```
1 C:\Users\palep\anaconda3\envs\Homework3_310\python.exe E:\
   pythonProject\Faster_RCNN\main.py
 2 ASL_Letters/train/filename
3 ASL_Letters/test/filename
4 Test data size: 72 Train data size: 1512
5 Downloading: "https://download.pytorch.org/models/
   fasterrcnn_mobilenet_v3_large_fpn-fb6a3cc7.pth" to C:\Users\palep/.
   cache\torch\hub\checkpoints\fasterrcnn_mobilenet_v3_large_fpn-fb6a3cc7
   .pth
 6 100.0%
 7 Epoch: [0] [ 0/378] eta: 1:20:09 lr: 0.000001 loss: 3.8779 (3.
   8779) loss_classifier: 3.4710 (3.4710) loss_box_reg: 0.2786 (0.2786
   ) loss_objectness: 0.1004 (0.1004) loss_rpn_box_reg: 0.0280 (0.0280
   ) time: 12.7233 data: 0.0778 max mem: 950
8 Epoch: [0] [ 50/378] eta: 0:03:30 lr: 0.000041 loss: 2.9662 (3.
   4904) loss_classifier: 2.5332 (2.9942) loss_box_reg: 0.3899 (0.4061
    loss_objectness: 0.0570 (0.0637) loss_rpn_box_reg: 0.0237 (0.0264
   ) time: 0.3939 data: 0.0669 max mem: 1109
9 Epoch: [0] [100/378] eta: 0:02:25 lr: 0.000081 loss: 1.3703 (2.
   5825) loss_classifier: 0.8073 (2.0538) loss_box_req: 0.5001 (0.4479
     loss_objectness: 0.0439 (0.0580) loss_rpn_box_reg: 0.0170 (0.0228
     time: 0.3842 data: 0.0641 max mem: 1109
10 Epoch: [0] [150/378] eta: 0:01:49 lr: 0.000120 loss: 1.3677 (2.
   1876) loss_classifier: 0.7588 (1.6279) loss_box_reg: 0.5628 (0.4872
    loss_objectness: 0.0355 (0.0514) loss_rpn_box_reg: 0.0148 (0.0211
   ) time: 0.3929 data: 0.0713 max mem: 1109
11 Epoch: [0] [200/378] eta: 0:01:20 lr: 0.000160 loss: 1.5671 (2.
   0170) loss_classifier: 0.8633 (1.4261) loss_box_req: 0.6393 (0.5265
     loss_objectness: 0.0174 (0.0455) loss_rpn_box_reg: 0.0075 (0.0190
     time: 0.3617 data: 0.0631 max mem: 1109
12 Epoch: [0] [250/378] eta: 0:00:55 lr: 0.000200 loss: 1.9839 (2.
   0103) loss_classifier: 1.0545 (1.3522) loss_box_reg: 0.9085 (0.5997
    loss_objectness: 0.0146 (0.0408) loss_rpn_box_reg: 0.0098 (0.0176
     time: 0.3487 data: 0.0663 max mem: 1109
13 Epoch: [0] [300/378] eta: 0:00:32 lr: 0.000240 loss: 2.1199 (2.
   0186) loss_classifier: 1.1714 (1.3106) loss_box_reg: 0.9270 (0.6546
     loss_objectness: 0.0094 (0.0367) loss_rpn_box_reg: 0.0107 (0.0166
   ) time: 0.3503 data: 0.0683 max mem: 1109
14 Epoch: [0] [350/378] eta: 0:00:11 lr: 0.000279 loss: 2.9383 (2.
   0812) loss_classifier: 1.5547 (1.3117) loss_box_req: 1.3100 (0.7209
    loss_objectness: 0.0066 (0.0329) loss_rpn_box_reg: 0.0082 (0.0158
    time: 0.3385 data: 0.0670 max mem: 1109
15 Epoch: [0] [377/378] eta: 0:00:00 lr: 0.000300 loss: 2.7053 (2.
   1254) loss_classifier: 1.4118 (1.3219) loss_box_reg: 1.2532 (0.7569)
    loss_objectness: 0.0074 (0.0313) loss_rpn_box_reg: 0.0076 (0.0154
     time: 0.3421 data: 0.0690 max mem: 1109
16 Epoch: [0] Total time: 0:02:32 (0.4047 s / it)
17 Epoch: [1] [ 0/378] eta: 0:02:24 lr: 0.000300 loss: 2.0629 (2.
   0629) loss_classifier: 1.1299 (1.1299) loss_box_reg: 0.9036 (0.9036
   ) loss_objectness: 0.0162 (0.0162) loss_rpn_box_reg: 0.0132 (0.0132
    time: 0.3830 data: 0.0719 max mem: 1109
18 Epoch: [1] [ 50/378] eta: 0:01:51 lr: 0.000300 loss: 2.7241 (2.
   8023) loss_classifier: 1.5968 (1.5757) loss_box_reg: 1.1488 (1.2076
```

```
loss_objectness: 0.0037 (0.0097) loss_rpn_box_reg: 0.0084 (0.0093
   ) time: 0.3418 data: 0.0709 max mem: 1109
19 Epoch: [1] [100/378] eta: 0:01:33 lr: 0.000300 loss: 2.7512 (2.
   8558) loss_classifier: 1.5704 (1.6455) loss_box_reg: 1.0710 (1.1925
   ) loss_objectness: 0.0046 (0.0080) loss_rpn_box_reg: 0.0087 (0.0097
    time: 0.3314 data: 0.0685 max mem: 1109
20 Epoch: [1] [150/378] eta: 0:01:16 lr: 0.000300 loss: 2.5200 (2.
  7487) loss_classifier: 1.4560 (1.6026) loss_box_reg: 1.0256 (1.1273
     loss_objectness: 0.0038 (0.0081) loss_rpn_box_req: 0.0102 (0.0106
     time: 0.3367 data: 0.0719 max mem: 1109
21 Epoch: [1] [200/378] eta: 0:01:00 lr: 0.000300 loss: 2.5056 (2.
   7372) loss_classifier: 1.5757 (1.6176) loss_box_reg: 0.9915 (1.1016
   ) loss_objectness: 0.0013 (0.0071) loss_rpn_box_reg: 0.0092 (0.0109
   ) time: 0.3490 data: 0.0750 max mem: 1109
22 Epoch: [1] [250/378] eta: 0:00:43 lr: 0.000300 loss: 2.4542 (2.
   6844) loss_classifier: 1.5061 (1.5931) loss_box_reg: 0.9467 (1.0739
    loss_objectness: 0.0022 (0.0067) loss_rpn_box_reg: 0.0094 (0.0107
   ) time: 0.3528 data: 0.0806 max mem: 1109
23 Epoch: [1] [300/378] eta: 0:00:26 lr: 0.000300 loss: 2.2914 (2.
  6120) loss_classifier: 1.2457 (1.5471) loss_box_req: 0.9733 (1.0482)
     loss_objectness: 0.0015 (0.0062) loss_rpn_box_reg: 0.0069 (0.0106
     time: 0.3513 data: 0.0868 max mem: 1109
24 Epoch: [1] [350/378] eta: 0:00:09 lr: 0.000300 loss: 2.1474 (2.
   5521) loss_classifier: 1.1962 (1.5125) loss_box_reg: 0.8374 (1.0230
   ) loss_objectness: 0.0014 (0.0062) loss_rpn_box_reg: 0.0116 (0.0105
   ) time: 0.4145 data: 0.1279 max mem: 1109
25 Epoch: [1] [377/378] eta: 0:00:00 lr: 0.000300 loss: 1.9421 (2.
   5083) loss_classifier: 1.0793 (1.4837) loss_box_reg: 0.8171 (1.0081
     loss_objectness: 0.0018 (0.0060) loss_rpn_box_req: 0.0107 (0.0105
     time: 0.4730 data: 0.1621 max mem: 1109
26 Epoch: [1] Total time: 0:02:13 (0.3535 s / it)
27 Epoch: [2] [ 0/378] eta: 0:02:02 lr: 0.000150 loss: 1.6517 (1.
   6517) loss_classifier: 1.0068 (1.0068) loss_box_reg: 0.6246 (0.6246
     loss_objectness: 0.0048 (0.0048) loss_rpn_box_reg: 0.0155 (0.0155
    time: 0.3251 data: 0.0598 max mem: 1109
28 Epoch: [2] [ 50/378] eta: 0:02:01 lr: 0.000150 loss: 1.7626 (1.
  7662) loss_classifier: 1.0806 (1.0393) loss_box_reg: 0.7086 (0.7153
     loss_objectness: 0.0015 (0.0033) loss_rpn_box_req: 0.0081 (0.0083
     time: 0.3680 data: 0.0868 max mem: 1109
29 Epoch: [2] [100/378] eta: 0:01:38 lr: 0.000150 loss: 1.5892 (1.
   7108) loss_classifier: 0.9059 (1.0094) loss_box_reg: 0.6652 (0.6896
    loss_objectness: 0.0022 (0.0033) loss_rpn_box_reg: 0.0071 (0.0085
   ) time: 0.3449 data: 0.0730 max mem: 1109
30 Epoch: [2] [150/378] eta: 0:01:22 lr: 0.000150 loss: 1.3951 (1.
   6654) loss_classifier: 0.7795 (0.9819) loss_box_reg: 0.6180 (0.6717
     loss_objectness: 0.0016 (0.0031) loss_rpn_box_reg: 0.0072 (0.0087
     time: 0.3765 data: 0.0709 max mem: 1109
31 Epoch: [2] [200/378] eta: 0:01:06 lr: 0.000150 loss: 1.5223 (1.
   6429) loss_classifier: 0.8233 (0.9567) loss_box_reg: 0.6370 (0.6738
   ) loss_objectness: 0.0013 (0.0033) loss_rpn_box_reg: 0.0104 (0.0091
    time: 0.3697 data: 0.0875 max mem: 1109
32 Epoch: [2] [250/378] eta: 0:00:49 lr: 0.000150 loss: 1.5222 (1.
   6179) loss_classifier: 0.7711 (0.9293) loss_box_reg: 0.6851 (0.6762
```

```
loss_objectness: 0.0010 (0.0034) loss_rpn_box_reg: 0.0075 (0.0090
   ) time: 0.4579 data: 0.1399 max mem: 1109
33 Epoch: [2] [300/378] eta: 0:00:30 lr: 0.000150 loss: 1.4533 (1.
   5755) loss_classifier: 0.7924 (0.8954) loss_box_reg: 0.6243 (0.6678
   ) loss_objectness: 0.0013 (0.0033) loss_rpn_box_reg: 0.0065 (0.0090
    time: 0.4424 data: 0.1252 max mem: 1109
34 Epoch: [2] [350/378] eta: 0:00:12 lr: 0.000150 loss: 1.2662 (1.
   5518) loss_classifier: 0.6776 (0.8735) loss_box_reg: 0.6231 (0.6662
     loss_objectness: 0.0007 (0.0033) loss_rpn_box_req: 0.0062 (0.0088
   ) time: 1.0679 data: 0.7220 max mem: 1109
35 Epoch: [2] [377/378] eta: 0:00:00 lr: 0.000150 loss: 1.4008 (1.
  5439) loss_classifier: 0.7867 (0.8661) loss_box_reg: 0.5873 (0.6658
   ) loss_objectness: 0.0008 (0.0032) loss_rpn_box_reg: 0.0074 (0.0088
   ) time: 0.3505 data: 0.0815 max mem: 1109
36 Epoch: [2] Total time: 0:02:48 (0.4466 s / it)
37 Epoch: [3] [ 0/378] eta: 0:01:58 lr: 0.000300 loss: 1.5267 (1.
   5267) loss_classifier: 0.7106 (0.7106) loss_box_reg: 0.7922 (0.7922
   ) loss_objectness: 0.0079 (0.0079) loss_rpn_box_reg: 0.0159 (0.0159
   ) time: 0.3133 data: 0.0578 max mem: 1109
38 Epoch: [3] [ 50/378] eta: 0:02:05 lr: 0.000300 loss: 1.4435 (1.
   4127) loss_classifier: 0.7774 (0.6535) loss_box_reg: 0.7100 (0.7464
   ) loss_objectness: 0.0011 (0.0035) loss_rpn_box_reg: 0.0100 (0.0093
   ) time: 0.4186 data: 0.1257 max mem: 1109
39 Epoch: [3] [100/378] eta: 0:01:44 lr: 0.000300 loss: 1.4693 (1.
   4177) loss_classifier: 0.6753 (0.6717) loss_box_reg: 0.6795 (0.7334
    loss_objectness: 0.0015 (0.0032) loss_rpn_box_reg: 0.0087 (0.0094
   ) time: 0.3456 data: 0.0738 max mem: 1109
40 Epoch: [3] [150/378] eta: 0:01:25 lr: 0.000300 loss: 1.4349 (1.
   4103) loss_classifier: 0.6286 (0.6716) loss_box_reg: 0.7180 (0.7266
   ) loss_objectness: 0.0010 (0.0034) loss_rpn_box_reg: 0.0069 (0.0087
   ) time: 0.3799 data: 0.0770 max mem: 1109
41 Epoch: [3] [200/378] eta: 0:01:06 lr: 0.000300 loss: 1.4192 (1.
   4059) loss_classifier: 0.5868 (0.6696) loss_box_reg: 0.7257 (0.7245
     loss_objectness: 0.0024 (0.0031) loss_rpn_box_reg: 0.0074 (0.0086
    time: 0.3678 data: 0.0657 max mem: 1109
42 Epoch: [3] [250/378] eta: 0:00:47 lr: 0.000300 loss: 1.1524 (1.
   3816) loss_classifier: 0.5689 (0.6581) loss_box_reg: 0.6045 (0.7121
    loss_objectness: 0.0008 (0.0030) loss_rpn_box_req: 0.0063 (0.0084
     time: 0.3330 data: 0.0693 max mem: 1109
43 Epoch: [3] [300/378] eta: 0:00:28 lr: 0.000300 loss: 1.2442 (1.
  3617) loss_classifier: 0.5272 (0.6427) loss_box_reg: 0.6274 (0.7078
   ) loss_objectness: 0.0020 (0.0030) loss_rpn_box_reg: 0.0071 (0.0082
   ) time: 0.3866 data: 0.0780 max mem: 1109
44 Epoch: [3] [350/378] eta: 0:00:10 lr: 0.000300 loss: 1.2883 (1.
   3489) loss_classifier: 0.6034 (0.6319) loss_box_reg: 0.6359 (0.7060
    loss_objectness: 0.0008 (0.0028) loss_rpn_box_reg: 0.0055 (0.0081
   ) time: 0.3294 data: 0.0655 max mem: 1109
45 Epoch: [3] [377/378] eta: 0:00:00 lr: 0.000300 loss: 1.1968 (1.
   3430) loss_classifier: 0.4974 (0.6286) loss_box_reg: 0.5853 (0.7035
   ) loss_objectness: 0.0012 (0.0028) loss_rpn_box_reg: 0.0060 (0.0081
     time: 0.4023 data: 0.0856 max mem: 1109
46 Epoch: [3] Total time: 0:02:18 (0.3670 s / it)
47 Epoch: [4] [ 0/378] eta: 0:02:17 lr: 0.000256 loss: 0.9306 (0.
```

```
47 9306) loss_classifier: 0.4351 (0.4351) loss_box_reg: 0.4872 (0.4872
   ) loss_objectness: 0.0038 (0.0038) loss_rpn_box_reg: 0.0045 (0.0045
   ) time: 0.3634 data: 0.0499 max mem: 1109
48 Epoch: [4] [ 50/378] eta: 0:01:56 lr: 0.000256 loss: 0.9774 (1.
   0411) loss_classifier: 0.3482 (0.4434) loss_box_reg: 0.5678 (0.5883
     loss_objectness: 0.0013 (0.0020) loss_rpn_box_reg: 0.0060 (0.0074
   ) time: 0.3427 data: 0.0761 max mem: 1109
49 Epoch: [4] [100/378] eta: 0:01:41 lr: 0.000256 loss: 1.0144 (1.
   0471) loss_classifier: 0.3879 (0.4350) loss_box_reg: 0.5657 (0.6029
   ) loss_objectness: 0.0007 (0.0021) loss_rpn_box_reg: 0.0060 (0.0070
     time: 0.4045 data: 0.1115 max mem: 1109
50 Epoch: [4] [150/378] eta: 0:01:28 lr: 0.000256 loss: 1.0013 (1.
   0225) loss_classifier: 0.3739 (0.4174) loss_box_reg: 0.5984 (0.5959
    loss_objectness: 0.0009 (0.0020) loss_rpn_box_reg: 0.0066 (0.0072
   ) time: 0.3986 data: 0.0964 max mem: 1109
51 Epoch: [4] [200/378] eta: 0:01:10 lr: 0.000256 loss: 0.9518 (1.
   0158) loss_classifier: 0.3756 (0.4117) loss_box_reg: 0.5945 (0.5949
   ) loss_objectness: 0.0010 (0.0019) loss_rpn_box_reg: 0.0070 (0.0073
    time: 0.4308 data: 0.1068 max mem: 1109
52 Epoch: [4] [250/378] eta: 0:00:51 lr: 0.000256 loss: 1.0189 (1.
   0109) loss_classifier: 0.3466 (0.4088) loss_box_reg: 0.5701 (0.5927
   ) loss_objectness: 0.0007 (0.0021) loss_rpn_box_reg: 0.0062 (0.0072
   ) time: 0.3923 data: 0.0832 max mem: 1109
53 Epoch: [4] [300/378] eta: 0:00:30 lr: 0.000256 loss: 0.9445 (1.
   0018) loss_classifier: 0.3338 (0.4024) loss_box_reg: 0.6556 (0.5898
     loss_objectness: 0.0017 (0.0023) loss_rpn_box_reg: 0.0057 (0.0072
   ) time: 0.3631 data: 0.0849 max mem: 1109
54 Epoch: [4] [350/378] eta: 0:00:10 lr: 0.000256 loss: 0.9074 (0.
   9932) loss_classifier: 0.3944 (0.4011) loss_box_reg: 0.5423 (0.5826
   ) loss_objectness: 0.0005 (0.0023) loss_rpn_box_req: 0.0052 (0.0072
   ) time: 0.3573 data: 0.0839 max mem: 1109
55 Epoch: [4] [377/378] eta: 0:00:00 lr: 0.000256 loss: 0.8943 (0.
  9869) loss_classifier: 0.3603 (0.3991) loss_box_reg: 0.4952 (0.5782
     loss_objectness: 0.0009 (0.0023) loss_rpn_box_reg: 0.0070 (0.0072
    time: 0.3425 data: 0.0692 max mem: 1109
56 Epoch: [4] Total time: 0:02:25 (0.3855 s / it)
57 -- Test begins--
58 avg_IOU: 0.8229630509732475 - avg_accuracy: 0.72222222222222
   avg_score: 0.7745564854900602
59 Epoch: [5] [ 0/378] eta: 0:02:24 lr: 0.000150 loss: 0.6053 (0.
   6053) loss_classifier: 0.2381 (0.2381) loss_box_reg: 0.3581 (0.3581
   ) loss_objectness: 0.0052 (0.0052) loss_rpn_box_reg: 0.0040 (0.0040
   ) time: 0.3823 data: 0.1107 max mem: 1109
60 Epoch: [5] [ 50/378] eta: 0:01:51 lr: 0.000150 loss: 0.6805 (0.
   7080) loss_classifier: 0.2744 (0.2675) loss_box_reg: 0.3956 (0.4311
     loss_objectness: 0.0004 (0.0023) loss_rpn_box_reg: 0.0049 (0.0071
     time: 0.3326 data: 0.0656 max mem: 1109
61 Epoch: [5] [100/378] eta: 0:01:39 lr: 0.000150 loss: 0.7359 (0.
   7115) loss_classifier: 0.2847 (0.2806) loss_box_reg: 0.4090 (0.4227
   ) loss_objectness: 0.0003 (0.0016) loss_rpn_box_reg: 0.0051 (0.0065
     time: 0.3881 data: 0.0753 max mem: 1109
62 Epoch: [5] [150/378] eta: 0:01:22 lr: 0.000150 loss: 0.7229 (0.
   7109) loss_classifier: 0.2517 (0.2777) loss_box_reg: 0.4254 (0.4254
```

