87.507), ('car', 54.173), ('chair', 65.477), ('cow', 73.538), ('person', 48.83), ('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)
```