Aero2Astro

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(28/08/2021)

I had trained Faster Rcnn model upto 53500 iterations. And also evaluated with both train and test dataset.

Model:(Faster Rcnn)

Backbone = Faster_rcnn_X_101_32x8d_FPN_3x

bs = 4

lr = 0.001

ins = 500

Previous Checkpoint : 46000 itrs.

Threshold : 0.85

Test :

```
[08/27 14:54:37 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 ] = 0.394
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.568
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.428
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.246
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.511
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.590
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.226
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.557
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.602
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.440
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.703
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.850
[08/27 14:54:37 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
39.399	56.794	42.810	24.648	51.133	59.015

```
[08/27 14:54:37 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	66.907	car	27.094	chair	32.051
cow	57.985	person	22.072	traffic_light	30.283

Train:

```
[08/27 15:05:29 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 ] = 0.613
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.820
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.678
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.515
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.711
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.794
 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 ] = 0.696
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.739
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.646
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.811
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.898
[08/27 15:05:29 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
```

AP	AP50	AP75	APs	APm	APl
61.289	82.036	67.792	51.464	71.061	79.403

```
[08/27 15:05:29 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	86.584	car	52.557	chair	63.802
cow	72.699	person	46.718	traffic_light	45.374

Threshold : 0.65

Test :

```
[08/27 15:09:14 d2.evaluation.fast_eval_api]: COCOeval_opt.accumulate() finished in 0.02 seco
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.394
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.568
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.428
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.246
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 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.590
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=  1 ] = 0.226
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets= 10 ] = 0.557
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.602
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.440
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cow	57.985	person	22.072	traffic_light	30.283

Train :

```
[08/27 15:19:00 d2.evaluation.fast_eval_api]: Accumulating evaluation results...
[08/27 15:19:00 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 ] = 0.613
 Average Precision  (AP) @[ IoU=0.50      | area=   all | maxDets=100 ] = 0.820
 Average Precision  (AP) @[ IoU=0.75      | area=   all | maxDets=100 ] = 0.678
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.515
 Average Precision  (AP) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.711
 Average Precision  (AP) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.794
 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 ] = 0.696
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=   all | maxDets=100 ] = 0.739
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= small | maxDets=100 ] = 0.646
 Average Recall     (AR) @[ IoU=0.50:0.95 | area=medium | maxDets=100 ] = 0.811
 Average Recall     (AR) @[ IoU=0.50:0.95 | area= large | maxDets=100 ] = 0.898
[08/27 15:19:00 d2.evaluation.coco_evaluation]: Evaluation results for bbox:
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[08/27 15:19:00 d2.evaluation.coco_evaluation]: Per-category bbox AP:
```

category	AP	category	AP	category	AP
aeroplane	86.584	car	52.557	chair	63.802
cow	72.699	person	46.718	traffic_light	45.374

Last Checkpoint : 53499
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
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 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',
```