```
loss_objectness: 0.0003 (0.0015) loss_rpn_box_reg: 0.0047 (0.0063
     time: 0.3692 data: 0.0676 max mem: 1109
63 Epoch: [5] [200/378] eta: 0:01:05 lr: 0.000150 loss: 0.7259 (0.
  7108) loss_classifier: 0.2470 (0.2737) loss_box_reg: 0.4611 (0.4294
     loss_objectness: 0.0006 (0.0015) loss_rpn_box_reg: 0.0042 (0.0063
     time: 0.3926 data: 0.1049 max mem: 1109
64 Epoch: [5] [250/378] eta: 0:00:47 lr: 0.000150 loss: 0.6619 (0.
  7087) loss_classifier: 0.2714 (0.2755) loss_box_reg: 0.3747 (0.4252
    loss_objectness: 0.0009 (0.0016) loss_rpn_box_req: 0.0060 (0.0064
  ) time: 0.3639 data: 0.0726 max mem: 1109
65 Epoch: [5] [300/378] eta: 0:00:29 lr: 0.000150 loss: 0.7112 (0.
  7143) loss_classifier: 0.2685 (0.2763) loss_box_reg: 0.4234 (0.4301
    loss_objectness: 0.0005 (0.0016) loss_rpn_box_reg: 0.0050 (0.0064
  ) time: 0.3914 data: 0.0707 max mem: 1109
66 Epoch: [5] [350/378] eta: 0:00:10 lr: 0.000150 loss: 0.6373 (0.
  7135) loss_classifier: 0.2235 (0.2756) loss_box_reg: 0.4116 (0.4298
     loss_objectness: 0.0005 (0.0016) loss_rpn_box_reg: 0.0058 (0.0065
     time: 0.3829 data: 0.0975 max mem: 1109
67 Epoch: [5] [377/378] eta: 0:00:00 lr: 0.000150 loss: 0.6877 (0.
  7114) loss_classifier: 0.2447 (0.2755) loss_box_req: 0.4350 (0.4278
    loss_objectness: 0.0008 (0.0016) loss_rpn_box_reg: 0.0053 (0.0064
     time: 0.3838 data: 0.0856 max mem: 1109
68 Epoch: [5] Total time: 0:02:21 (0.3750 s / it)
69 Epoch: [6] [ 0/378] eta: 0:02:52 lr: 0.000044 loss: 0.2957 (0.
  2957) loss_classifier: 0.1240 (0.1240) loss_box_reg: 0.1660 (0.1660
    loss_objectness: 0.0023 (0.0023) loss_rpn_box_reg: 0.0034 (0.0034
  ) time: 0.4563 data: 0.1142 max mem: 1109
70 Epoch: [6] [ 50/378] eta: 0:02:07 lr: 0.000044 loss: 0.5633 (0.
  5780) loss_classifier: 0.2059 (0.2264) loss_box_reg: 0.3188 (0.3439
    loss_objectness: 0.0004 (0.0014) loss_rpn_box_reg: 0.0052 (0.0063
  ) time: 0.3742 data: 0.0715 max mem: 1109
71 Epoch: [6] [100/378] eta: 0:01:48 lr: 0.000044 loss: 0.5230 (0.
  5602) loss_classifier: 0.2073 (0.2259) loss_box_reg: 0.3085 (0.3267
     loss_objectness: 0.0008 (0.0014) loss_rpn_box_reg: 0.0048 (0.0062
     time: 0.3924 data: 0.0803 max mem: 1109
72 Epoch: [6] [150/378] eta: 0:01:26 lr: 0.000044 loss: 0.5166 (0.
  5608) loss_classifier: 0.1954 (0.2276) loss_box_reg: 0.3079 (0.3260
    loss_objectness: 0.0002 (0.0012) loss_rpn_box_reg: 0.0053 (0.0060
     time: 0.3612 data: 0.0840 max mem: 1109
73 Epoch: [6] [200/378] eta: 0:01:06 lr: 0.000044 loss: 0.5191 (0.
  5534) loss_classifier: 0.1963 (0.2254) loss_box_reg: 0.2722 (0.3208
    loss_objectness: 0.0007 (0.0012) loss_rpn_box_reg: 0.0056 (0.0060
  ) time: 0.3711 data: 0.0824 max mem: 1109
74 Epoch: [6] [250/378] eta: 0:00:48 lr: 0.000044 loss: 0.4678 (0.
  5482) loss_classifier: 0.1872 (0.2235) loss_box_reg: 0.3084 (0.3172
     loss_objectness: 0.0014 (0.0014) loss_rpn_box_reg: 0.0059 (0.0061
    time: 0.3950 data: 0.0787 max mem: 1109
75 Epoch: [6] [300/378] eta: 0:00:29 lr: 0.000044 loss: 0.4913 (0.
  5430) loss_classifier: 0.1925 (0.2213) loss_box_reg: 0.2794 (0.3142
    loss_objectness: 0.0004 (0.0015) loss_rpn_box_reg: 0.0043 (0.0061
     time: 0.3415 data: 0.0658 max mem: 1109
76 Epoch: [6] [350/378] eta: 0:00:10 lr: 0.000044 loss: 0.5539 (0.
  5396) loss_classifier: 0.2263 (0.2212) loss_box_reg: 0.3183 (0.3109)
```

```
loss_objectness: 0.0009 (0.0015) loss_rpn_box_reg: 0.0052 (0.0060
     time: 0.3832 data: 0.0749 max mem: 1109
77 Epoch: [6] [377/378] eta: 0:00:00 lr: 0.000044 loss: 0.5359 (0.
   5389) loss_classifier: 0.2054 (0.2197) loss_box_reg: 0.3120 (0.3115
     loss_objectness: 0.0020 (0.0015) loss_rpn_box_reg: 0.0065 (0.0061
     time: 0.3842 data: 0.0689 max mem: 1109
78 Epoch: [6] Total time: 0:02:21 (0.3753 s / it)
79 Epoch: [7] [ 0/378] eta: 0:02:38 lr: 0.000300 loss: 0.5562 (0.
  5562) loss_classifier: 0.2220 (0.2220) loss_box_reg: 0.3273 (0.3273
     loss_objectness: 0.0002 (0.0002) loss_rpn_box_req: 0.0067 (0.0067)
     time: 0.4194 data: 0.0898 max mem: 1109
80 Epoch: [7] [ 50/378] eta: 0:02:04 lr: 0.000300 loss: 0.7008 (0.
   7363) loss_classifier: 0.2128 (0.2228) loss_box_reg: 0.4391 (0.5057
     loss_objectness: 0.0004 (0.0013) loss_rpn_box_reg: 0.0057 (0.0065
   ) time: 0.3758 data: 0.0905 max mem: 1109
81 Epoch: [7] [100/378] eta: 0:01:39 lr: 0.000300 loss: 0.7902 (0.
   7732) loss_classifier: 0.2611 (0.2431) loss_box_reg: 0.5113 (0.5218
     loss_objectness: 0.0003 (0.0015) loss_rpn_box_reg: 0.0061 (0.0068
     time: 0.3332 data: 0.0651 max mem: 1109
82 Epoch: [7] [150/378] eta: 0:01:23 lr: 0.000300 loss: 0.8198 (0.
   7971) loss_classifier: 0.2899 (0.2569) loss_box_reg: 0.4682 (0.5322
     loss_objectness: 0.0008 (0.0013) loss_rpn_box_reg: 0.0055 (0.0066
     time: 0.3819 data: 0.0753 max mem: 1109
83 Epoch: [7] [200/378] eta: 0:01:05 lr: 0.000300 loss: 0.8380 (0.
  7972) loss_classifier: 0.2414 (0.2586) loss_box_reg: 0.5683 (0.5309
    loss_objectness: 0.0005 (0.0014) loss_rpn_box_reg: 0.0051 (0.0064
   ) time: 0.3734 data: 0.0666 max mem: 1109
84 Epoch: [7] [250/378] eta: 0:00:46 lr: 0.000300 loss: 0.7614 (0.
   7905) loss_classifier: 0.2462 (0.2581) loss_box_reg: 0.4479 (0.5246
     loss_objectness: 0.0006 (0.0015) loss_rpn_box_reg: 0.0056 (0.0063
   ) time: 0.3677 data: 0.0872 max mem: 1109
85 Epoch: [7] [300/378] eta: 0:00:28 lr: 0.000300 loss: 0.6960 (0.
   7815) loss_classifier: 0.2576 (0.2569) loss_box_reg: 0.4546 (0.5167
     loss_objectness: 0.0005 (0.0015) loss_rpn_box_reg: 0.0053 (0.0064
     time: 0.4019 data: 0.0904 max mem: 1109
86 Epoch: [7] [350/378] eta: 0:00:10 lr: 0.000300 loss: 0.6538 (0.
  7736) loss_classifier: 0.2435 (0.2568) loss_box_reg: 0.4272 (0.5089
    loss_objectness: 0.0008 (0.0015) loss_rpn_box_req: 0.0041 (0.0064
   ) time: 0.3940 data: 0.0767 max mem: 1109
87 Epoch: [7] [377/378] eta: 0:00:00 lr: 0.000300 loss: 0.7918 (0.
  7725) loss_classifier: 0.2439 (0.2568) loss_box_reg: 0.5110 (0.5078
     loss_objectness: 0.0003 (0.0015) loss_rpn_box_reg: 0.0059 (0.0064
     time: 0.3804 data: 0.0765 max mem: 1109
88 Epoch: [7] Total time: 0:02:20 (0.3721 s / it)
89 Epoch: [8] [ 0/378] eta: 0:02:17 lr: 0.000289 loss: 0.6317 (0.
  6317) loss_classifier: 0.2288 (0.2288) loss_box_reg: 0.3926 (0.3926
     loss_objectness: 0.0018 (0.0018) loss_rpn_box_reg: 0.0085 (0.0085
  ) time: 0.3635 data: 0.0688 max mem: 1109
90 Epoch: [8] [ 50/378] eta: 0:02:05 lr: 0.000289 loss: 0.6478 (0.
   6666) loss_classifier: 0.1989 (0.2210) loss_box_reg: 0.4636 (0.4376
     loss_objectness: 0.0007 (0.0020) loss_rpn_box_reg: 0.0045 (0.0060
     time: 0.3871 data: 0.0985 max mem: 1109
91 Epoch: [8] [100/378] eta: 0:01:47 lr: 0.000289 loss: 0.6327 (0.
```

```
91 6540) loss_classifier: 0.2136 (0.2259) loss_box_reg: 0.3882 (0.4207
   ) loss_objectness: 0.0007 (0.0017) loss_rpn_box_reg: 0.0055 (0.0058
   ) time: 0.3856 data: 0.0781 max mem: 1109
92 Epoch: [8] [150/378] eta: 0:01:27 lr: 0.000289 loss: 0.6564 (0.
   6626) loss_classifier: 0.2178 (0.2244) loss_box_reg: 0.4409 (0.4307
     loss_objectness: 0.0008 (0.0015) loss_rpn_box_reg: 0.0060 (0.0060
   ) time: 0.3728 data: 0.0671 max mem: 1109
93 Epoch: [8] [200/378] eta: 0:01:07 lr: 0.000289 loss: 0.6716 (0.
   6674) loss_classifier: 0.2219 (0.2239) loss_box_reg: 0.4122 (0.4362
     loss_objectness: 0.0008 (0.0014) loss_rpn_box_reg: 0.0046 (0.0059
      time: 0.3443 data: 0.0608 max mem: 1109
94 Epoch: [8] [250/378] eta: 0:00:47 lr: 0.000289 loss: 0.6568 (0.
   6626) loss_classifier: 0.2079 (0.2193) loss_box_reg: 0.4529 (0.4360
     loss_objectness: 0.0002 (0.0014) loss_rpn_box_reg: 0.0051 (0.0059
   ) time: 0.3442 data: 0.0710 max mem: 1109
95 Epoch: [8] [300/378] eta: 0:00:29 lr: 0.000289 loss: 0.6199 (0.
   6678) loss_classifier: 0.2179 (0.2205) loss_box_reg: 0.4037 (0.4400
     loss_objectness: 0.0005 (0.0014) loss_rpn_box_reg: 0.0052 (0.0059
      time: 0.4910 data: 0.1832 max mem: 1109
96 Epoch: [8] [350/378] eta: 0:00:11 lr: 0.000289 loss: 0.6305 (0.
   6661) loss_classifier: 0.1904 (0.2196) loss_box_reg: 0.4261 (0.4392
     loss_objectness: 0.0008 (0.0014) loss_rpn_box_reg: 0.0054 (0.0059
   ) time: 0.4590 data: 0.1550 max mem: 1109
97 Epoch: [8] [377/378] eta: 0:00:00 lr: 0.000289 loss: 0.5205 (0.
   6611) loss_classifier: 0.1943 (0.2179) loss_box_reg: 0.3370 (0.4359
      loss_objectness: 0.0006 (0.0014) loss_rpn_box_reg: 0.0060 (0.0059
   ) time: 0.4390 data: 0.1153 max mem: 1109
98 Epoch: [8] Total time: 0:02:30 (0.3987 s / it)
99 Epoch: [9] [ 0/378] eta: 0:02:21 lr: 0.000256 loss: 0.7516 (0.
   7516) loss_classifier: 0.1515 (0.1515) loss_box_reg: 0.5948 (0.5948
      loss_objectness: 0.0004 (0.0004) loss_rpn_box_reg: 0.0049 (0.0049
   ) time: 0.3750 data: 0.0509 max mem: 1109
100 Epoch: [9] [ 50/378] eta: 0:02:11 lr: 0.000256 loss: 0.5220 (0.
   5363) loss_classifier: 0.1834 (0.1754) loss_box_reg: 0.3351 (0.3543
     loss_objectness: 0.0005 (0.0011) loss_rpn_box_reg: 0.0048 (0.0055
   ) time: 0.4132 data: 0.1018 max mem: 1109
101 Epoch: [9] [100/378] eta: 0:01:49 lr: 0.000256 loss: 0.5023 (0.
   5369) loss_classifier: 0.1656 (0.1773) loss_box_reg: 0.3284 (0.3528
     loss_objectness: 0.0009 (0.0014) loss_rpn_box_reg: 0.0052 (0.0054
      time: 0.3931 data: 0.1126 max mem: 1109
102 Epoch: [9] [150/378] eta: 0:01:29 lr: 0.000256 loss: 0.5794 (0.
   5465) loss_classifier: 0.1640 (0.1806) loss_box_reg: 0.3977 (0.3593
     loss_objectness: 0.0003 (0.0013) loss_rpn_box_req: 0.0041 (0.0053
   ) time: 0.3884 data: 0.1051 max mem: 1109
103 Epoch: [9] [200/378] eta: 0:01:10 lr: 0.000256 loss: 0.5285 (0.
   5521) loss_classifier: 0.1670 (0.1799) loss_box_reg: 0.3386 (0.3658
     loss_objectness: 0.0006 (0.0012) loss_rpn_box_reg: 0.0045 (0.0052
      time: 0.4344 data: 0.1070 max mem: 1109
104 Epoch: [9] [250/378] eta: 0:00:50 lr: 0.000256 loss: 0.5879 (0.
   5638) loss_classifier: 0.1819 (0.1816) loss_box_reg: 0.3936 (0.3758
      loss_objectness: 0.0007 (0.0012) loss_rpn_box_reg: 0.0041 (0.0052
      time: 0.3799 data: 0.0800 max mem: 1109
105 Epoch: [9] [300/378] eta: 0:00:30 lr: 0.000256 loss: 0.6151 (0.
```

```
105 5715) loss_classifier: 0.1779 (0.1817) loss_box_reg: 0.4122 (0.3835
   ) loss_objectness: 0.0003 (0.0012) loss_rpn_box_reg: 0.0056 (0.0052
   ) time: 0.3549 data: 0.0589 max mem: 1109
106 Epoch: [9] [350/378] eta: 0:00:10 lr: 0.000256 loss: 0.6993 (0.
   5797) loss_classifier: 0.1833 (0.1843) loss_box_reg: 0.4533 (0.3888
     loss_objectness: 0.0004 (0.0012) loss_rpn_box_reg: 0.0057 (0.0053
   ) time: 0.3451 data: 0.0681 max mem: 1109
107 Epoch: [9] [377/378] eta: 0:00:00 lr: 0.000256 loss: 0.5673 (0.
   5793) loss_classifier: 0.1752 (0.1845) loss_box_reg: 0.3859 (0.3881
     loss_objectness: 0.0014 (0.0012) loss_rpn_box_reg: 0.0057 (0.0054
      time: 0.3249 data: 0.0621 max mem: 1109
108 Epoch: [9] Total time: 0:02:24 (0.3818 s / it)
109 -- Test begins--
110 avg_IOU: 0.8562943579422103 - avg_accuracy: 0.833333333333333 -
   avg_score: 0.8580627219441036
111 Epoch: [10] [ 0/378] eta: 0:02:23 lr: 0.000207 loss: 0.7504 (0.
   7504) loss_classifier: 0.2289 (0.2289) loss_box_reg: 0.5198 (0.5198
     loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0015 (0.0015
      time: 0.3796 data: 0.0928 max mem: 1109
112 Epoch: [10] [ 50/378] eta: 0:01:55 lr: 0.000207 loss: 0.5272 (0.
   5121) loss_classifier: 0.1666 (0.1727) loss_box_reg: 0.3371 (0.3337
      loss_objectness: 0.0003 (0.0011) loss_rpn_box_reg: 0.0046 (0.0046
      time: 0.3500 data: 0.0684 max mem: 1109
113 Epoch: [10] [100/378] eta: 0:01:48 lr: 0.000207 loss: 0.4900 (0.
   4920) loss_classifier: 0.1482 (0.1636) loss_box_reg: 0.3180 (0.3225
      loss_objectness: 0.0009 (0.0011) loss_rpn_box_reg: 0.0044 (0.0048
   ) time: 0.4352 data: 0.1144 max mem: 1109
114 Epoch: [10] [150/378] eta: 0:01:33 lr: 0.000207 loss: 0.4748 (0.
   4953) loss_classifier: 0.1587 (0.1642) loss_box_reg: 0.3095 (0.3249
      loss_objectness: 0.0003 (0.0012) loss_rpn_box_reg: 0.0043 (0.0050
      time: 0.4762 data: 0.1379 max mem: 1109
115 Epoch: [10] [200/378] eta: 0:01:10 lr: 0.000207 loss: 0.4609 (0.
   4917) loss_classifier: 0.1611 (0.1624) loss_box_reg: 0.2948 (0.3231
      loss_objectness: 0.0004 (0.0011) loss_rpn_box_reg: 0.0057 (0.0051
      time: 0.3421 data: 0.0750 max mem: 1109
116 Epoch: [10] [250/378] eta: 0:00:51 lr: 0.000207 loss: 0.5465 (0.
   4937) loss_classifier: 0.1473 (0.1609) loss_box_reg: 0.3355 (0.3264
     loss_objectness: 0.0004 (0.0012) loss_rpn_box_reg: 0.0055 (0.0052
      time: 0.4905 data: 0.1625 max mem: 1109
117 Epoch: [10] [300/378] eta: 0:00:31 lr: 0.000207 loss: 0.4967 (0.
   4955) loss_classifier: 0.1512 (0.1615) loss_box_reg: 0.3313 (0.3279
      loss_objectness: 0.0006 (0.0011) loss_rpn_box_reg: 0.0033 (0.0051
   ) time: 0.4377 data: 0.1081 max mem: 1109
118 Epoch: [10] [350/378] eta: 0:00:11 lr: 0.000207 loss: 0.5271 (0.
   4985) loss_classifier: 0.1525 (0.1613) loss_box_reg: 0.3428 (0.3310
      loss_objectness: 0.0005 (0.0012) loss_rpn_box_reg: 0.0041 (0.0051
   ) time: 0.3975 data: 0.0834 max mem: 1109
119 Epoch: [10] [377/378] eta: 0:00:00 lr: 0.000207 loss: 0.4694 (0.
   4990) loss_classifier: 0.1689 (0.1620) loss_box_reg: 0.2906 (0.3307
     loss_objectness: 0.0004 (0.0012) loss_rpn_box_reg: 0.0039 (0.0051
      time: 0.4049 data: 0.0949 max mem: 1109
120 Epoch: [10] Total time: 0:02:33 (0.4059 s / it)
121 Epoch: [11] [ 0/378] eta: 0:02:09 lr: 0.000150 loss: 0.3889 (0.
```

```
121 3889) loss_classifier: 0.1042 (0.1042) loss_box_reg: 0.2802 (0.2802
   ) loss_objectness: 0.0013 (0.0013) loss_rpn_box_reg: 0.0033 (0.0033
   ) time: 0.3419 data: 0.0539 max mem: 1109
122 Epoch: [11] [ 50/378] eta: 0:02:11 lr: 0.000150 loss: 0.4103 (0.
   4147) loss_classifier: 0.1391 (0.1350) loss_box_reg: 0.2584 (0.2734
      loss_objectness: 0.0005 (0.0010) loss_rpn_box_reg: 0.0043 (0.0053
   ) time: 0.3927 data: 0.1015 max mem: 1109
123 Epoch: [11] [100/378] eta: 0:01:49 lr: 0.000150 loss: 0.3781 (0.
   4146) loss_classifier: 0.1289 (0.1375) loss_box_reg: 0.2497 (0.2714
      loss_objectness: 0.0005 (0.0010) loss_rpn_box_reg: 0.0035 (0.0048
      time: 0.3813 data: 0.0901 max mem: 1109
124 Epoch: [11] [150/378] eta: 0:01:27 lr: 0.000150 loss: 0.4333 (0.
   4166) loss_classifier: 0.1485 (0.1387) loss_box_reg: 0.2808 (0.2718
      loss_objectness: 0.0005 (0.0011) loss_rpn_box_reg: 0.0050 (0.0050
   ) time: 0.3840 data: 0.0752 max mem: 1109
125 Epoch: [11] [200/378] eta: 0:01:07 lr: 0.000150 loss: 0.4104 (0.
   4143) loss_classifier: 0.1286 (0.1351) loss_box_reg: 0.2773 (0.2732
     loss_objectness: 0.0006 (0.0011) loss_rpn_box_reg: 0.0043 (0.0049
      time: 0.3750 data: 0.0680 max mem: 1109
126 Epoch: [11] [250/378] eta: 0:00:48 lr: 0.000150 loss: 0.4035 (0.
   4141) loss_classifier: 0.1260 (0.1365) loss_box_reg: 0.2494 (0.2716
      loss_objectness: 0.0004 (0.0010) loss_rpn_box_reg: 0.0041 (0.0050
      time: 0.3553 data: 0.0587 max mem: 1109
127 Epoch: [11] [300/378] eta: 0:00:30 lr: 0.000150 loss: 0.4221 (0.
   4167) loss_classifier: 0.1321 (0.1361) loss_box_reg: 0.2547 (0.2747
      loss_objectness: 0.0003 (0.0010) loss_rpn_box_reg: 0.0042 (0.0049
   ) time: 0.4746 data: 0.1548 max mem: 1109
128 Epoch: [11] [350/378] eta: 0:00:11 lr: 0.000150 loss: 0.4326 (0.
   4195) loss_classifier: 0.1463 (0.1373) loss_box_reg: 0.2772 (0.2763
      loss_objectness: 0.0002 (0.0009) loss_rpn_box_reg: 0.0036 (0.0049
   ) time: 0.5100 data: 0.1993 max mem: 1109
129 Epoch: [11] [377/378] eta: 0:00:00 lr: 0.000150 loss: 0.4470 (0.
   4213) loss_classifier: 0.1379 (0.1374) loss_box_reg: 0.2724 (0.2779
      loss_objectness: 0.0009 (0.0010) loss_rpn_box_reg: 0.0040 (0.0050
      time: 0.4554 data: 0.1514 max mem: 1109
130 Epoch: [11] Total time: 0:02:31 (0.4018 s / it)
131 Epoch: [12] [ 0/378] eta: 0:02:23 lr: 0.000093 loss: 0.6373 (0.
   6373) loss_classifier: 0.2022 (0.2022) loss_box_reg: 0.4282 (0.4282
      loss_objectness: 0.0007 (0.0007) loss_rpn_box_reg: 0.0062 (0.0062
      time: 0.3805 data: 0.0788 max mem: 1109
132 Epoch: [12] [ 50/378] eta: 0:02:12 lr: 0.000093 loss: 0.3577 (0.
   3652) loss_classifier: 0.1255 (0.1284) loss_box_reg: 0.2063 (0.2317
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_req: 0.0035 (0.0044
   ) time: 0.3850 data: 0.0838 max mem: 1109
133 Epoch: [12] [100/378] eta: 0:01:56 lr: 0.000093 loss: 0.3514 (0.
   3567) loss_classifier: 0.1283 (0.1296) loss_box_reg: 0.2179 (0.2215
      loss_objectness: 0.0005 (0.0010) loss_rpn_box_reg: 0.0038 (0.0046
      time: 0.4191 data: 0.0959 max mem: 1109
134 Epoch: [12] [150/378] eta: 0:01:35 lr: 0.000093 loss: 0.3244 (0.
   3524) loss_classifier: 0.1213 (0.1279) loss_box_reg: 0.2078 (0.2190
      loss_objectness: 0.0005 (0.0010) loss_rpn_box_reg: 0.0042 (0.0045
      time: 0.3833 data: 0.0963 max mem: 1109
135 Epoch: [12] [200/378] eta: 0:01:13 lr: 0.000093 loss: 0.3570 (0.
```

```
135 3490) loss_classifier: 0.1190 (0.1244) loss_box_reg: 0.2248 (0.2191
   ) loss_objectness: 0.0004 (0.0009) loss_rpn_box_reg: 0.0035 (0.0046
   ) time: 0.3726 data: 0.0717 max mem: 1109
136 Epoch: [12] [250/378] eta: 0:00:51 lr: 0.000093 loss: 0.3636 (0.
   3509) loss_classifier: 0.1182 (0.1242) loss_box_reg: 0.2440 (0.2213
      loss_objectness: 0.0006 (0.0009) loss_rpn_box_reg: 0.0039 (0.0046
   ) time: 0.3633 data: 0.0894 max mem: 1109
137 Epoch: [12] [300/378] eta: 0:00:30 lr: 0.000093 loss: 0.3283 (0.
   3501) loss_classifier: 0.1162 (0.1236) loss_box_reg: 0.2084 (0.2208
      loss_objectness: 0.0002 (0.0009) loss_rpn_box_reg: 0.0035 (0.0047
      time: 0.3483 data: 0.0725 max mem: 1109
138 Epoch: [12] [350/378] eta: 0:00:11 lr: 0.000093 loss: 0.3404 (0.
   3500) loss_classifier: 0.1210 (0.1232) loss_box_reg: 0.2245 (0.2211
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0044 (0.0047
   ) time: 0.4716 data: 0.1361 max mem: 1109
139 Epoch: [12] [377/378] eta: 0:00:00 lr: 0.000093 loss: 0.3531 (0.
   3516) loss_classifier: 0.1302 (0.1238) loss_box_reg: 0.2207 (0.2221
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0042 (0.0048
      time: 0.4268 data: 0.1046 max mem: 1109
140 Epoch: [12] Total time: 0:02:31 (0.4007 s / it)
141 Epoch: [13] [ 0/378] eta: 0:02:24 lr: 0.000044 loss: 0.3448 (0.
   3448) loss_classifier: 0.1415 (0.1415) loss_box_reg: 0.1990 (0.1990
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_req: 0.0039 (0.0039
   ) time: 0.3824 data: 0.0638 max mem: 1109
142 Epoch: [13] [ 50/378] eta: 0:02:12 lr: 0.000044 loss: 0.2963 (0.
   3170) loss_classifier: 0.1156 (0.1150) loss_box_reg: 0.1748 (0.1968
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0041 (0.0044
      time: 0.4079 data: 0.0971 max mem: 1109
143 Epoch: [13] [100/378] eta: 0:01:47 lr: 0.000044 loss: 0.2838 (0.
   3091) loss_classifier: 0.1077 (0.1135) loss_box_reg: 0.1771 (0.1903
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0046 (0.0046
   ) time: 0.3738 data: 0.0938 max mem: 1109
144 Epoch: [13] [150/378] eta: 0:01:28 lr: 0.000044 loss: 0.2698 (0.
   3071) loss_classifier: 0.1116 (0.1147) loss_box_reg: 0.1675 (0.1868)
      loss_objectness: 0.0002 (0.0009) loss_rpn_box_reg: 0.0046 (0.0048
      time: 0.3745 data: 0.0920 max mem: 1109
145 Epoch: [13] [200/378] eta: 0:01:08 lr: 0.000044 loss: 0.2758 (0.
   3039) loss_classifier: 0.0985 (0.1141) loss_box_reg: 0.1674 (0.1843)
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0028 (0.0047
      time: 0.3858 data: 0.0742 max mem: 1109
146 Epoch: [13] [250/378] eta: 0:00:48 lr: 0.000044 loss: 0.3054 (0.
   3036) loss_classifier: 0.1120 (0.1139) loss_box_reg: 0.1883 (0.1840
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_req: 0.0047 (0.0048
   ) time: 0.3836 data: 0.0724 max mem: 1109
147 Epoch: [13] [300/378] eta: 0:00:29 lr: 0.000044 loss: 0.3076 (0.
   3024) loss_classifier: 0.1142 (0.1132) loss_box_reg: 0.1912 (0.1836
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0033 (0.0047
      time: 0.3770 data: 0.0723 max mem: 1109
148 Epoch: [13] [350/378] eta: 0:00:10 lr: 0.000044 loss: 0.2884 (0.
   3028) loss_classifier: 0.1033 (0.1139) loss_box_reg: 0.1735 (0.1834
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0039 (0.0047
      time: 0.3840 data: 0.0963 max mem: 1109
149 Epoch: [13] [377/378] eta: 0:00:00 lr: 0.000044 loss: 0.2783 (0.
```

```
149 3026) loss_classifier: 0.1102 (0.1140) loss_box_reg: 0.1677 (0.1830
     loss_objectness: 0.0007 (0.0009) loss_rpn_box_reg: 0.0048 (0.0047
   ) time: 0.3387 data: 0.0672 max mem: 1109
150 Epoch: [13] Total time: 0:02:24 (0.3819 s / it)
151 Epoch: [14] [ 0/378] eta: 0:02:21 lr: 0.000011 loss: 0.2253 (0.
   2253) loss_classifier: 0.0732 (0.0732) loss_box_reg: 0.1463 (0.1463
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0057 (0.0057
      time: 0.3730 data: 0.0823 max mem: 1109
152 Epoch: [14] [ 50/378] eta: 0:02:09 lr: 0.000011 loss: 0.2771 (0.
   2937) loss_classifier: 0.1049 (0.1150) loss_box_reg: 0.1649 (0.1735
      loss_objectness: 0.0004 (0.0012) loss_rpn_box_reg: 0.0033 (0.0040
   ) time: 0.3974 data: 0.0857 max mem: 1109
153 Epoch: [14] [100/378] eta: 0:01:48 lr: 0.000011 loss: 0.2594 (0.
   2875) loss_classifier: 0.1038 (0.1140) loss_box_reg: 0.1606 (0.1675
     loss_objectness: 0.0003 (0.0012) loss_rpn_box_reg: 0.0042 (0.0047
      time: 0.3709 data: 0.0648 max mem: 1109
154 Epoch: [14] [150/378] eta: 0:01:28 lr: 0.000011 loss: 0.2560 (0.
   2833) loss_classifier: 0.1049 (0.1116) loss_box_reg: 0.1637 (0.1660
      loss_objectness: 0.0003 (0.0011) loss_rpn_box_reg: 0.0043 (0.0047
   ) time: 0.3724 data: 0.0699 max mem: 1109
155 Epoch: [14] [200/378] eta: 0:01:07 lr: 0.000011 loss: 0.2682 (0.
   2806) loss_classifier: 0.1038 (0.1105) loss_box_reg: 0.1551 (0.1645
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_req: 0.0040 (0.0046
   ) time: 0.3705 data: 0.0916 max mem: 1109
156 Epoch: [14] [250/378] eta: 0:00:48 lr: 0.000011 loss: 0.2408 (0.
   2795) loss_classifier: 0.0997 (0.1098) loss_box_reg: 0.1389 (0.1642
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0032 (0.0046
      time: 0.3843 data: 0.0976 max mem: 1109
157 Epoch: [14] [300/378] eta: 0:00:29 lr: 0.000011 loss: 0.2700 (0.
   2793) loss_classifier: 0.1090 (0.1093) loss_box_reg: 0.1544 (0.1645
      loss_objectness: 0.0005 (0.0009) loss_rpn_box_reg: 0.0039 (0.0047
   ) time: 0.4146 data: 0.0965 max mem: 1109
158 Epoch: [14] [350/378] eta: 0:00:10 lr: 0.000011 loss: 0.2560 (0.
   2789) loss_classifier: 0.1099 (0.1096) loss_box_reg: 0.1463 (0.1638
      loss_objectness: 0.0002 (0.0009) loss_rpn_box_reg: 0.0037 (0.0046
   ) time: 0.3849 data: 0.0734 max mem: 1109
159 Epoch: [14] [377/378] eta: 0:00:00 lr: 0.000011 loss: 0.2614 (0.
   2791) loss_classifier: 0.1059 (0.1099) loss_box_reg: 0.1570 (0.1637
      loss_objectness: 0.0004 (0.0009) loss_rpn_box_reg: 0.0049 (0.0046
      time: 0.3843 data: 0.0735 max mem: 1109
160 Epoch: [14] Total time: 0:02:24 (0.3813 s / it)
161 -- Test begins--
162 avg_IOU: 0.858015068819825 - avg_accuracy: 0.833333333333333
   avg_score: 0.9137486244591189
163 Epoch: [15] [ 0/378] eta: 0:02:31 lr: 0.000300 loss: 0.2033 (0.
   2033) loss_classifier: 0.0939 (0.0939) loss_box_reg: 0.1042 (0.1042
      loss_objectness: 0.0004 (0.0004) loss_rpn_box_reg: 0.0048 (0.0048
      time: 0.4016 data: 0.1147 max mem: 1109
164 Epoch: [15] [ 50/378] eta: 0:01:55 lr: 0.000300 loss: 0.4506 (0.
   4139) loss_classifier: 0.1265 (0.1187) loss_box_reg: 0.3168 (0.2891
      loss_objectness: 0.0007 (0.0008) loss_rpn_box_reg: 0.0050 (0.0052
      time: 0.3521 data: 0.0737 max mem: 1109
165 Epoch: [15] [100/378] eta: 0:01:39 lr: 0.000300 loss: 0.4655 (0.
```

```
165 4584) loss_classifier: 0.1267 (0.1289) loss_box_reg: 0.3075 (0.3236
     loss_objectness: 0.0005 (0.0009) loss_rpn_box_reg: 0.0031 (0.0050
   ) time: 0.3642 data: 0.0837 max mem: 1109
166 Epoch: [15] [150/378] eta: 0:01:26 lr: 0.000300 loss: 0.5410 (0.
   4756) loss_classifier: 0.1411 (0.1339) loss_box_reg: 0.3955 (0.3357
      loss_objectness: 0.0006 (0.0011) loss_rpn_box_reg: 0.0035 (0.0049
   ) time: 0.4242 data: 0.1206 max mem: 1109
167 Epoch: [15] [200/378] eta: 0:01:08 lr: 0.000300 loss: 0.5397 (0.
   4951) loss_classifier: 0.1463 (0.1398) loss_box_reg: 0.3684 (0.3493
      loss_objectness: 0.0004 (0.0010) loss_rpn_box_reg: 0.0046 (0.0050
      time: 0.3790 data: 0.0732 max mem: 1109
168 Epoch: [15] [250/378] eta: 0:00:49 lr: 0.000300 loss: 0.5200 (0.
   5040) loss_classifier: 0.1417 (0.1414) loss_box_reg: 0.3761 (0.3566
      loss_objectness: 0.0003 (0.0010) loss_rpn_box_reg: 0.0045 (0.0050
   ) time: 0.4082 data: 0.0915 max mem: 1109
169 Epoch: [15] [300/378] eta: 0:00:30 lr: 0.000300 loss: 0.5177 (0.
   5096) loss_classifier: 0.1411 (0.1450) loss_box_reg: 0.3203 (0.3587
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0036 (0.0050
      time: 0.3828 data: 0.0839 max mem: 1109
170 Epoch: [15] [350/378] eta: 0:00:10 lr: 0.000300 loss: 0.4893 (0.
   5106) loss_classifier: 0.1419 (0.1465) loss_box_reg: 0.3419 (0.3583
      loss_objectness: 0.0005 (0.0009) loss_rpn_box_reg: 0.0038 (0.0049
      time: 0.3601 data: 0.0789 max mem: 1109
171 Epoch: [15] [377/378] eta: 0:00:00 lr: 0.000300 loss: 0.4868 (0.
   5092) loss_classifier: 0.1505 (0.1471) loss_box_reg: 0.3253 (0.3563
      loss_objectness: 0.0003 (0.0009) loss_rpn_box_reg: 0.0044 (0.0049
   ) time: 0.4049 data: 0.0873 max mem: 1109
172 Epoch: [15] Total time: 0:02:24 (0.3830 s / it)
173 Epoch: [16] [ 0/378] eta: 0:02:23 lr: 0.000297 loss: 0.4332 (0.
   4332) loss_classifier: 0.1294 (0.1294) loss_box_reg: 0.3002 (0.3002
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_req: 0.0033 (0.0033
   ) time: 0.3785 data: 0.0509 max mem: 1109
174 Epoch: [16] [ 50/378] eta: 0:02:07 lr: 0.000297 loss: 0.5039 (0.
   4617) loss_classifier: 0.1413 (0.1417) loss_box_reg: 0.3267 (0.3138
      loss_objectness: 0.0005 (0.0015) loss_rpn_box_reg: 0.0031 (0.0047
   ) time: 0.3916 data: 0.0796 max mem: 1109
175 Epoch: [16] [100/378] eta: 0:01:45 lr: 0.000297 loss: 0.4580 (0.
   4685) loss_classifier: 0.1293 (0.1404) loss_box_reg: 0.3295 (0.3223
      loss_objectness: 0.0006 (0.0011) loss_rpn_box_reg: 0.0038 (0.0048
      time: 0.3629 data: 0.0822 max mem: 1109
176 Epoch: [16] [150/378] eta: 0:01:26 lr: 0.000297 loss: 0.4748 (0.
   4756) loss_classifier: 0.1454 (0.1394) loss_box_reg: 0.3056 (0.3306
      loss_objectness: 0.0004 (0.0010) loss_rpn_box_req: 0.0040 (0.0047
   ) time: 0.3722 data: 0.0886 max mem: 1109
177 Epoch: [16] [200/378] eta: 0:01:07 lr: 0.000297 loss: 0.4762 (0.
   4813) loss_classifier: 0.1374 (0.1399) loss_box_reg: 0.3177 (0.3357
      loss_objectness: 0.0004 (0.0009) loss_rpn_box_reg: 0.0044 (0.0047
      time: 0.3808 data: 0.0813 max mem: 1109
178 Epoch: [16] [250/378] eta: 0:00:49 lr: 0.000297 loss: 0.4700 (0.
   4859) loss_classifier: 0.1464 (0.1402) loss_box_reg: 0.3280 (0.3401
      loss_objectness: 0.0005 (0.0009) loss_rpn_box_reg: 0.0036 (0.0047
      time: 0.4027 data: 0.0833 max mem: 1109
179 Epoch: [16] [300/378] eta: 0:00:30 lr: 0.000297 loss: 0.4132 (0.
```

```
179 4868) loss_classifier: 0.1329 (0.1403) loss_box_reg: 0.2843 (0.3409)
     loss_objectness: 0.0005 (0.0009) loss_rpn_box_reg: 0.0041 (0.0047
   ) time: 0.4125 data: 0.0990 max mem: 1109
180 Epoch: [16] [350/378] eta: 0:00:10 lr: 0.000297 loss: 0.4795 (0.
   4848) loss_classifier: 0.1466 (0.1407) loss_box_reg: 0.3160 (0.3385
      loss_objectness: 0.0006 (0.0009) loss_rpn_box_reg: 0.0046 (0.0047
   ) time: 0.3709 data: 0.0870 max mem: 1109
181 Epoch: [16] [377/378] eta: 0:00:00 lr: 0.000297 loss: 0.4903 (0.
   4843) loss_classifier: 0.1442 (0.1412) loss_box_req: 0.3383 (0.3375
      loss_objectness: 0.0008 (0.0009) loss_rpn_box_reg: 0.0040 (0.0047
      time: 0.3558 data: 0.0727 max mem: 1109
182 Epoch: [16] Total time: 0:02:26 (0.3875 s / it)
183 Epoch: [17] [ 0/378] eta: 0:02:22 lr: 0.000289 loss: 0.4610 (0.
   4610) loss_classifier: 0.0773 (0.0773) loss_box_reg: 0.3796 (0.3796
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0040 (0.0040
      time: 0.3780 data: 0.0614 max mem: 1109
184 Epoch: [17] [ 50/378] eta: 0:02:08 lr: 0.000289 loss: 0.4314 (0.
   4751) loss_classifier: 0.1302 (0.1407) loss_box_reg: 0.2992 (0.3288
      loss_objectness: 0.0006 (0.0010) loss_rpn_box_reg: 0.0037 (0.0046
      time: 0.3977 data: 0.0810 max mem: 1109
185 Epoch: [17] [100/378] eta: 0:01:45 lr: 0.000289 loss: 0.4039 (0.
   4515) loss_classifier: 0.1254 (0.1347) loss_box_reg: 0.2732 (0.3114
      loss_objectness: 0.0005 (0.0009) loss_rpn_box_req: 0.0024 (0.0044
      time: 0.3717 data: 0.0696 max mem: 1109
186 Epoch: [17] [150/378] eta: 0:01:31 lr: 0.000289 loss: 0.4436 (0.
   4440) loss_classifier: 0.1247 (0.1333) loss_box_reg: 0.2992 (0.3053
      loss_objectness: 0.0006 (0.0009) loss_rpn_box_reg: 0.0037 (0.0044
      time: 0.4278 data: 0.1094 max mem: 1109
187 Epoch: [17] [200/378] eta: 0:01:11 lr: 0.000289 loss: 0.4216 (0.
   4445) loss_classifier: 0.1182 (0.1332) loss_box_reg: 0.2819 (0.3059
      loss_objectness: 0.0004 (0.0010) loss_rpn_box_reg: 0.0034 (0.0044
   ) time: 0.4117 data: 0.1180 max mem: 1109
188 Epoch: [17] [250/378] eta: 0:00:50 lr: 0.000289 loss: 0.4323 (0.
   4460) loss_classifier: 0.1169 (0.1336) loss_box_reg: 0.3348 (0.3071
     loss_objectness: 0.0004 (0.0010) loss_rpn_box_reg: 0.0037 (0.0044
   ) time: 0.3508 data: 0.0761 max mem: 1109
189 Epoch: [17] [300/378] eta: 0:00:30 lr: 0.000289 loss: 0.3845 (0.
   4464) loss_classifier: 0.1303 (0.1338) loss_box_reg: 0.2592 (0.3072
      loss_objectness: 0.0005 (0.0010) loss_rpn_box_reg: 0.0036 (0.0044
      time: 0.3447 data: 0.0728 max mem: 1109
190 Epoch: [17] [350/378] eta: 0:00:10 lr: 0.000289 loss: 0.4357 (0.
   4482) loss_classifier: 0.1165 (0.1341) loss_box_reg: 0.3080 (0.3086
      loss_objectness: 0.0004 (0.0009) loss_rpn_box_req: 0.0041 (0.0045
   ) time: 0.3733 data: 0.0750 max mem: 1109
191 Epoch: [17] [377/378] eta: 0:00:00 lr: 0.000289 loss: 0.4366 (0.
   4478) loss_classifier: 0.1214 (0.1340) loss_box_reg: 0.2934 (0.3083
      loss_objectness: 0.0004 (0.0009) loss_rpn_box_reg: 0.0039 (0.0046
      time: 0.3634 data: 0.0608 max mem: 1109
192 Epoch: [17] Total time: 0:02:24 (0.3836 s / it)
193 Epoch: [18] [ 0/378] eta: 0:02:18 lr: 0.000275 loss: 0.4387 (0.
   4387) loss_classifier: 0.1113 (0.1113) loss_box_reg: 0.3225 (0.3225
     loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0047 (0.0047)
   ) time: 0.3660 data: 0.0648 max mem: 1109
```

```
194 Epoch: [18] [ 50/378] eta: 0:02:08 lr: 0.000275 loss: 0.4340 (0.
   4354) loss_classifier: 0.1333 (0.1288) loss_box_reg: 0.3065 (0.3021
     loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0036 (0.0039
   ) time: 0.3895 data: 0.0760 max mem: 1109
195 Epoch: [18] [100/378] eta: 0:01:52 lr: 0.000275 loss: 0.3986 (0.
   4279) loss_classifier: 0.1253 (0.1305) loss_box_reg: 0.2813 (0.2928
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0039 (0.0041
      time: 0.4016 data: 0.0913 max mem: 1109
196 Epoch: [18] [150/378] eta: 0:01:33 lr: 0.000275 loss: 0.3998 (0.
   4221) loss_classifier: 0.1281 (0.1268) loss_box_reg: 0.2615 (0.2905
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0041 (0.0041
     time: 0.4231 data: 0.1207 max mem: 1109
197 Epoch: [18] [200/378] eta: 0:01:13 lr: 0.000275 loss: 0.3730 (0.
   4183) loss_classifier: 0.1129 (0.1254) loss_box_reg: 0.2430 (0.2879)
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_reg: 0.0035 (0.0042
      time: 0.3900 data: 0.0866 max mem: 1109
198 Epoch: [18] [250/378] eta: 0:00:53 lr: 0.000275 loss: 0.4340 (0.
   4289) loss_classifier: 0.1131 (0.1264) loss_box_reg: 0.2895 (0.2973
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_reg: 0.0037 (0.0043
   ) time: 0.4723 data: 0.1361 max mem: 1109
199 Epoch: [18] [300/378] eta: 0:00:32 lr: 0.000275 loss: 0.3652 (0.
   4237) loss_classifier: 0.1242 (0.1255) loss_box_reg: 0.2438 (0.2931
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_req: 0.0039 (0.0043
   ) time: 0.4141 data: 0.1132 max mem: 1109
200 Epoch: [18] [350/378] eta: 0:00:11 lr: 0.000275 loss: 0.4120 (0.
   4267) loss_classifier: 0.1288 (0.1256) loss_box_reg: 0.2562 (0.2960
     loss_objectness: 0.0004 (0.0008) loss_rpn_box_reg: 0.0036 (0.0043
      time: 0.4081 data: 0.0842 max mem: 1109
201 Epoch: [18] [377/378] eta: 0:00:00 lr: 0.000275 loss: 0.3613 (0.
   4248) loss_classifier: 0.1083 (0.1251) loss_box_reg: 0.2473 (0.2945
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_reg: 0.0035 (0.0043
   ) time: 0.3861 data: 0.0745 max mem: 1109
202 Epoch: [18] Total time: 0:02:36 (0.4146 s / it)
203 Epoch: [19] [ 0/378] eta: 0:02:32 lr: 0.000256 loss: 0.3425 (0.
   3425) loss_classifier: 0.0957 (0.0957) loss_box_reg: 0.2412 (0.2412
      loss_objectness: 0.0005 (0.0005) loss_rpn_box_reg: 0.0051 (0.0051
      time: 0.4037 data: 0.0766 max mem: 1109
204 Epoch: [19] [ 50/378] eta: 0:02:04 lr: 0.000256 loss: 0.3839 (0.
   4181) loss_classifier: 0.1112 (0.1179) loss_box_reg: 0.2712 (0.2955
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0039 (0.0043
   ) time: 0.3572 data: 0.0820 max mem: 1109
205 Epoch: [19] [100/378] eta: 0:01:43 lr: 0.000256 loss: 0.3361 (0.
   3958) loss_classifier: 0.1061 (0.1164) loss_box_req: 0.2358 (0.2747
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0047 (0.0042
      time: 0.3654 data: 0.0822 max mem: 1109
206 Epoch: [19] [150/378] eta: 0:01:26 lr: 0.000256 loss: 0.3819 (0.
   3966) loss_classifier: 0.1096 (0.1164) loss_box_reg: 0.2623 (0.2752
      loss_objectness: 0.0005 (0.0007) loss_rpn_box_req: 0.0046 (0.0043
   ) time: 0.4126 data: 0.1072 max mem: 1109
207 Epoch: [19] [200/378] eta: 0:01:07 lr: 0.000256 loss: 0.3593 (0.
   3938) loss_classifier: 0.1152 (0.1162) loss_box_reg: 0.2339 (0.2726
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0038 (0.0043
   ) time: 0.3745 data: 0.0712 max mem: 1109
```

```
208 Epoch: [19] [250/378] eta: 0:00:49 lr: 0.000256 loss: 0.3950 (0.
   3983) loss_classifier: 0.1153 (0.1176) loss_box_reg: 0.2748 (0.2757
     loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0029 (0.0042
   ) time: 0.4102 data: 0.0963 max mem: 1109
209 Epoch: [19] [300/378] eta: 0:00:29 lr: 0.000256 loss: 0.3823 (0.
   3992) loss_classifier: 0.1183 (0.1172) loss_box_reg: 0.2691 (0.2772
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0034 (0.0041
      time: 0.3257 data: 0.0666 max mem: 1109
210 Epoch: [19] [350/378] eta: 0:00:10 lr: 0.000256 loss: 0.3568 (0.
   3962) loss_classifier: 0.1150 (0.1174) loss_box_reg: 0.2301 (0.2740
      loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0039 (0.0041
      time: 0.3751 data: 0.0873 max mem: 1109
211 Epoch: [19] [377/378] eta: 0:00:00 lr: 0.000256 loss: 0.3809 (0.
   3956) loss_classifier: 0.1165 (0.1175) loss_box_reg: 0.2874 (0.2731
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0043 (0.0042
      time: 0.3555 data: 0.0751 max mem: 1109
212 Epoch: [19] Total time: 0:02:22 (0.3759 s / it)
213 --Test begins--
214 avg_IOU: 0.8561595669934448 - avg_accuracy: 0.819444444444444 -
   avg_score: 0.8863708074663726
215 Epoch: [20] [ 0/378] eta: 0:02:42 lr: 0.000233 loss: 0.4788 (0.
   4788) loss_classifier: 0.1171 (0.1171) loss_box_reg: 0.3571 (0.3571
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_req: 0.0043 (0.0043
   ) time: 0.4298 data: 0.1043 max mem: 1109
216 Epoch: [20] [ 50/378] eta: 0:02:07 lr: 0.000233 loss: 0.3419 (0.
   3756) loss_classifier: 0.1148 (0.1125) loss_box_reg: 0.2196 (0.2585
      loss_objectness: 0.0001 (0.0006) loss_rpn_box_reg: 0.0032 (0.0040
      time: 0.4113 data: 0.1009 max mem: 1109
217 Epoch: [20] [100/378] eta: 0:01:48 lr: 0.000233 loss: 0.3553 (0.
   3667) loss_classifier: 0.1053 (0.1086) loss_box_reg: 0.2534 (0.2532
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_req: 0.0029 (0.0041
   ) time: 0.3922 data: 0.0850 max mem: 1109
218 Epoch: [20] [150/378] eta: 0:01:29 lr: 0.000233 loss: 0.3675 (0.
   3717) loss_classifier: 0.1111 (0.1093) loss_box_reg: 0.2540 (0.2573
      loss_objectness: 0.0006 (0.0007) loss_rpn_box_reg: 0.0040 (0.0043
   ) time: 0.4500 data: 0.1371 max mem: 1109
219 Epoch: [20] [200/378] eta: 0:01:13 lr: 0.000233 loss: 0.3589 (0.
   3687) loss_classifier: 0.1104 (0.1092) loss_box_reg: 0.2441 (0.2545
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0033 (0.0043
      time: 0.4498 data: 0.1406 max mem: 1109
220 Epoch: [20] [250/378] eta: 0:00:52 lr: 0.000233 loss: 0.3647 (0.
   3632) loss_classifier: 0.1059 (0.1090) loss_box_reg: 0.2275 (0.2493
      loss_objectness: 0.0005 (0.0007) loss_rpn_box_req: 0.0039 (0.0042
   ) time: 0.3531 data: 0.0827 max mem: 1109
221 Epoch: [20] [300/378] eta: 0:00:31 lr: 0.000233 loss: 0.3134 (0.
   3629) loss_classifier: 0.1045 (0.1099) loss_box_reg: 0.2075 (0.2483
      loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0034 (0.0041
      time: 0.3800 data: 0.0723 max mem: 1109
222 Epoch: [20] [350/378] eta: 0:00:11 lr: 0.000233 loss: 0.2972 (0.
   3589) loss_classifier: 0.1119 (0.1098) loss_box_reg: 0.1948 (0.2443
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0031 (0.0041
      time: 0.3613 data: 0.0643 max mem: 1109
223 Epoch: [20] [377/378] eta: 0:00:00 lr: 0.000233 loss: 0.3461 (0.
```

```
223 3586) loss_classifier: 0.1130 (0.1098) loss_box_reg: 0.2312 (0.2439
     loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0032 (0.0041
   ) time: 0.3581 data: 0.0606 max mem: 1109
224 Epoch: [20] Total time: 0:02:30 (0.3973 s / it)
225 Epoch: [21] [ 0/378] eta: 0:02:09 lr: 0.000207 loss: 0.3004 (0.
   3004) loss_classifier: 0.1110 (0.1110) loss_box_reg: 0.1846 (0.1846
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0046 (0.0046
      time: 0.3421 data: 0.0588 max mem: 1109
226 Epoch: [21] [ 50/378] eta: 0:02:01 lr: 0.000207 loss: 0.3249 (0.
   3182) loss_classifier: 0.0978 (0.0980) loss_box_reg: 0.2226 (0.2151
      loss_objectness: 0.0004 (0.0009) loss_rpn_box_reg: 0.0034 (0.0042
   ) time: 0.3787 data: 0.0755 max mem: 1109
227 Epoch: [21] [100/378] eta: 0:01:40 lr: 0.000207 loss: 0.2989 (0.
   3233) loss_classifier: 0.0947 (0.0998) loss_box_reg: 0.1987 (0.2189
     loss_objectness: 0.0005 (0.0008) loss_rpn_box_reg: 0.0027 (0.0039
      time: 0.3556 data: 0.0612 max mem: 1109
228 Epoch: [21] [150/378] eta: 0:01:25 lr: 0.000207 loss: 0.3183 (0.
   3244) loss_classifier: 0.0998 (0.1000) loss_box_reg: 0.1964 (0.2197
      loss_objectness: 0.0004 (0.0008) loss_rpn_box_reg: 0.0037 (0.0039
   ) time: 0.4258 data: 0.1068 max mem: 1109
229 Epoch: [21] [200/378] eta: 0:01:08 lr: 0.000207 loss: 0.3112 (0.
   3263) loss_classifier: 0.0966 (0.1004) loss_box_reg: 0.1876 (0.2212
      loss_objectness: 0.0006 (0.0008) loss_rpn_box_req: 0.0042 (0.0039
   ) time: 0.3603 data: 0.0805 max mem: 1109
230 Epoch: [21] [250/378] eta: 0:00:49 lr: 0.000207 loss: 0.3074 (0.
   3245) loss_classifier: 0.1048 (0.1004) loss_box_reg: 0.2015 (0.2194
     loss_objectness: 0.0002 (0.0008) loss_rpn_box_reg: 0.0030 (0.0039
      time: 0.4223 data: 0.1232 max mem: 1109
231 Epoch: [21] [300/378] eta: 0:00:30 lr: 0.000207 loss: 0.2949 (0.
   3273) loss_classifier: 0.0989 (0.1015) loss_box_reg: 0.1922 (0.2212
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0032 (0.0039
   ) time: 0.3895 data: 0.1009 max mem: 1109
232 Epoch: [21] [350/378] eta: 0:00:10 lr: 0.000207 loss: 0.3230 (0.
   3278) loss_classifier: 0.1013 (0.1021) loss_box_reg: 0.2114 (0.2211
     loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0036 (0.0039
   ) time: 0.4107 data: 0.0839 max mem: 1109
233 Epoch: [21] [377/378] eta: 0:00:00 lr: 0.000207 loss: 0.3320 (0.
   3289) loss_classifier: 0.1057 (0.1023) loss_box_reg: 0.2022 (0.2219
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0038 (0.0039
      time: 0.3824 data: 0.0762 max mem: 1109
234 Epoch: [21] Total time: 0:02:27 (0.3914 s / it)
235 Epoch: [22] [ 0/378] eta: 0:02:19 lr: 0.000179 loss: 0.2867 (0.
   2867) loss_classifier: 0.0993 (0.0993) loss_box_req: 0.1824 (0.1824
      loss_objectness: 0.0015 (0.0015) loss_rpn_box_req: 0.0036 (0.0036
      time: 0.3691 data: 0.0618 max mem: 1109
236 Epoch: [22] [ 50/378] eta: 0:02:07 lr: 0.000179 loss: 0.2686 (0.
   3045) loss_classifier: 0.1034 (0.0994) loss_box_reg: 0.1682 (0.2007
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_req: 0.0032 (0.0036
   ) time: 0.3657 data: 0.0627 max mem: 1109
237 Epoch: [22] [100/378] eta: 0:01:48 lr: 0.000179 loss: 0.2725 (0.
   2943) loss_classifier: 0.0899 (0.0962) loss_box_reg: 0.1607 (0.1937
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0026 (0.0037)
   ) time: 0.3756 data: 0.0683 max mem: 1109
```

```
238 Epoch: [22] [150/378] eta: 0:01:27 lr: 0.000179 loss: 0.3033 (0.
   2933) loss_classifier: 0.0910 (0.0943) loss_box_reg: 0.2023 (0.1946
     loss_objectness: 0.0005 (0.0007) loss_rpn_box_reg: 0.0036 (0.0037
   ) time: 0.3481 data: 0.0686 max mem: 1109
239 Epoch: [22] [200/378] eta: 0:01:07 lr: 0.000179 loss: 0.2900 (0.
   2901) loss_classifier: 0.0935 (0.0945) loss_box_reg: 0.1858 (0.1911
      loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0038 (0.0037)
      time: 0.3454 data: 0.0743 max mem: 1109
240 Epoch: [22] [250/378] eta: 0:00:48 lr: 0.000179 loss: 0.3468 (0.
   2926) loss_classifier: 0.1117 (0.0954) loss_box_reg: 0.2379 (0.1927
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0034 (0.0038
      time: 0.3869 data: 0.0959 max mem: 1109
241 Epoch: [22] [300/378] eta: 0:00:29 lr: 0.000179 loss: 0.3113 (0.
   2968) loss_classifier: 0.0909 (0.0959) loss_box_reg: 0.1956 (0.1964
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0037 (0.0039
      time: 0.3902 data: 0.0972 max mem: 1109
242 Epoch: [22] [350/378] eta: 0:00:10 lr: 0.000179 loss: 0.2769 (0.
   2962) loss_classifier: 0.0779 (0.0959) loss_box_reg: 0.1774 (0.1957
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0030 (0.0039
      time: 0.3844 data: 0.0850 max mem: 1109
243 Epoch: [22] [377/378] eta: 0:00:00 lr: 0.000179 loss: 0.2750 (0.
   2957) loss_classifier: 0.0892 (0.0959) loss_box_reg: 0.1684 (0.1953
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_req: 0.0037 (0.0039
      time: 0.3746 data: 0.0644 max mem: 1109
244 Epoch: [22] Total time: 0:02:25 (0.3851 s / it)
245 Epoch: [23] [ 0/378] eta: 0:02:18 lr: 0.000150 loss: 0.2634 (0.
   2634) loss_classifier: 0.0892 (0.0892) loss_box_reg: 0.1676 (0.1676
      loss_objectness: 0.0036 (0.0036) loss_rpn_box_reg: 0.0030 (0.0030
     time: 0.3660 data: 0.0618 max mem: 1109
246 Epoch: [23] [ 50/378] eta: 0:02:01 lr: 0.000150 loss: 0.2555 (0.
   2505) loss_classifier: 0.0878 (0.0861) loss_box_reg: 0.1527 (0.1597
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0030 (0.0041
      time: 0.3713 data: 0.0669 max mem: 1109
247 Epoch: [23] [100/378] eta: 0:01:42 lr: 0.000150 loss: 0.2565 (0.
   2528) loss_classifier: 0.0925 (0.0887) loss_box_reg: 0.1569 (0.1597
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0030 (0.0038
   ) time: 0.3678 data: 0.0626 max mem: 1109
248 Epoch: [23] [150/378] eta: 0:01:24 lr: 0.000150 loss: 0.2656 (0.
   2590) loss_classifier: 0.0943 (0.0888) loss_box_reg: 0.1635 (0.1657
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_req: 0.0028 (0.0038
   ) time: 0.3783 data: 0.0755 max mem: 1109
249 Epoch: [23] [200/378] eta: 0:01:06 lr: 0.000150 loss: 0.2550 (0.
   2644) loss_classifier: 0.0885 (0.0895) loss_box_req: 0.1596 (0.1706
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0036 (0.0038
      time: 0.3772 data: 0.0770 max mem: 1109
250 Epoch: [23] [250/378] eta: 0:00:48 lr: 0.000150 loss: 0.2473 (0.
   2617) loss_classifier: 0.0863 (0.0882) loss_box_reg: 0.1568 (0.1693
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0033 (0.0038
   ) time: 0.3969 data: 0.0861 max mem: 1109
251 Epoch: [23] [300/378] eta: 0:00:29 lr: 0.000150 loss: 0.2520 (0.
   2629) loss_classifier: 0.0866 (0.0888) loss_box_reg: 0.1673 (0.1697
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0031 (0.0038
   ) time: 0.3783 data: 0.0795 max mem: 1109
```

```
252 Epoch: [23] [350/378] eta: 0:00:10 lr: 0.000150 loss: 0.2444 (0.
   2632) loss_classifier: 0.0766 (0.0886) loss_box_reg: 0.1634 (0.1702
     loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0034 (0.0038
   ) time: 0.3688 data: 0.0699 max mem: 1109
253 Epoch: [23] [377/378] eta: 0:00:00 lr: 0.000150 loss: 0.3044 (0.
   2654) loss_classifier: 0.0980 (0.0892) loss_box_reg: 0.1996 (0.1718
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0037 (0.0038
      time: 0.4071 data: 0.1023 max mem: 1109
254 Epoch: [23] Total time: 0:02:21 (0.3749 s / it)
255 Epoch: [24] [ 0/378] eta: 0:02:09 lr: 0.000121 loss: 0.1875 (0.
   1875) loss_classifier: 0.0587 (0.0587) loss_box_reg: 0.1257 (0.1257
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_reg: 0.0028 (0.0028
   ) time: 0.3438 data: 0.0539 max mem: 1109
256 Epoch: [24] [ 50/378] eta: 0:01:59 lr: 0.000121 loss: 0.2387 (0.
   2451) loss_classifier: 0.0905 (0.0851) loss_box_reg: 0.1465 (0.1551
      loss_objectness: 0.0004 (0.0010) loss_rpn_box_reg: 0.0034 (0.0039
      time: 0.3671 data: 0.0657 max mem: 1109
257 Epoch: [24] [100/378] eta: 0:01:41 lr: 0.000121 loss: 0.2197 (0.
   2395) loss_classifier: 0.0890 (0.0869) loss_box_reg: 0.1376 (0.1479
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_req: 0.0031 (0.0039
   ) time: 0.3611 data: 0.0634 max mem: 1109
258 Epoch: [24] [150/378] eta: 0:01:22 lr: 0.000121 loss: 0.2140 (0.
   2365) loss_classifier: 0.0837 (0.0859) loss_box_req: 0.1258 (0.1462
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0032 (0.0038
      time: 0.3518 data: 0.0647 max mem: 1109
259 Epoch: [24] [200/378] eta: 0:01:05 lr: 0.000121 loss: 0.2386 (0.
   2383) loss_classifier: 0.0792 (0.0857) loss_box_reg: 0.1515 (0.1481
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_req: 0.0029 (0.0038
   ) time: 0.4115 data: 0.0956 max mem: 1109
260 Epoch: [24] [250/378] eta: 0:00:46 lr: 0.000121 loss: 0.2458 (0.
   2383) loss_classifier: 0.0960 (0.0858) loss_box_reg: 0.1491 (0.1481
      loss_objectness: 0.0005 (0.0007) loss_rpn_box_reg: 0.0033 (0.0038
      time: 0.3759 data: 0.0929 max mem: 1109
261 Epoch: [24] [300/378] eta: 0:00:28 lr: 0.000121 loss: 0.2215 (0.
   2389) loss_classifier: 0.0696 (0.0849) loss_box_reg: 0.1430 (0.1496
      loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0033 (0.0037
   ) time: 0.4036 data: 0.0932 max mem: 1109
262 Epoch: [24] [350/378] eta: 0:00:10 lr: 0.000121 loss: 0.2352 (0.
   2387) loss_classifier: 0.0895 (0.0846) loss_box_reg: 0.1321 (0.1498
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_reg: 0.0034 (0.0037
   ) time: 0.3762 data: 0.0697 max mem: 1109
263 Epoch: [24] [377/378] eta: 0:00:00 lr: 0.000121 loss: 0.2187 (0.
   2385) loss_classifier: 0.0760 (0.0846) loss_box_req: 0.1395 (0.1496
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0030 (0.0037
      time: 0.3739 data: 0.0727 max mem: 1109
264 Epoch: [24] Total time: 0:02:19 (0.3686 s / it)
265 -- Test begins--
266 avg_IOU: 0.8685363463952508 - avg_accuracy: 0.833333333333333 -
   avg_score: 0.9220433151218254
267 Epoch: [25] [ 0/378] eta: 0:02:15 lr: 0.000093 loss: 0.1729 (0.
   1729) loss_classifier: 0.0569 (0.0569) loss_box_reg: 0.1091 (0.1091
   ) loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0068 (0.0068
   ) time: 0.3586 data: 0.0963 max mem: 1109
```

```
268 Epoch: [25] [ 50/378] eta: 0:01:49 lr: 0.000093 loss: 0.2361 (0.
   2201) loss_classifier: 0.0925 (0.0832) loss_box_reg: 0.1254 (0.1327
     loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0034 (0.0037
   ) time: 0.3338 data: 0.0708 max mem: 1109
269 Epoch: [25] [100/378] eta: 0:01:33 lr: 0.000093 loss: 0.2002 (0.
   2177) loss_classifier: 0.0801 (0.0817) loss_box_reg: 0.1194 (0.1321
      loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0031 (0.0035
      time: 0.3353 data: 0.0692 max mem: 1109
270 Epoch: [25] [150/378] eta: 0:01:20 lr: 0.000093 loss: 0.2113 (0.
   2162) loss_classifier: 0.0784 (0.0803) loss_box_reg: 0.1319 (0.1319
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0035 (0.0036
     time: 0.4009 data: 0.0873 max mem: 1109
271 Epoch: [25] [200/378] eta: 0:01:04 lr: 0.000093 loss: 0.1989 (0.
   2144) loss_classifier: 0.0828 (0.0810) loss_box_reg: 0.1161 (0.1293
     loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0029 (0.0036
      time: 0.4079 data: 0.0933 max mem: 1109
272 Epoch: [25] [250/378] eta: 0:00:46 lr: 0.000093 loss: 0.2105 (0.
   2135) loss_classifier: 0.0758 (0.0803) loss_box_reg: 0.1217 (0.1291
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0029 (0.0036
      time: 0.3798 data: 0.0733 max mem: 1109
273 Epoch: [25] [300/378] eta: 0:00:28 lr: 0.000093 loss: 0.2124 (0.
   2129) loss_classifier: 0.0767 (0.0798) loss_box_reg: 0.1199 (0.1290
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_req: 0.0029 (0.0036
   ) time: 0.3426 data: 0.0638 max mem: 1109
274 Epoch: [25] [350/378] eta: 0:00:10 lr: 0.000093 loss: 0.2122 (0.
   2128) loss_classifier: 0.0804 (0.0793) loss_box_reg: 0.1201 (0.1294
     loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0039 (0.0036
      time: 0.3529 data: 0.0805 max mem: 1109
275 Epoch: [25] [377/378] eta: 0:00:00 lr: 0.000093 loss: 0.1948 (0.
   2119) loss_classifier: 0.0757 (0.0791) loss_box_reg: 0.1284 (0.1287
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0033 (0.0036
   ) time: 0.3791 data: 0.0836 max mem: 1109
276 Epoch: [25] Total time: 0:02:16 (0.3623 s / it)
277 Epoch: [26] [ 0/378] eta: 0:02:14 lr: 0.000067 loss: 0.2537 (0.
   2537) loss_classifier: 0.0881 (0.0881) loss_box_reg: 0.1571 (0.1571
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_reg: 0.0082 (0.0082
   ) time: 0.3570 data: 0.0638 max mem: 1109
278 Epoch: [26] [ 50/378] eta: 0:02:01 lr: 0.000067 loss: 0.1796 (0.
   1901) loss_classifier: 0.0653 (0.0735) loss_box_reg: 0.1071 (0.1126
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0032 (0.0035
   ) time: 0.3620 data: 0.0635 max mem: 1109
279 Epoch: [26] [100/378] eta: 0:01:45 lr: 0.000067 loss: 0.1897 (0.
   1914) loss_classifier: 0.0750 (0.0767) loss_box_req: 0.1096 (0.1105
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0035 (0.0036
      time: 0.3958 data: 0.0935 max mem: 1109
280 Epoch: [26] [150/378] eta: 0:01:27 lr: 0.000067 loss: 0.1708 (0.
   1895) loss_classifier: 0.0629 (0.0756) loss_box_reg: 0.1051 (0.1097
      loss_objectness: 0.0001 (0.0006) loss_rpn_box_req: 0.0036 (0.0036
   ) time: 0.4297 data: 0.1257 max mem: 1109
281 Epoch: [26] [200/378] eta: 0:01:09 lr: 0.000067 loss: 0.1779 (0.
   1907) loss_classifier: 0.0623 (0.0750) loss_box_reg: 0.1151 (0.1115
     loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0031 (0.0037
   ) time: 0.3777 data: 0.0797 max mem: 1109
```

```
282 Epoch: [26] [250/378] eta: 0:00:49 lr: 0.000067 loss: 0.1984 (0.
   1926) loss_classifier: 0.0771 (0.0755) loss_box_reg: 0.1112 (0.1129
     loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0030 (0.0036
   ) time: 0.3492 data: 0.0571 max mem: 1109
283 Epoch: [26] [300/378] eta: 0:00:29 lr: 0.000067 loss: 0.2027 (0.
   1928) loss_classifier: 0.0730 (0.0757) loss_box_reg: 0.1121 (0.1129
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0035 (0.0036
      time: 0.3282 data: 0.0610 max mem: 1109
284 Epoch: [26] [350/378] eta: 0:00:10 lr: 0.000067 loss: 0.1706 (0.
   1925) loss_classifier: 0.0653 (0.0752) loss_box_reg: 0.0965 (0.1129
      loss_objectness: 0.0007 (0.0006) loss_rpn_box_reg: 0.0032 (0.0036
     time: 0.3318 data: 0.0688 max mem: 1109
285 Epoch: [26] [377/378] eta: 0:00:00 lr: 0.000067 loss: 0.1866 (0.
   1926) loss_classifier: 0.0718 (0.0753) loss_box_reg: 0.1056 (0.1131
      loss_objectness: 0.0002 (0.0007) loss_rpn_box_reg: 0.0032 (0.0036
      time: 0.3558 data: 0.0580 max mem: 1109
286 Epoch: [26] Total time: 0:02:19 (0.3682 s / it)
287 Epoch: [27] [ 0/378] eta: 0:02:21 lr: 0.000044 loss: 0.1628 (0.
   1628) loss_classifier: 0.0609 (0.0609) loss_box_reg: 0.0989 (0.0989
      loss_objectness: 0.0002 (0.0002) loss_rpn_box_req: 0.0028 (0.0028
   ) time: 0.3747 data: 0.0663 max mem: 1109
288 Epoch: [27] [ 50/378] eta: 0:02:04 lr: 0.000044 loss: 0.1618 (0.
   1808) loss_classifier: 0.0672 (0.0733) loss_box_req: 0.0889 (0.1032)
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0027 (0.0036
      time: 0.4039 data: 0.0887 max mem: 1109
289 Epoch: [27] [100/378] eta: 0:01:47 lr: 0.000044 loss: 0.1799 (0.
   1769) loss_classifier: 0.0651 (0.0721) loss_box_reg: 0.0983 (0.1006
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_req: 0.0029 (0.0036
   ) time: 0.3639 data: 0.0661 max mem: 1109
290 Epoch: [27] [150/378] eta: 0:01:27 lr: 0.000044 loss: 0.1760 (0.
   1758) loss_classifier: 0.0725 (0.0712) loss_box_reg: 0.0962 (0.1004
     loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0033 (0.0035
      time: 0.3831 data: 0.0801 max mem: 1109
291 Epoch: [27] [200/378] eta: 0:01:06 lr: 0.000044 loss: 0.1987 (0.
   1772) loss_classifier: 0.0818 (0.0721) loss_box_reg: 0.1091 (0.1010
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0025 (0.0035
   ) time: 0.3565 data: 0.0820 max mem: 1109
292 Epoch: [27] [250/378] eta: 0:00:48 lr: 0.000044 loss: 0.1658 (0.
   1781) loss_classifier: 0.0644 (0.0724) loss_box_reg: 0.0986 (0.1015
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0027 (0.0036
      time: 0.3775 data: 0.0985 max mem: 1109
293 Epoch: [27] [300/378] eta: 0:00:29 lr: 0.000044 loss: 0.1677 (0.
   1770) loss_classifier: 0.0720 (0.0721) loss_box_req: 0.0981 (0.1008
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0031 (0.0036
      time: 0.3723 data: 0.0687 max mem: 1109
294 Epoch: [27] [350/378] eta: 0:00:10 lr: 0.000044 loss: 0.1742 (0.
   1780) loss_classifier: 0.0669 (0.0721) loss_box_reg: 0.1006 (0.1017
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0031 (0.0036
   ) time: 0.4183 data: 0.0976 max mem: 1109
295 Epoch: [27] [377/378] eta: 0:00:00 lr: 0.000044 loss: 0.1832 (0.
   1785) loss_classifier: 0.0656 (0.0722) loss_box_reg: 0.0999 (0.1021
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0030 (0.0036
   ) time: 0.3883 data: 0.0797 max mem: 1109
```

```
296 Epoch: [27] Total time: 0:02:24 (0.3812 s / it)
297 Epoch: [28] [ 0/378] eta: 0:02:23 lr: 0.000025 loss: 0.1810 (0.
    1810) loss_classifier: 0.0746 (0.0746) loss_box_reg: 0.1041 (0.1041
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_req: 0.0023 (0.0023
      time: 0.3790 data: 0.0808 max mem: 1109
298 Epoch: [28] [ 50/378] eta: 0:02:03 lr: 0.000025 loss: 0.1706 (0.
    1643) loss_classifier: 0.0796 (0.0699) loss_box_reg: 0.0812 (0.0902
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0036 (0.0035
    ) time: 0.3675 data: 0.0844 max mem: 1109
299 Epoch: [28] [100/378] eta: 0:01:47 lr: 0.000025 loss: 0.1594 (0.
   1693) loss_classifier: 0.0744 (0.0723) loss_box_reg: 0.0846 (0.0929
      loss_objectness: 0.0001 (0.0006) loss_rpn_box_reg: 0.0028 (0.0035
      time: 0.3951 data: 0.0893 max mem: 1109
300 Epoch: [28] [150/378] eta: 0:01:26 lr: 0.000025 loss: 0.1655 (0.
   1679) loss_classifier: 0.0739 (0.0709) loss_box_reg: 0.0869 (0.0928
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0032 (0.0036
      time: 0.3361 data: 0.0649 max mem: 1109
301 Epoch: [28] [200/378] eta: 0:01:06 lr: 0.000025 loss: 0.1547 (0.
    1669) loss_classifier: 0.0573 (0.0691) loss_box_reg: 0.0890 (0.0937
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_req: 0.0034 (0.0035
      time: 0.3685 data: 0.0661 max mem: 1109
302 Epoch: [28] [250/378] eta: 0:00:47 lr: 0.000025 loss: 0.1615 (0.
    1677) loss_classifier: 0.0651 (0.0695) loss_box_req: 0.0876 (0.0941
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0035 (0.0036
      time: 0.3671 data: 0.0652 max mem: 1109
303 Epoch: [28] [300/378] eta: 0:00:28 lr: 0.000025 loss: 0.1519 (0.
    1677) loss_classifier: 0.0652 (0.0695) loss_box_reg: 0.0892 (0.0940
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_req: 0.0035 (0.0036
      time: 0.3273 data: 0.0624 max mem: 1109
304 Epoch: [28] [350/378] eta: 0:00:10 lr: 0.000025 loss: 0.1606 (0.
    1691) loss_classifier: 0.0662 (0.0699) loss_box_reg: 0.0921 (0.0951
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0037 (0.0036
      time: 0.3731 data: 0.0843 max mem: 1109
305 Epoch: [28] [377/378] eta: 0:00:00 lr: 0.000025 loss: 0.1656 (0.
   1693) loss_classifier: 0.0697 (0.0700) loss_box_reg: 0.0877 (0.0952
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0032 (0.0036
      time: 0.3822 data: 0.0731 max mem: 1109
306 Epoch: [28] Total time: 0:02:18 (0.3668 s / it)
307 Epoch: [29] [ 0/378] eta: 0:02:14 lr: 0.000011 loss: 0.0970 (0.
    0970) loss_classifier: 0.0342 (0.0342) loss_box_req: 0.0616 (0.0616
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_req: 0.0011 (0.0011
      time: 0.3550 data: 0.0658 max mem: 1109
308 Epoch: [29] [ 50/378] eta: 0:02:03 lr: 0.000011 loss: 0.1872 (0.
    1656) loss_classifier: 0.0742 (0.0699) loss_box_reg: 0.1016 (0.0917
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0027 (0.0035
      time: 0.3693 data: 0.0671 max mem: 1109
309 Epoch: [29] [100/378] eta: 0:01:40 lr: 0.000011 loss: 0.1543 (0.
    1621) loss_classifier: 0.0584 (0.0676) loss_box_reg: 0.0900 (0.0906
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0025 (0.0034
      time: 0.3341 data: 0.0710 max mem: 1109
310 Epoch: [29] [150/378] eta: 0:01:23 lr: 0.000011 loss: 0.1599 (0.
   1625) loss_classifier: 0.0646 (0.0669) loss_box_reg: 0.0882 (0.0915
     loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0033 (0.0035
```

```
time: 0.3870 data: 0.0975 max mem: 1109
311 Epoch: [29] [200/378] eta: 0:01:07 lr: 0.000011 loss: 0.1707 (0.
    1646) loss_classifier: 0.0717 (0.0686) loss_box_reg: 0.0882 (0.0919
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0042 (0.0036
      time: 0.4185 data: 0.1206 max mem: 1109
312 Epoch: [29] [250/378] eta: 0:00:49 lr: 0.000011 loss: 0.1570 (0.
    1639) loss_classifier: 0.0550 (0.0684) loss_box_reg: 0.0812 (0.0915
      loss_objectness: 0.0005 (0.0005) loss_rpn_box_reg: 0.0030 (0.0035
    ) time: 0.4069 data: 0.1088 max mem: 1109
313 Epoch: [29] [300/378] eta: 0:00:30 lr: 0.000011 loss: 0.1574 (0.
   1639) loss_classifier: 0.0663 (0.0685) loss_box_reg: 0.0843 (0.0914
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0027 (0.0035
    ) time: 0.4930 data: 0.1481 max mem: 1109
314 Epoch: [29] [350/378] eta: 0:00:11 lr: 0.000011 loss: 0.1545 (0.
    1634) loss_classifier: 0.0680 (0.0685) loss_box_reg: 0.0839 (0.0908
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0030 (0.0036
      time: 0.4339 data: 0.1142 max mem: 1109
315 Epoch: [29] [377/378] eta: 0:00:00 lr: 0.000011 loss: 0.1577 (0.
    1631) loss_classifier: 0.0686 (0.0684) loss_box_reg: 0.0877 (0.0906
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0021 (0.0035
    ) time: 0.4862 data: 0.1500 max mem: 1109
316 Epoch: [29] Total time: 0:02:33 (0.4054 s / it)
317 -- Test begins--
318 avg_IOU: 0.8696093508895014 - avg_accuracy: 0.833333333333333 -
   avg_score: 0.9399317377050158
319 Epoch: [30] [ 0/378] eta: 0:02:30 lr: 0.000003 loss: 0.1806 (0.
   1806) loss_classifier: 0.1001 (0.1001) loss_box_reg: 0.0744 (0.0744
      loss_objectness: 0.0013 (0.0013) loss_rpn_box_req: 0.0048 (0.0048
    ) time: 0.3990 data: 0.0967 max mem: 1109
320 Epoch: [30] [ 50/378] eta: 0:02:07 lr: 0.000003 loss: 0.1551 (0.
    1571) loss_classifier: 0.0633 (0.0671) loss_box_reg: 0.0833 (0.0859
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0032 (0.0035
      time: 0.3884 data: 0.0956 max mem: 1109
321 Epoch: [30] [100/378] eta: 0:01:41 lr: 0.000003 loss: 0.1612 (0.
   1589) loss_classifier: 0.0718 (0.0686) loss_box_reg: 0.0845 (0.0864
      loss_objectness: 0.0001 (0.0005) loss_rpn_box_reg: 0.0033 (0.0034
      time: 0.3385 data: 0.0732 max mem: 1109
322 Epoch: [30] [150/378] eta: 0:01:22 lr: 0.000003 loss: 0.1395 (0.
    1581) loss_classifier: 0.0579 (0.0667) loss_box_reg: 0.0805 (0.0874
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_reg: 0.0032 (0.0034
      time: 0.3687 data: 0.0672 max mem: 1109
323 Epoch: [30] [200/378] eta: 0:01:04 lr: 0.000003 loss: 0.1548 (0.
    1577) loss_classifier: 0.0646 (0.0673) loss_box_req: 0.0818 (0.0864
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0030 (0.0035
      time: 0.3603 data: 0.0623 max mem: 1109
324 Epoch: [30] [250/378] eta: 0:00:46 lr: 0.000003 loss: 0.1624 (0.
    1588) loss_classifier: 0.0723 (0.0673) loss_box_reg: 0.0842 (0.0874
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0035 (0.0035
    ) time: 0.3609 data: 0.0645 max mem: 1109
325 Epoch: [30] [300/378] eta: 0:00:28 lr: 0.000003 loss: 0.1535 (0.
   1595) loss_classifier: 0.0611 (0.0677) loss_box_reg: 0.0814 (0.0876
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0031 (0.0036
    ) time: 0.4109 data: 0.0967 max mem: 1109
```

```
326 Epoch: [30] [350/378] eta: 0:00:10 lr: 0.000003 loss: 0.1595 (0.
    1599) loss_classifier: 0.0637 (0.0679) loss_box_reg: 0.0823 (0.0879
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0026 (0.0035
    ) time: 0.3574 data: 0.0651 max mem: 1109
327 Epoch: [30] [377/378] eta: 0:00:00 lr: 0.000003 loss: 0.1531 (0.
    1604) loss_classifier: 0.0635 (0.0680) loss_box_reg: 0.0806 (0.0883
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0031 (0.0035
      time: 0.3710 data: 0.0954 max mem: 1109
328 Epoch: [30] Total time: 0:02:19 (0.3679 s / it)
329 Epoch: [31] [ 0/378] eta: 0:02:07 lr: 0.000300 loss: 0.1292 (0.
   1292) loss_classifier: 0.0524 (0.0524) loss_box_reg: 0.0737 (0.0737
      loss_objectness: 0.0004 (0.0004) loss_rpn_box_reg: 0.0026 (0.0026
      time: 0.3371 data: 0.0618 max mem: 1109
330 Epoch: [31] [ 50/378] eta: 0:01:53 lr: 0.000300 loss: 0.3505 (0.
   2995) loss_classifier: 0.0835 (0.0733) loss_box_reg: 0.2749 (0.2222
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0030 (0.0035
      time: 0.3579 data: 0.0613 max mem: 1109
331 Epoch: [31] [100/378] eta: 0:01:37 lr: 0.000300 loss: 0.3673 (0.
    3311) loss_classifier: 0.0881 (0.0806) loss_box_reg: 0.2514 (0.2464
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0030 (0.0036
      time: 0.3684 data: 0.0668 max mem: 1109
332 Epoch: [31] [150/378] eta: 0:01:21 lr: 0.000300 loss: 0.3964 (0.
    3482) loss_classifier: 0.0921 (0.0874) loss_box_req: 0.2875 (0.2568
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0027 (0.0035
      time: 0.3513 data: 0.0569 max mem: 1109
333 Epoch: [31] [200/378] eta: 0:01:02 lr: 0.000300 loss: 0.3840 (0.
   3632) loss_classifier: 0.1021 (0.0903) loss_box_reg: 0.2753 (0.2687
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_req: 0.0032 (0.0036
      time: 0.3264 data: 0.0628 max mem: 1109
334 Epoch: [31] [250/378] eta: 0:00:44 lr: 0.000300 loss: 0.3675 (0.
    3663) loss_classifier: 0.1095 (0.0930) loss_box_reg: 0.2489 (0.2691
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0030 (0.0037
      time: 0.3350 data: 0.0617 max mem: 1109
335 Epoch: [31] [300/378] eta: 0:00:27 lr: 0.000300 loss: 0.3538 (0.
   3693) loss_classifier: 0.0907 (0.0940) loss_box_reg: 0.2498 (0.2710
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0034 (0.0037
      time: 0.3617 data: 0.0621 max mem: 1109
336 Epoch: [31] [350/378] eta: 0:00:09 lr: 0.000300 loss: 0.3676 (0.
    3701) loss_classifier: 0.1089 (0.0958) loss_box_reg: 0.2641 (0.2701
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0030 (0.0037
      time: 0.3644 data: 0.0644 max mem: 1109
337 Epoch: [31] [377/378] eta: 0:00:00 lr: 0.000300 loss: 0.4102 (0.
   3729) loss_classifier: 0.1052 (0.0970) loss_box_req: 0.2844 (0.2715
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0031 (0.0037
      time: 0.3589 data: 0.0638 max mem: 1109
338 Epoch: [31] Total time: 0:02:14 (0.3566 s / it)
339 Epoch: [32] [ 0/378] eta: 0:02:10 lr: 0.000299 loss: 0.3444 (0.
    3444) loss_classifier: 0.1063 (0.1063) loss_box_reg: 0.2352 (0.2352
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_reg: 0.0027 (0.0027
      time: 0.3461 data: 0.0623 max mem: 1109
340 Epoch: [32] [ 50/378] eta: 0:01:52 lr: 0.000299 loss: 0.3210 (0.
   3490) loss_classifier: 0.0960 (0.1031) loss_box_reg: 0.2353 (0.2417
    ) loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0034 (0.0036
```

```
time: 0.3506 data: 0.0595 max mem: 1109
341 Epoch: [32] [100/378] eta: 0:01:38 lr: 0.000299 loss: 0.3163 (0.
   3434) loss_classifier: 0.0978 (0.1015) loss_box_reg: 0.1962 (0.2373
      loss_objectness: 0.0005 (0.0007) loss_rpn_box_req: 0.0026 (0.0038
      time: 0.3538 data: 0.0591 max mem: 1109
342 Epoch: [32] [150/378] eta: 0:01:22 lr: 0.000299 loss: 0.3712 (0.
    3497) loss_classifier: 0.0959 (0.1006) loss_box_reg: 0.2682 (0.2447
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0030 (0.0037
   ) time: 0.4163 data: 0.0950 max mem: 1109
343 Epoch: [32] [200/378] eta: 0:01:06 lr: 0.000299 loss: 0.3178 (0.
    3519) loss_classifier: 0.1046 (0.1024) loss_box_reg: 0.2045 (0.2453
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0029 (0.0037
      time: 0.4241 data: 0.1072 max mem: 1109
344 Epoch: [32] [250/378] eta: 0:00:46 lr: 0.000299 loss: 0.3462 (0.
    3551) loss_classifier: 0.1065 (0.1032) loss_box_reg: 0.2311 (0.2475
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0033 (0.0037
      time: 0.3478 data: 0.0715 max mem: 1109
345 Epoch: [32] [300/378] eta: 0:00:28 lr: 0.000299 loss: 0.3419 (0.
   3592) loss_classifier: 0.1096 (0.1040) loss_box_reg: 0.2247 (0.2508
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_req: 0.0041 (0.0037
      time: 0.3803 data: 0.0728 max mem: 1109
346 Epoch: [32] [350/378] eta: 0:00:10 lr: 0.000299 loss: 0.3499 (0.
    3597) loss_classifier: 0.1169 (0.1044) loss_box_req: 0.2382 (0.2508
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_reg: 0.0036 (0.0037)
      time: 0.3380 data: 0.0701 max mem: 1109
347 Epoch: [32] [377/378] eta: 0:00:00 lr: 0.000299 loss: 0.3546 (0.
   3576) loss_classifier: 0.1054 (0.1042) loss_box_reg: 0.2329 (0.2490
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0030 (0.0037
      time: 0.3374 data: 0.0718 max mem: 1109
348 Epoch: [32] Total time: 0:02:18 (0.3662 s / it)
349 Epoch: [33] [ 0/378] eta: 0:02:15 lr: 0.000297 loss: 0.3853 (0.
   3853) loss_classifier: 0.1147 (0.1147) loss_box_reg: 0.2652 (0.2652
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0053 (0.0053
      time: 0.3575 data: 0.0738 max mem: 1109
350 Epoch: [33] [ 50/378] eta: 0:02:11 lr: 0.000297 loss: 0.3124 (0.
    3122) loss_classifier: 0.1060 (0.0987) loss_box_reg: 0.1970 (0.2094
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0024 (0.0034
    ) time: 0.3616 data: 0.0607 max mem: 1109
351 Epoch: [33] [100/378] eta: 0:01:51 lr: 0.000297 loss: 0.3593 (0.
    3340) loss_classifier: 0.1095 (0.1027) loss_box_req: 0.2400 (0.2272
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0028 (0.0035
      time: 0.3832 data: 0.0887 max mem: 1109
352 Epoch: [33] [150/378] eta: 0:01:26 lr: 0.000297 loss: 0.3800 (0.
    3371) loss_classifier: 0.0923 (0.1019) loss_box_reg: 0.2544 (0.2308
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0031 (0.0036
      time: 0.3313 data: 0.0695 max mem: 1109
353 Epoch: [33] [200/378] eta: 0:01:06 lr: 0.000297 loss: 0.3104 (0.
    3394) loss_classifier: 0.0848 (0.1017) loss_box_reg: 0.2188 (0.2334
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0030 (0.0036
      time: 0.3620 data: 0.0624 max mem: 1109
354 Epoch: [33] [250/378] eta: 0:00:48 lr: 0.000297 loss: 0.3339 (0.
   3380) loss_classifier: 0.1060 (0.1010) loss_box_reg: 0.2237 (0.2328
    ) loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0030 (0.0035
```

```
time: 0.3762 data: 0.0709 max mem: 1109
355 Epoch: [33] [300/378] eta: 0:00:29 lr: 0.000297 loss: 0.2933 (0.
   3388) loss_classifier: 0.0800 (0.1005) loss_box_reg: 0.2087 (0.2340
      loss_objectness: 0.0004 (0.0007) loss_rpn_box_req: 0.0028 (0.0036
      time: 0.3797 data: 0.0987 max mem: 1109
356 Epoch: [33] [350/378] eta: 0:00:10 lr: 0.000297 loss: 0.3765 (0.
   3403) loss_classifier: 0.1009 (0.1003) loss_box_reg: 0.2536 (0.2357
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0035 (0.0036
   ) time: 0.3613 data: 0.0671 max mem: 1109
357 Epoch: [33] [377/378] eta: 0:00:00 lr: 0.000297 loss: 0.3386 (0.
   3411) loss_classifier: 0.1050 (0.1005) loss_box_reg: 0.2346 (0.2363
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0026 (0.0036
      time: 0.4523 data: 0.1269 max mem: 1109
358 Epoch: [33] Total time: 0:02:23 (0.3808 s / it)
359 Epoch: [34] [ 0/378] eta: 0:02:17 lr: 0.000294 loss: 0.3230 (0.
   3230) loss_classifier: 0.1041 (0.1041) loss_box_reg: 0.2151 (0.2151
      loss_objectness: 0.0013 (0.0013) loss_rpn_box_reg: 0.0025 (0.0025
      time: 0.3644 data: 0.0619 max mem: 1109
360 Epoch: [34] [ 50/378] eta: 0:02:01 lr: 0.000294 loss: 0.3195 (0.
   3376) loss_classifier: 0.0974 (0.0986) loss_box_req: 0.2210 (0.2352)
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0027 (0.0034
      time: 0.3643 data: 0.0637 max mem: 1109
361 Epoch: [34] [100/378] eta: 0:01:41 lr: 0.000294 loss: 0.2942 (0.
   3343) loss_classifier: 0.0887 (0.0963) loss_box_reg: 0.2321 (0.2341
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0040 (0.0034
      time: 0.3353 data: 0.0696 max mem: 1109
362 Epoch: [34] [150/378] eta: 0:01:23 lr: 0.000294 loss: 0.3188 (0.
   3289) loss_classifier: 0.0846 (0.0954) loss_box_reg: 0.2158 (0.2295
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_reg: 0.0030 (0.0034
      time: 0.3914 data: 0.0798 max mem: 1109
363 Epoch: [34] [200/378] eta: 0:01:04 lr: 0.000294 loss: 0.3367 (0.
   3338) loss_classifier: 0.1026 (0.0958) loss_box_reg: 0.2362 (0.2339
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0034 (0.0034
      time: 0.3600 data: 0.0625 max mem: 1109
364 Epoch: [34] [250/378] eta: 0:00:46 lr: 0.000294 loss: 0.3284 (0.
   3373) loss_classifier: 0.0972 (0.0976) loss_box_reg: 0.2096 (0.2356
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0030 (0.0035
   ) time: 0.3575 data: 0.0621 max mem: 1109
365 Epoch: [34] [300/378] eta: 0:00:27 lr: 0.000294 loss: 0.3456 (0.
   3355) loss_classifier: 0.0985 (0.0976) loss_box_req: 0.2158 (0.2339
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_reg: 0.0031 (0.0035
      time: 0.3350 data: 0.0671 max mem: 1109
366 Epoch: [34] [350/378] eta: 0:00:10 lr: 0.000294 loss: 0.3042 (0.
   3339) loss_classifier: 0.0811 (0.0971) loss_box_reg: 0.1909 (0.2327
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0040 (0.0036
   ) time: 0.3772 data: 0.0719 max mem: 1109
367 Epoch: [34] [377/378] eta: 0:00:00 lr: 0.000294 loss: 0.3078 (0.
   3327) loss_classifier: 0.0864 (0.0968) loss_box_reg: 0.2052 (0.2318
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0032 (0.0035
      time: 0.3722 data: 0.0669 max mem: 1109
368 Epoch: [34] Total time: 0:02:16 (0.3600 s / it)
369 -- Test begins--
370 avg_IOU: 0.8715240946957763 - avg_accuracy: 0.819444444444444 -
```

```
370 avg_score: 0.89505788977717
371 Epoch: [35] [ 0/378] eta: 0:02:21 lr: 0.000289 loss: 0.2730 (0.
    2730) loss_classifier: 0.0871 (0.0871) loss_box_reg: 0.1828 (0.1828
      loss_objectness: 0.0006 (0.0006) loss_rpn_box_reg: 0.0025 (0.0025
      time: 0.3731 data: 0.0794 max mem: 1109
372 Epoch: [35] [ 50/378] eta: 0:02:07 lr: 0.000289 loss: 0.2748 (0.
    3140) loss_classifier: 0.0924 (0.0931) loss_box_reg: 0.1853 (0.2170
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0028 (0.0035
      time: 0.3700 data: 0.0633 max mem: 1109
373 Epoch: [35] [100/378] eta: 0:01:49 lr: 0.000289 loss: 0.3061 (0.
    3164) loss_classifier: 0.1004 (0.0932) loss_box_reg: 0.2158 (0.2193
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0030 (0.0034
      time: 0.3955 data: 0.0946 max mem: 1109
374 Epoch: [35] [150/378] eta: 0:01:27 lr: 0.000289 loss: 0.2889 (0.
    3108) loss_classifier: 0.0834 (0.0917) loss_box_reg: 0.1999 (0.2151
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0031 (0.0035
      time: 0.3762 data: 0.0971 max mem: 1109
375 Epoch: [35] [200/378] eta: 0:01:08 lr: 0.000289 loss: 0.2837 (0.
         loss_classifier: 0.0794 (0.0915) loss_box_reg: 0.1804 (0.2116
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0026 (0.0034
      time: 0.3686 data: 0.0661 max mem: 1109
376 Epoch: [35] [250/378] eta: 0:00:49 lr: 0.000289 loss: 0.2800 (0.
    3060) loss_classifier: 0.0904 (0.0929) loss_box_req: 0.1855 (0.2092
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0024 (0.0034
      time: 0.3987 data: 0.0859 max mem: 1109
377 Epoch: [35] [300/378] eta: 0:00:30 lr: 0.000289 loss: 0.3259 (0.
   3060) loss_classifier: 0.0939 (0.0929) loss_box_reg: 0.2095 (0.2090
      loss_objectness: 0.0005 (0.0006) loss_rpn_box_req: 0.0034 (0.0035
      time: 0.4040 data: 0.0986 max mem: 1109
378 Epoch: [35] [350/378] eta: 0:00:10 lr: 0.000289 loss: 0.2633 (0.
    3052) loss_classifier: 0.0808 (0.0922) loss_box_reg: 0.1790 (0.2090
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0024 (0.0035
      time: 0.3732 data: 0.0909 max mem: 1109
379 Epoch: [35] [377/378] eta: 0:00:00 lr: 0.000289 loss: 0.2956 (0.
   3063) loss_classifier: 0.0798 (0.0917) loss_box_reg: 0.2049 (0.2106
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0025 (0.0034
      time: 0.3969 data: 0.1106 max mem: 1109
380 Epoch: [35] Total time: 0:02:25 (0.3856 s / it)
381 Epoch: [36] [ 0/378] eta: 0:02:06 lr: 0.000282 loss: 0.2542 (0.
    2542) loss_classifier: 0.0732 (0.0732) loss_box_reg: 0.1786 (0.1786
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_reg: 0.0020 (0.0020
      time: 0.3341 data: 0.0658 max mem: 1109
382 Epoch: [36] [ 50/378] eta: 0:02:03 lr: 0.000282 loss: 0.2779 (0.
    2974) loss_classifier: 0.0803 (0.0804) loss_box_reg: 0.1805 (0.2130
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0034 (0.0034
      time: 0.3832 data: 0.0954 max mem: 1109
383 Epoch: [36] [100/378] eta: 0:01:44 lr: 0.000282 loss: 0.2449 (0.
    2879) loss_classifier: 0.0836 (0.0827) loss_box_reg: 0.1536 (0.2012
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0027 (0.0035
      time: 0.3709 data: 0.0661 max mem: 1109
384 Epoch: [36] [150/378] eta: 0:01:24 lr: 0.000282 loss: 0.2549 (0.
    2826) loss_classifier: 0.0866 (0.0850) loss_box_reg: 0.1616 (0.1934
     loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0035 (0.0035
```

```
time: 0.3636 data: 0.0628 max mem: 1109
385 Epoch: [36] [200/378] eta: 0:01:05 lr: 0.000282 loss: 0.2601 (0.
   2820) loss_classifier: 0.0797 (0.0851) loss_box_reg: 0.1751 (0.1930
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_req: 0.0023 (0.0034
      time: 0.3282 data: 0.0652 max mem: 1109
386 Epoch: [36] [250/378] eta: 0:00:46 lr: 0.000282 loss: 0.2722 (0.
   2841) loss_classifier: 0.0709 (0.0846) loss_box_reg: 0.1859 (0.1955
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0028 (0.0034
   ) time: 0.3695 data: 0.0634 max mem: 1109
387 Epoch: [36] [300/378] eta: 0:00:28 lr: 0.000282 loss: 0.2573 (0.
   2859) loss_classifier: 0.0868 (0.0856) loss_box_reg: 0.1704 (0.1965
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0025 (0.0033
      time: 0.3910 data: 0.0821 max mem: 1109
388 Epoch: [36] [350/378] eta: 0:00:10 lr: 0.000282 loss: 0.2644 (0.
   2868) loss_classifier: 0.0925 (0.0859) loss_box_reg: 0.1823 (0.1970
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0025 (0.0034
      time: 0.3842 data: 0.0745 max mem: 1109
389 Epoch: [36] [377/378] eta: 0:00:00 lr: 0.000282 loss: 0.3074 (0.
   2876) loss_classifier: 0.0895 (0.0867) loss_box_reg: 0.2142 (0.1970
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_req: 0.0037 (0.0034
      time: 0.3647 data: 0.0709 max mem: 1109
390 Epoch: [36] Total time: 0:02:19 (0.3687 s / it)
391 Epoch: [37] [ 0/378] eta: 0:02:41 lr: 0.000275 loss: 0.3165 (0.
   3165) loss_classifier: 0.0712 (0.0712) loss_box_reg: 0.2391 (0.2391
      loss_objectness: 0.0012 (0.0012) loss_rpn_box_reg: 0.0049 (0.0049
      time: 0.4282 data: 0.0608 max mem: 1109
392 Epoch: [37] [ 50/378] eta: 0:02:00 lr: 0.000275 loss: 0.2771 (0.
   3117) loss_classifier: 0.0830 (0.0887) loss_box_reg: 0.1823 (0.2196
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0022 (0.0029
      time: 0.3771 data: 0.0991 max mem: 1109
393 Epoch: [37] [100/378] eta: 0:01:38 lr: 0.000275 loss: 0.2797 (0.
   3025) loss_classifier: 0.0846 (0.0893) loss_box_reg: 0.1861 (0.2094
      loss_objectness: 0.0005 (0.0007) loss_rpn_box_req: 0.0028 (0.0031
      time: 0.3418 data: 0.0692 max mem: 1109
394 Epoch: [37] [150/378] eta: 0:01:21 lr: 0.000275 loss: 0.2489 (0.
   2912) loss_classifier: 0.0788 (0.0869) loss_box_reg: 0.1548 (0.2004
      loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0034 (0.0033
      time: 0.3585 data: 0.0654 max mem: 1109
395 Epoch: [37] [200/378] eta: 0:01:05 lr: 0.000275 loss: 0.2731 (0.
   2882) loss_classifier: 0.0801 (0.0860) loss_box_req: 0.1938 (0.1983
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0020 (0.0032
      time: 0.4052 data: 0.0915 max mem: 1109
396 Epoch: [37] [250/378] eta: 0:00:47 lr: 0.000275 loss: 0.2757 (0.
   2828) loss_classifier: 0.0759 (0.0847) loss_box_reg: 0.1799 (0.1943
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0030 (0.0033
      time: 0.3913 data: 0.0797 max mem: 1109
397 Epoch: [37] [300/378] eta: 0:00:29 lr: 0.000275 loss: 0.3033 (0.
   2871) loss_classifier: 0.0807 (0.0852) loss_box_reg: 0.2098 (0.1981
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0027 (0.0033
      time: 0.3959 data: 0.0856 max mem: 1109
398 Epoch: [37] [350/378] eta: 0:00:10 lr: 0.000275 loss: 0.2756 (0.
   2879) loss_classifier: 0.0848 (0.0858) loss_box_reg: 0.1978 (0.1981
     loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0039 (0.0033
```

```
time: 0.3650 data: 0.0664 max mem: 1109
399 Epoch: [37] [377/378] eta: 0:00:00 lr: 0.000275 loss: 0.3340 (0.
   2911) loss_classifier: 0.0868 (0.0864) loss_box_reg: 0.2235 (0.2008
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0027 (0.0033
      time: 0.3557 data: 0.0662 max mem: 1109
400 Epoch: [37] Total time: 0:02:21 (0.3739 s / it)
401 Epoch: [38] [ 0/378] eta: 0:01:59 lr: 0.000266 loss: 0.2843 (0.
   2843) loss_classifier: 0.0854 (0.0854) loss_box_reg: 0.1956 (0.1956
      loss_objectness: 0.0003 (0.0003) loss_rpn_box_req: 0.0030 (0.0030
      time: 0.3157 data: 0.0549 max mem: 1109
402 Epoch: [38] [ 50/378] eta: 0:01:48 lr: 0.000266 loss: 0.2302 (0.
   2679) loss_classifier: 0.0745 (0.0835) loss_box_reg: 0.1547 (0.1803
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0026 (0.0035
      time: 0.3314 data: 0.0652 max mem: 1109
403 Epoch: [38] [100/378] eta: 0:01:32 lr: 0.000266 loss: 0.2825 (0.
   2816) loss_classifier: 0.0777 (0.0834) loss_box_reg: 0.1833 (0.1943
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0028 (0.0033
      time: 0.3345 data: 0.0655 max mem: 1109
404 Epoch: [38] [150/378] eta: 0:01:16 lr: 0.000266 loss: 0.2637 (0.
   2782) loss_classifier: 0.0737 (0.0820) loss_box_req: 0.1840 (0.1925
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0020 (0.0031
      time: 0.3375 data: 0.0686 max mem: 1109
405 Epoch: [38] [200/378] eta: 0:01:05 lr: 0.000266 loss: 0.2630 (0.
   2748) loss_classifier: 0.0710 (0.0807) loss_box_reg: 0.1699 (0.1904
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0027 (0.0031
      time: 0.5793 data: 0.2306 max mem: 1109
406 Epoch: [38] [250/378] eta: 0:00:47 lr: 0.000266 loss: 0.2559 (0.
   2757) loss_classifier: 0.0818 (0.0817) loss_box_reg: 0.1849 (0.1902
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0036 (0.0031
      time: 0.4027 data: 0.1104 max mem: 1109
407 Epoch: [38] [300/378] eta: 0:00:29 lr: 0.000266 loss: 0.2716 (0.
   2723) loss_classifier: 0.0774 (0.0818) loss_box_reg: 0.1772 (0.1867
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0028 (0.0032
      time: 0.4161 data: 0.1025 max mem: 1109
408 Epoch: [38] [350/378] eta: 0:00:10 lr: 0.000266 loss: 0.2420 (0.
   2702) loss_classifier: 0.0760 (0.0818) loss_box_reg: 0.1684 (0.1847
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0031 (0.0032
   ) time: 0.4025 data: 0.0867 max mem: 1109
409 Epoch: [38] [377/378] eta: 0:00:00 lr: 0.000266 loss: 0.2579 (0.
   2706) loss_classifier: 0.0876 (0.0822) loss_box_req: 0.1700 (0.1847
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0034 (0.0032
      time: 0.4008 data: 0.0881 max mem: 1109
410 Epoch: [38] Total time: 0:02:26 (0.3866 s / it)
411 Epoch: [39] [ 0/378] eta: 0:02:09 lr: 0.000256 loss: 0.2621 (0.
   2621) loss_classifier: 0.0518 (0.0518) loss_box_reg: 0.2076 (0.2076
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0025 (0.0025
      time: 0.3415 data: 0.0499 max mem: 1109
412 Epoch: [39] [ 50/378] eta: 0:02:04 lr: 0.000256 loss: 0.2174 (0.
   2595) loss_classifier: 0.0774 (0.0785) loss_box_reg: 0.1380 (0.1772
      loss_objectness: 0.0003 (0.0008) loss_rpn_box_reg: 0.0028 (0.0029
      time: 0.3840 data: 0.1015 max mem: 1109
413 Epoch: [39] [100/378] eta: 0:01:50 lr: 0.000256 loss: 0.2265 (0.
   2448) loss_classifier: 0.0732 (0.0782) loss_box_reg: 0.1499 (0.1630
```

```
loss_objectness: 0.0003 (0.0007) loss_rpn_box_reg: 0.0025 (0.0030
      time: 0.3953 data: 0.1060 max mem: 1109
414 Epoch: [39] [150/378] eta: 0:01:32 lr: 0.000256 loss: 0.2472 (0.
   2410) loss_classifier: 0.0774 (0.0786) loss_box_reg: 0.1619 (0.1587
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0035 (0.0031
      time: 0.4102 data: 0.0957 max mem: 1109
415 Epoch: [39] [200/378] eta: 0:01:11 lr: 0.000256 loss: 0.2305 (0.
   2417) loss_classifier: 0.0779 (0.0788) loss_box_reg: 0.1440 (0.1592
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_req: 0.0038 (0.0032)
   ) time: 0.3378 data: 0.0706 max mem: 1109
416 Epoch: [39] [250/378] eta: 0:00:49 lr: 0.000256 loss: 0.2638 (0.
   2434) loss_classifier: 0.0768 (0.0780) loss_box_reg: 0.1763 (0.1617
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0028 (0.0032
   ) time: 0.3386 data: 0.0638 max mem: 1109
417 Epoch: [39] [300/378] eta: 0:00:30 lr: 0.000256 loss: 0.2358 (0.
   2446) loss_classifier: 0.0782 (0.0785) loss_box_reg: 0.1539 (0.1625
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0027 (0.0032
      time: 0.3710 data: 0.0678 max mem: 1109
418 Epoch: [39] [350/378] eta: 0:00:10 lr: 0.000256 loss: 0.2354 (0.
   2457) loss_classifier: 0.0694 (0.0779) loss_box_req: 0.1434 (0.1641
     loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0030 (0.0031
      time: 0.3709 data: 0.0683 max mem: 1109
419 Epoch: [39] [377/378] eta: 0:00:00 lr: 0.000256 loss: 0.2484 (0.
   2470) loss_classifier: 0.0830 (0.0781) loss_box_reg: 0.1599 (0.1652)
      loss_objectness: 0.0005 (0.0005) loss_rpn_box_reg: 0.0032 (0.0032
   ) time: 0.3703 data: 0.0662 max mem: 1109
420 Epoch: [39] Total time: 0:02:24 (0.3829 s / it)
421 -- Test begins--
422 avg_IOU: 0.8698059236499626 - avg_accuracy: 0.819444444444444 -
   avg_score: 0.9214251906099454
423 Epoch: [40] [ 0/378] eta: 0:02:16 lr: 0.000245 loss: 0.3255 (0.
   3255) loss_classifier: 0.0755 (0.0755) loss_box_reg: 0.2450 (0.2450
   ) loss_objectness: 0.0002 (0.0002) loss_rpn_box_reg: 0.0049 (0.0049
      time: 0.3620 data: 0.0818 max mem: 1109
424 Epoch: [40] [ 50/378] eta: 0:02:01 lr: 0.000245 loss: 0.2600 (0.
   2587) loss_classifier: 0.0756 (0.0762) loss_box_reg: 0.1692 (0.1787
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0026 (0.0033
   ) time: 0.3848 data: 0.1057 max mem: 1109
425 Epoch: [40] [100/378] eta: 0:01:42 lr: 0.000245 loss: 0.2171 (0.
   2488) loss_classifier: 0.0717 (0.0732) loss_box_req: 0.1375 (0.1720
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0025 (0.0030
      time: 0.3814 data: 0.0977 max mem: 1109
426 Epoch: [40] [150/378] eta: 0:01:26 lr: 0.000245 loss: 0.2182 (0.
   2489) loss_classifier: 0.0716 (0.0746) loss_box_reg: 0.1575 (0.1707
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0026 (0.0031
   ) time: 0.3592 data: 0.0616 max mem: 1109
427 Epoch: [40] [200/378] eta: 0:01:07 lr: 0.000245 loss: 0.2332 (0.
   2455) loss_classifier: 0.0605 (0.0737) loss_box_reg: 0.1623 (0.1682
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0029 (0.0031
      time: 0.3946 data: 0.0879 max mem: 1109
428 Epoch: [40] [250/378] eta: 0:00:48 lr: 0.000245 loss: 0.2296 (0.
   2468) loss_classifier: 0.0705 (0.0744) loss_box_reg: 0.1429 (0.1687
   ) loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0027 (0.0031
```

```
time: 0.3995 data: 0.0918 max mem: 1109
429 Epoch: [40] [300/378] eta: 0:00:29 lr: 0.000245 loss: 0.2395 (0.
   2463) loss_classifier: 0.0787 (0.0754) loss_box_reg: 0.1503 (0.1673
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0024 (0.0031
      time: 0.3757 data: 0.0969 max mem: 1109
430 Epoch: [40] [350/378] eta: 0:00:10 lr: 0.000245 loss: 0.2296 (0.
    2466) loss_classifier: 0.0702 (0.0762) loss_box_reg: 0.1434 (0.1668
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0028 (0.0031
   ) time: 0.3994 data: 0.0900 max mem: 1109
431 Epoch: [40] [377/378] eta: 0:00:00 lr: 0.000245 loss: 0.2184 (0.
    2452) loss_classifier: 0.0718 (0.0758) loss_box_reg: 0.1493 (0.1658
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0027 (0.0031
      time: 0.4981 data: 0.1822 max mem: 1109
432 Epoch: [40] Total time: 0:02:26 (0.3872 s / it)
433 Epoch: [41] [ 0/378] eta: 0:03:03 lr: 0.000233 loss: 0.2832 (0.
    2832) loss_classifier: 0.0835 (0.0835) loss_box_reg: 0.1949 (0.1949
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0048 (0.0048
      time: 0.4846 data: 0.1774 max mem: 1109
434 Epoch: [41] [ 50/378] eta: 0:02:21 lr: 0.000233 loss: 0.2385 (0.
    2345) loss_classifier: 0.0701 (0.0735) loss_box_req: 0.1668 (0.1574
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0033 (0.0031
      time: 0.4708 data: 0.1423 max mem: 1109
435 Epoch: [41] [100/378] eta: 0:01:52 lr: 0.000233 loss: 0.2317 (0.
    2331) loss_classifier: 0.0674 (0.0728) loss_box_reg: 0.1446 (0.1568
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0023 (0.0030
      time: 0.3444 data: 0.0758 max mem: 1109
436 Epoch: [41] [150/378] eta: 0:01:31 lr: 0.000233 loss: 0.2339 (0.
    2332) loss_classifier: 0.0701 (0.0725) loss_box_reg: 0.1676 (0.1570
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0027 (0.0031
      time: 0.4032 data: 0.0908 max mem: 1109
437 Epoch: [41] [200/378] eta: 0:01:09 lr: 0.000233 loss: 0.2093 (0.
    2277) loss_classifier: 0.0679 (0.0726) loss_box_reg: 0.1304 (0.1514
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0017 (0.0030
      time: 0.3837 data: 0.0758 max mem: 1109
438 Epoch: [41] [250/378] eta: 0:00:50 lr: 0.000233 loss: 0.2458 (0.
   2287) loss_classifier: 0.0706 (0.0726) loss_box_reg: 0.1560 (0.1525
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_reg: 0.0027 (0.0030
    ) time: 0.3831 data: 0.0975 max mem: 1109
439 Epoch: [41] [300/378] eta: 0:00:31 lr: 0.000233 loss: 0.2396 (0.
    2313) loss_classifier: 0.0669 (0.0730) loss_box_req: 0.1733 (0.1547
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0026 (0.0031
      time: 0.3907 data: 0.0965 max mem: 1109
440 Epoch: [41] [350/378] eta: 0:00:11 lr: 0.000233 loss: 0.2179 (0.
    2290) loss_classifier: 0.0680 (0.0726) loss_box_reg: 0.1500 (0.1527
      loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0026 (0.0031
      time: 0.4149 data: 0.1134 max mem: 1109
441 Epoch: [41] [377/378] eta: 0:00:00 lr: 0.000233 loss: 0.2308 (0.
    2304) loss_classifier: 0.0744 (0.0729) loss_box_reg: 0.1406 (0.1539)
      loss_objectness: 0.0002 (0.0006) loss_rpn_box_req: 0.0027 (0.0031
      time: 0.3879 data: 0.0931 max mem: 1109
442 Epoch: [41] Total time: 0:02:31 (0.3999 s / it)
443 Epoch: [42] [ 0/378] eta: 0:02:07 lr: 0.000221 loss: 0.2580 (0.
    2580) loss_classifier: 0.0776 (0.0776) loss_box_reg: 0.1783 (0.1783
```

```
loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0019 (0.0019
      time: 0.3365 data: 0.0708 max mem: 1109
444 Epoch: [42] [ 50/378] eta: 0:02:01 lr: 0.000221 loss: 0.1991 (0.
   2047) loss_classifier: 0.0646 (0.0689) loss_box_reg: 0.1320 (0.1322
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0024 (0.0031
      time: 0.3739 data: 0.0785 max mem: 1109
445 Epoch: [42] [100/378] eta: 0:01:46 lr: 0.000221 loss: 0.1982 (0.
   2059) loss_classifier: 0.0568 (0.0681) loss_box_reg: 0.1319 (0.1344
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_req: 0.0027 (0.0030
   ) time: 0.3918 data: 0.0785 max mem: 1109
446 Epoch: [42] [150/378] eta: 0:01:26 lr: 0.000221 loss: 0.2061 (0.
   2064) loss_classifier: 0.0631 (0.0678) loss_box_reg: 0.1319 (0.1352
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0028 (0.0031
   ) time: 0.3667 data: 0.0650 max mem: 1109
447 Epoch: [42] [200/378] eta: 0:01:06 lr: 0.000221 loss: 0.1802 (0.
   2057) loss_classifier: 0.0677 (0.0673) loss_box_reg: 0.1152 (0.1349
      loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0032 (0.0031
      time: 0.3682 data: 0.0650 max mem: 1109
448 Epoch: [42] [250/378] eta: 0:00:47 lr: 0.000221 loss: 0.2130 (0.
   2069) loss_classifier: 0.0584 (0.0678) loss_box_req: 0.1495 (0.1356
     loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0024 (0.0030
      time: 0.3666 data: 0.0669 max mem: 1109
449 Epoch: [42] [300/378] eta: 0:00:28 lr: 0.000221 loss: 0.2112 (0.
   2101) loss_classifier: 0.0701 (0.0681) loss_box_reg: 0.1298 (0.1385
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0023 (0.0030
   ) time: 0.3391 data: 0.0724 max mem: 1109
450 Epoch: [42] [350/378] eta: 0:00:10 lr: 0.000221 loss: 0.1927 (0.
   2106) loss_classifier: 0.0700 (0.0690) loss_box_reg: 0.1316 (0.1380
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0033 (0.0030
      time: 0.3676 data: 0.0664 max mem: 1109
451 Epoch: [42] [377/378] eta: 0:00:00 lr: 0.000221 loss: 0.2044 (0.
   2109) loss_classifier: 0.0620 (0.0686) loss_box_reg: 0.1401 (0.1387
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0024 (0.0030
      time: 0.3743 data: 0.0699 max mem: 1109
452 Epoch: [42] Total time: 0:02:19 (0.3695 s / it)
453 Epoch: [43] [ 0/378] eta: 0:02:11 lr: 0.000207 loss: 0.2156 (0.
   2156) loss_classifier: 0.0869 (0.0869) loss_box_reg: 0.1260 (0.1260
     loss_objectness: 0.0005 (0.0005) loss_rpn_box_req: 0.0021 (0.0021
      time: 0.3481 data: 0.0489 max mem: 1109
454 Epoch: [43] [ 50/378] eta: 0:01:59 lr: 0.000207 loss: 0.2157 (0.
   2102) loss_classifier: 0.0656 (0.0693) loss_box_reg: 0.1373 (0.1369)
      loss_objectness: 0.0004 (0.0006) loss_rpn_box_reg: 0.0031 (0.0034
      time: 0.3629 data: 0.0648 max mem: 1109
455 Epoch: [43] [100/378] eta: 0:01:41 lr: 0.000207 loss: 0.1965 (0.
   2033) loss_classifier: 0.0637 (0.0665) loss_box_reg: 0.1282 (0.1331
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0031 (0.0032
      time: 0.3651 data: 0.0639 max mem: 1109
456 Epoch: [43] [150/378] eta: 0:01:23 lr: 0.000207 loss: 0.1936 (0.
   2039) loss_classifier: 0.0688 (0.0676) loss_box_reg: 0.1146 (0.1327
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0022 (0.0031
      time: 0.3608 data: 0.0642 max mem: 1109
457 Epoch: [43] [200/378] eta: 0:01:04 lr: 0.000207 loss: 0.1533 (0.
   1972) loss_classifier: 0.0618 (0.0657) loss_box_reg: 0.0969 (0.1280
```

```
loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0026 (0.0030
      time: 0.3584 data: 0.0629 max mem: 1109
458 Epoch: [43] [250/378] eta: 0:00:46 lr: 0.000207 loss: 0.1919 (0.
   1986) loss_classifier: 0.0722 (0.0659) loss_box_reg: 0.1181 (0.1292
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0025 (0.0030
      time: 0.3725 data: 0.0707 max mem: 1109
459 Epoch: [43] [300/378] eta: 0:00:28 lr: 0.000207 loss: 0.2136 (0.
   2003) loss_classifier: 0.0743 (0.0665) loss_box_reg: 0.1363 (0.1303
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_req: 0.0026 (0.0030
   ) time: 0.3280 data: 0.0652 max mem: 1109
460 Epoch: [43] [350/378] eta: 0:00:09 lr: 0.000207 loss: 0.2018 (0.
   1998) loss_classifier: 0.0658 (0.0662) loss_box_reg: 0.1308 (0.1301
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0029 (0.0030
      time: 0.3357 data: 0.0691 max mem: 1109
461 Epoch: [43] [377/378] eta: 0:00:00 lr: 0.000207 loss: 0.1934 (0.
   1990) loss_classifier: 0.0597 (0.0659) loss_box_reg: 0.1177 (0.1296
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0031 (0.0030
      time: 0.3669 data: 0.0707 max mem: 1109
462 Epoch: [43] Total time: 0:02:14 (0.3562 s / it)
463 Epoch: [44] [ 0/378] eta: 0:02:17 lr: 0.000194 loss: 0.3699 (0.
   3699) loss_classifier: 0.0827 (0.0827) loss_box_reg: 0.2804 (0.2804
      loss_objectness: 0.0029 (0.0029) loss_rpn_box_reg: 0.0040 (0.0040
      time: 0.3630 data: 0.0568 max mem: 1109
464 Epoch: [44] [ 50/378] eta: 0:01:59 lr: 0.000194 loss: 0.1865 (0.
   1876) loss_classifier: 0.0594 (0.0630) loss_box_reg: 0.1142 (0.1215
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0028 (0.0027
   ) time: 0.3670 data: 0.0620 max mem: 1109
465 Epoch: [44] [100/378] eta: 0:01:40 lr: 0.000194 loss: 0.2172 (0.
   1889) loss_classifier: 0.0669 (0.0634) loss_box_reg: 0.1470 (0.1222
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0025 (0.0029
      time: 0.3603 data: 0.0621 max mem: 1109
466 Epoch: [44] [150/378] eta: 0:01:22 lr: 0.000194 loss: 0.1901 (0.
   1881) loss_classifier: 0.0628 (0.0634) loss_box_reg: 0.1224 (0.1214
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0025 (0.0028
      time: 0.3650 data: 0.0682 max mem: 1109
467 Epoch: [44] [200/378] eta: 0:01:03 lr: 0.000194 loss: 0.1842 (0.
   1884) loss_classifier: 0.0644 (0.0641) loss_box_reg: 0.1150 (0.1210
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0027 (0.0029
      time: 0.3283 data: 0.0627 max mem: 1109
468 Epoch: [44] [250/378] eta: 0:00:45 lr: 0.000194 loss: 0.1672 (0.
   1879) loss_classifier: 0.0675 (0.0639) loss_box_reg: 0.0970 (0.1206
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0031 (0.0029
   ) time: 0.3335 data: 0.0706 max mem: 1109
469 Epoch: [44] [300/378] eta: 0:00:27 lr: 0.000194 loss: 0.1865 (0.
   1858) loss_classifier: 0.0587 (0.0633) loss_box_reg: 0.1110 (0.1192
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0022 (0.0029
      time: 0.3442 data: 0.0608 max mem: 1109
470 Epoch: [44] [350/378] eta: 0:00:09 lr: 0.000194 loss: 0.1909 (0.
   1871) loss_classifier: 0.0606 (0.0630) loss_box_reg: 0.1204 (0.1207
      loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0024 (0.0029
      time: 0.3932 data: 0.0791 max mem: 1109
471 Epoch: [44] [377/378] eta: 0:00:00 lr: 0.000194 loss: 0.1786 (0.
   1877) loss_classifier: 0.0535 (0.0630) loss_box_reg: 0.1221 (0.1212
```

```
loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0028 (0.0029
      time: 0.3728 data: 0.0660 max mem: 1109
472 Epoch: [44] Total time: 0:02:14 (0.3556 s / it)
473 -- Test begins--
474 avg_IOU: 0.860832005319461 - avg_accuracy: 0.833333333333333 -
   avg_score: 0.9250034110646852
475 Epoch: [45] [ 0/378] eta: 0:02:20 lr: 0.000179 loss: 0.2676 (0.
   2676) loss_classifier: 0.0803 (0.0803) loss_box_reg: 0.1854 (0.1854
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_req: 0.0018 (0.0018
   ) time: 0.3705 data: 0.0962 max mem: 1109
476 Epoch: [45] [ 50/378] eta: 0:01:55 lr: 0.000179 loss: 0.1813 (0.
   1989) loss_classifier: 0.0562 (0.0635) loss_box_reg: 0.1206 (0.1318
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0030 (0.0032
   ) time: 0.3618 data: 0.0680 max mem: 1109
477 Epoch: [45] [100/378] eta: 0:01:40 lr: 0.000179 loss: 0.1694 (0.
   1945) loss_classifier: 0.0617 (0.0645) loss_box_reg: 0.1011 (0.1267
      loss_objectness: 0.0002 (0.0003) loss_rpn_box_reg: 0.0031 (0.0030
      time: 0.3906 data: 0.0783 max mem: 1109
478 Epoch: [45] [150/378] eta: 0:01:24 lr: 0.000179 loss: 0.1816 (0.
   1841) loss_classifier: 0.0555 (0.0628) loss_box_req: 0.1223 (0.1179
      loss_objectness: 0.0004 (0.0004) loss_rpn_box_reg: 0.0021 (0.0030
      time: 0.3313 data: 0.0645 max mem: 1109
479 Epoch: [45] [200/378] eta: 0:01:05 lr: 0.000179 loss: 0.1870 (0.
   1807) loss_classifier: 0.0605 (0.0619) loss_box_reg: 0.1185 (0.1155
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0024 (0.0029
   ) time: 0.3604 data: 0.0820 max mem: 1109
480 Epoch: [45] [250/378] eta: 0:00:46 lr: 0.000179 loss: 0.1564 (0.
   1763) loss_classifier: 0.0643 (0.0617) loss_box_reg: 0.0878 (0.1113
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0025 (0.0029
      time: 0.3763 data: 0.0964 max mem: 1109
481 Epoch: [45] [300/378] eta: 0:00:28 lr: 0.000179 loss: 0.1792 (0.
   1749) loss_classifier: 0.0656 (0.0617) loss_box_reg: 0.1114 (0.1098
      loss_objectness: 0.0004 (0.0005) loss_rpn_box_reg: 0.0032 (0.0029
      time: 0.4036 data: 0.0930 max mem: 1109
482 Epoch: [45] [350/378] eta: 0:00:10 lr: 0.000179 loss: 0.1600 (0.
   1754) loss_classifier: 0.0561 (0.0615) loss_box_reg: 0.1007 (0.1106
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0023 (0.0029
   ) time: 0.3633 data: 0.0651 max mem: 1109
483 Epoch: [45] [377/378] eta: 0:00:00 lr: 0.000179 loss: 0.1717 (0.
   1749) loss_classifier: 0.0517 (0.0611) loss_box_req: 0.1166 (0.1105
      loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0026 (0.0029
      time: 0.3589 data: 0.0653 max mem: 1109
484 Epoch: [45] Total time: 0:02:19 (0.3682 s / it)
485 Epoch: [46] [ 0/378] eta: 0:02:11 lr: 0.000165 loss: 0.1234 (0.
   1234) loss_classifier: 0.0418 (0.0418) loss_box_reg: 0.0759 (0.0759
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0057 (0.0057
   ) time: 0.3491 data: 0.0658 max mem: 1109
486 -Epoch: [46] [ 50/378] eta: 0:01:56 lr: 0.000165 loss: 0.1528 (0.
   1549) loss_classifier: 0.0559 (0.0565) loss_box_reg: 0.0900 (0.0950
     loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0028 (0.0030
      time: 0.3969 data: 0.1092 max mem: 1109
487 Epoch: [46] [100/378] eta: 0:01:37 lr: 0.000165 loss: 0.1542 (0.
   1605) loss_classifier: 0.0588 (0.0570) loss_box_reg: 0.0972 (0.1002
```

```
loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0022 (0.0030
      time: 0.3558 data: 0.0669 max mem: 1109
488 Epoch: [46] [150/378] eta: 0:01:21 lr: 0.000165 loss: 0.1706 (0.
   1606) loss_classifier: 0.0544 (0.0573) loss_box_reg: 0.1029 (0.1000
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0022 (0.0029
      time: 0.3686 data: 0.0721 max mem: 1109
489 Epoch: [46] [200/378] eta: 0:01:03 lr: 0.000165 loss: 0.1376 (0.
   1589) loss_classifier: 0.0539 (0.0577) loss_box_reg: 0.0816 (0.0980
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_req: 0.0024 (0.0029
   ) time: 0.3575 data: 0.0584 max mem: 1109
490 Epoch: [46] [250/378] eta: 0:00:45 lr: 0.000165 loss: 0.1570 (0.
   1600) loss_classifier: 0.0554 (0.0574) loss_box_reg: 0.0961 (0.0994
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0027 (0.0028
      time: 0.3593 data: 0.0617 max mem: 1109
491 Epoch: [46] [300/378] eta: 0:00:27 lr: 0.000165 loss: 0.1656 (0.
   1615) loss_classifier: 0.0489 (0.0573) loss_box_reg: 0.1242 (0.1009
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0025 (0.0029
      time: 0.3524 data: 0.0582 max mem: 1109
492 Epoch: [46] [350/378] eta: 0:00:09 lr: 0.000165 loss: 0.1555 (0.
   1617) loss_classifier: 0.0584 (0.0572) loss_box_req: 0.0885 (0.1012
     loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0030 (0.0029
      time: 0.3593 data: 0.0640 max mem: 1109
493 Epoch: [46] [377/378] eta: 0:00:00 lr: 0.000165 loss: 0.1595 (0.
   1615) loss_classifier: 0.0563 (0.0571) loss_box_reg: 0.0741 (0.1011
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0024 (0.0029
      time: 0.3233 data: 0.0640 max mem: 1109
494 Epoch: [46] Total time: 0:02:14 (0.3547 s / it)
495 Epoch: [47] [ 0/378] eta: 0:02:10 lr: 0.000150 loss: 0.1337 (0.
   1337) loss_classifier: 0.0509 (0.0509) loss_box_reg: 0.0782 (0.0782
      loss_objectness: 0.0008 (0.0008) loss_rpn_box_reg: 0.0039 (0.0039
      time: 0.3461 data: 0.0728 max mem: 1109
496 Epoch: [47] [ 50/378] eta: 0:01:52 lr: 0.000150 loss: 0.1416 (0.
   1496) loss_classifier: 0.0491 (0.0540) loss_box_reg: 0.0745 (0.0922
      loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0025 (0.0030
      time: 0.3601 data: 0.0635 max mem: 1109
497 Epoch: [47] [100/378] eta: 0:01:37 lr: 0.000150 loss: 0.1279 (0.
   1460) loss_classifier: 0.0506 (0.0531) loss_box_reg: 0.0736 (0.0898
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_req: 0.0026 (0.0027
      time: 0.3597 data: 0.0604 max mem: 1109
498 Epoch: [47] [150/378] eta: 0:01:18 lr: 0.000150 loss: 0.1474 (0.
   1466) loss_classifier: 0.0595 (0.0540) loss_box_reg: 0.0824 (0.0893
      loss_objectness: 0.0004 (0.0004) loss_rpn_box_reg: 0.0028 (0.0028
   ) time: 0.3268 data: 0.0642 max mem: 1109
499 Epoch: [47] [200/378] eta: 0:01:00 lr: 0.000150 loss: 0.1491 (0.
   1467) loss_classifier: 0.0477 (0.0547) loss_box_reg: 0.0923 (0.0887
      loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0026 (0.0029
      time: 0.3412 data: 0.0568 max mem: 1109
500 Epoch: [47] [250/378] eta: 0:00:44 lr: 0.000150 loss: 0.1500 (0.
   1459) loss_classifier: 0.0568 (0.0545) loss_box_reg: 0.0884 (0.0882
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0022 (0.0028
      time: 0.3717 data: 0.0719 max mem: 1109
501 Epoch: [47] [300/378] eta: 0:00:27 lr: 0.000150 loss: 0.1450 (0.
   1457) loss_classifier: 0.0446 (0.0543) loss_box_reg: 0.0821 (0.0881
```

```
loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0024 (0.0028
      time: 0.3501 data: 0.0577 max mem: 1109
502 Epoch: [47] [350/378] eta: 0:00:09 lr: 0.000150 loss: 0.1496 (0.
   1473) loss_classifier: 0.0507 (0.0546) loss_box_reg: 0.0967 (0.0894
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0028 (0.0028
      time: 0.3675 data: 0.0710 max mem: 1109
503 Epoch: [47] [377/378] eta: 0:00:00 lr: 0.000150 loss: 0.1529 (0.
   1485) loss_classifier: 0.0578 (0.0549) loss_box_reg: 0.0981 (0.0903
     loss_objectness: 0.0003 (0.0004) loss_rpn_box_req: 0.0028 (0.0028
   ) time: 0.3294 data: 0.0673 max mem: 1109
504 Epoch: [47] Total time: 0:02:12 (0.3497 s / it)
505 Epoch: [48] [ 0/378] eta: 0:02:10 lr: 0.000135 loss: 0.1650 (0.
   1650) loss_classifier: 0.0482 (0.0482) loss_box_reg: 0.1111 (0.1111
      loss_objectness: 0.0001 (0.0001) loss_rpn_box_reg: 0.0057 (0.0057
   ) time: 0.3451 data: 0.0658 max mem: 1109
506 Epoch: [48] [ 50/378] eta: 0:01:48 lr: 0.000135 loss: 0.1425 (0.
   1468) loss_classifier: 0.0513 (0.0544) loss_box_reg: 0.0830 (0.0892
     loss_objectness: 0.0002 (0.0003) loss_rpn_box_reg: 0.0023 (0.0030
   ) time: 0.3334 data: 0.0686 max mem: 1109
507 Epoch: [48] [100/378] eta: 0:01:32 lr: 0.000135 loss: 0.1510 (0.
   1500) loss_classifier: 0.0492 (0.0541) loss_box_reg: 0.1006 (0.0927
     loss_objectness: 0.0002 (0.0003) loss_rpn_box_reg: 0.0027 (0.0028
      time: 0.3333 data: 0.0702 max mem: 1109
508 Epoch: [48] [150/378] eta: 0:01:15 lr: 0.000135 loss: 0.1185 (0.
   1468) loss_classifier: 0.0452 (0.0542) loss_box_reg: 0.0640 (0.0895
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0021 (0.0028
   ) time: 0.3360 data: 0.0680 max mem: 1109
509 Epoch: [48] [200/378] eta: 0:01:00 lr: 0.000135 loss: 0.1232 (0.
   1437) loss_classifier: 0.0443 (0.0540) loss_box_reg: 0.0714 (0.0864
     loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0023 (0.0028
      time: 0.3614 data: 0.0609 max mem: 1109
510 Epoch: [48] [250/378] eta: 0:00:44 lr: 0.000135 loss: 0.1492 (0.
   1444) loss_classifier: 0.0588 (0.0540) loss_box_reg: 0.0920 (0.0871
      loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0030 (0.0029
      time: 0.3553 data: 0.0590 max mem: 1109
511 Epoch: [48] [300/378] eta: 0:00:26 lr: 0.000135 loss: 0.1373 (0.
   1445) loss_classifier: 0.0535 (0.0539) loss_box_reg: 0.0780 (0.0873
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0025 (0.0028
      time: 0.3242 data: 0.0665 max mem: 1109
512 Epoch: [48] [350/378] eta: 0:00:09 lr: 0.000135 loss: 0.1198 (0.
   1432) loss_classifier: 0.0506 (0.0537) loss_box_reg: 0.0694 (0.0862
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0022 (0.0028
   ) time: 0.3612 data: 0.0642 max mem: 1109
513 Epoch: [48] [377/378] eta: 0:00:00 lr: 0.000135 loss: 0.1382 (0.
   1433) loss_classifier: 0.0552 (0.0537) loss_box_reg: 0.0849 (0.0863
     loss_objectness: 0.0001 (0.0004) loss_rpn_box_reg: 0.0022 (0.0028
      time: 0.3589 data: 0.0633 max mem: 1109
514 Epoch: [48] Total time: 0:02:10 (0.3447 s / it)
515 Epoch: [49] [ 0/378] eta: 0:02:11 lr: 0.000121 loss: 0.1715 (0.
   1715) loss_classifier: 0.0453 (0.0453) loss_box_reg: 0.1208 (0.1208
      loss_objectness: 0.0007 (0.0007) loss_rpn_box_reg: 0.0046 (0.0046
      time: 0.3481 data: 0.0559 max mem: 1109
516 Epoch: [49] [ 50/378] eta: 0:01:55 lr: 0.000121 loss: 0.1321 (0.
```

```
516 1325) loss_classifier: 0.0534 (0.0516) loss_box_reg: 0.0678 (0.0774
   ) loss_objectness: 0.0003 (0.0006) loss_rpn_box_reg: 0.0023 (0.0028
   ) time: 0.3492 data: 0.0587 max mem: 1109
517 Epoch: [49] [100/378] eta: 0:01:33 lr: 0.000121 loss: 0.1311 (0.
   1302) loss_classifier: 0.0514 (0.0517) loss_box_reg: 0.0718 (0.0750
     loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0025 (0.0030
   ) time: 0.3204 data: 0.0614 max mem: 1109
518 Epoch: [49] [150/378] eta: 0:01:16 lr: 0.000121 loss: 0.1199 (0.
   1298) loss_classifier: 0.0444 (0.0516) loss_box_reg: 0.0642 (0.0749)
   ) loss_objectness: 0.0001 (0.0004) loss_rpn_box_reg: 0.0019 (0.0030
      time: 0.3368 data: 0.0640 max mem: 1109
519 Epoch: [49] [200/378] eta: 0:01:00 lr: 0.000121 loss: 0.1215 (0.
   1290) loss_classifier: 0.0435 (0.0504) loss_box_reg: 0.0716 (0.0754
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0020 (0.0028
   ) time: 0.3546 data: 0.0586 max mem: 1109
520 Epoch: [49] [250/378] eta: 0:00:44 lr: 0.000121 loss: 0.1355 (0.
   1298) loss_classifier: 0.0550 (0.0510) loss_box_reg: 0.0759 (0.0755
   ) loss_objectness: 0.0002 (0.0005) loss_rpn_box_reg: 0.0026 (0.0028
   ) time: 0.3535 data: 0.0623 max mem: 1109
521 Epoch: [49] [300/378] eta: 0:00:26 lr: 0.000121 loss: 0.1169 (0.
   1293) loss_classifier: 0.0544 (0.0513) loss_box_reg: 0.0649 (0.0748
   ) loss_objectness: 0.0003 (0.0005) loss_rpn_box_reg: 0.0025 (0.0028
   ) time: 0.3272 data: 0.0637 max mem: 1109
522 Epoch: [49] [350/378] eta: 0:00:09 lr: 0.000121 loss: 0.1205 (0.
   1294) loss_classifier: 0.0472 (0.0516) loss_box_reg: 0.0696 (0.0746
     loss_objectness: 0.0003 (0.0004) loss_rpn_box_reg: 0.0021 (0.0028
   ) time: 0.3280 data: 0.0649 max mem: 1109
523 Epoch: [49] [377/378] eta: 0:00:00 lr: 0.000121 loss: 0.1308 (0.
   1294) loss_classifier: 0.0459 (0.0516) loss_box_reg: 0.0735 (0.0746
     loss_objectness: 0.0002 (0.0004) loss_rpn_box_reg: 0.0026 (0.0028
   ) time: 0.3327 data: 0.0685 max mem: 1109
524 Epoch: [49] Total time: 0:02:08 (0.3395 s / it)
525 --Test begins--
526 avg_IOU: 0.8708847526093604 - avg_accuracy: 0.833333333333333 -
   avg_score: 0.9415726720447272
527
528 Process finished with exit code 0
529
```