```
 1   Namespace(epochs=100, batch_size=20, accumulate=4, cfg='cfg/yolov3-custom.cfg',
     data='data/customdata/custom.data', multi_scale=False, img_size=[512], rect=False,
     resume=False, nosave=True, notest=False, evolve=False, bucket='', cache_images=True,
     weights='weights/yolov3-spp-ultralytics.pt', name='', device='', adam=False,
     single_cls=False)
 2   Using CUDA device0 _CudaDeviceProperties(name='Tesla T4', total_memory=15102MB)
 3
 4   2024-04-23 09:51:38.431278: E
     external/local_xla/xla/stream_executor/cuda/cuda_dnn.cc:9261] Unable to register
     cuDNN factory: Attempting to register factory for plugin cuDNN when one has already
     been registered
 5   2024-04-23 09:51:38.431347: E
     external/local_xla/xla/stream_executor/cuda/cuda_fft.cc:607] Unable to register
     cuFFT factory: Attempting to register factory for plugin cuFFT when one has already
     been registered
 6   2024-04-23 09:51:38.432790: E
     external/local_xla/xla/stream_executor/cuda/cuda_blas.cc:1515] Unable to register
     cuBLAS factory: Attempting to register factory for plugin cuBLAS when one has
     already been registered
 7   2024-04-23 09:51:39.606926: W tensorflow/compiler/tf2tensorrt/utils/py_utils.cc:38]
     TF-TRT Warning: Could not find TensorRT
 8   Run 'tensorboard --logdir=runs' to view tensorboard at http://localhost:6006/
 9   WARNING: smart bias initialization failure.
10   WARNING: smart bias initialization failure.
11   WARNING: smart bias initialization failure.
12   Model Summary: 225 layers, 6.25733e+07 parameters, 6.25733e+07 gradients
13   Caching labels (91 found, 0 missing, 0 empty, 0 duplicate, for 91 images): 100%
     91/91 [00:00<00:00, 6898.78it/s]
14   Caching images (0.0GB): 100% 91/91 [00:00<00:00, 123.09it/s]
15   Reading image shapes: 100% 10/10 [00:00<00:00, 970.34it/s]
16   Caching labels (10 found, 0 missing, 0 empty, 0 duplicate, for 10 images): 100%
     10/10 [00:00<00:00, 6115.04it/s]
17   Caching images (0.0GB): 100% 10/10 [00:00<00:00, 63.34it/s]
18   Image sizes 512 - 512 train, 512 test
19   Using 2 dataloader workers
20   Starting training for 100 epochs...
21
22       Epoch   gpu_mem      GIoU       obj       cls     total   targets  img_size
23   /usr/lib/python3.10/multiprocessing/popen_fork.py:66: RuntimeWarning: os.fork() was
     called. os.fork() is incompatible with multithreaded code, and JAX is multithreaded,
     so this will likely lead to a deadlock.
24     self.pid = os.fork()
25     0% 0/5 [00:00<?, ?it/s]/content/YoloV3/utils/utils.py:374: UserWarning: The
     torch.cuda.*DtypeTensor constructors are no longer recommended. It's best to use
     methods such as torch.tensor(data, dtype=*, device='cuda') to create tensors.
     (Triggered internally at ../torch/csrc/tensor/python_tensor.cpp:83.)
26     lcls, lbox, lobj = ft([0]), ft([0]), ft([0])
27   /usr/local/lib/python3.10/dist-packages/torch/cuda/memory.py:440: FutureWarning:
     torch.cuda.memory_cached has been renamed to torch.cuda.memory_reserved
28     warnings.warn(
29         0/99     13.9G      8.25       161         0       169        51       512:
         20% 1/5 [00:09<00:39,
         9.77s/it]/usr/local/lib/python3.10/dist-packages/torch/cuda/memory.py:440:
         FutureWarning: torch.cuda.memory_cached has been renamed to
         torch.cuda.memory_reserved
30     warnings.warn(
31         0/99     13.9G      7.54       108         0       115        28       512:
         100% 5/5 [00:15<00:00,  3.10s/it]
32   /usr/local/lib/python3.10/dist-packages/torch/functional.py:507: UserWarning:
     torch.meshgrid: in an upcoming release, it will be required to pass the indexing
     argument. (Triggered internally at ../aten/src/ATen/native/TensorShape.cpp:3549.)
33     return _VF.meshgrid(tensors, **kwargs)  # type: ignore[attr-defined]
34               Class    Images   Targets         P         R    mAP@0.5        F1:
         0% 0/1 [00:00<?,
         ?it/s]/usr/lib/python3.10/multiprocessing/popen_fork.py:66:
         RuntimeWarning: os.fork() was called. os.fork() is incompatible with
         multithreaded code, and JAX is multithreaded, so this will likely
         lead to a deadlock.
35     self.pid = os.fork()
36               Class    Images   Targets         P         R    mAP@0.5        F1:
         100% 1/1 [00:02<00:00,  2.77s/it]
37                 all        10        17         0         0  0.000586          0
38
```

```
39            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
40            1/99     13.9G       6.22      9.19         0      15.4        19       512:
              100% 5/5 [00:06<00:00,  1.34s/it]
41                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  1.62it/s]
42                      all        10        17         0         0   0.00136         0
43
44            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
45            2/99     13.9G       5.86      3.98         0      9.84        27       512:
              100% 5/5 [00:06<00:00,  1.36s/it]
46                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  1.97it/s]
47                      all        10        17         0         0   0.00418         0
48
49            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
50            3/99     13.9G       6.26      3.55         0      9.81        30       512:
              100% 5/5 [00:06<00:00,  1.36s/it]
51                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  1.65it/s]
52                      all        10        17         0         0   0.00771         0
53
54            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
55            4/99     13.3G       4.73      3.89         0      8.63        26       512:
              100% 5/5 [00:07<00:00,  1.41s/it]
56                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.13it/s]
57                      all        10        17         0         0    0.0554         0
58
59            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
60            5/99     13.3G       4.81       4.5         0      9.31        36       512:
              100% 5/5 [00:06<00:00,  1.37s/it]
61                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.43it/s]
62                      all        10        17         1    0.0588     0.179     0.111
63
64            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
65            6/99     13.3G       5.14      4.32         0      9.46        28       512:
              100% 5/5 [00:06<00:00,  1.37s/it]
66                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.70it/s]
67                      all        10        17         1    0.0588     0.335     0.111
68
69            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
70            7/99     15.1G       5.19      4.62         0      9.82        24       512:
              100% 5/5 [00:06<00:00,  1.37s/it]
71                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.72it/s]
72                      all        10        17         1    0.0588      0.44     0.111
73
74            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
75            8/99     15.1G        5.1      4.95         0      10.1        32       512:
              100% 5/5 [00:06<00:00,  1.40s/it]
76                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.26it/s]
77                      all        10        17         1    0.0588     0.588     0.111
78
79            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
80            9/99     15.1G       5.64      5.22         0      10.9        33       512:
              100% 5/5 [00:07<00:00,  1.42s/it]
81                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.61it/s]
82                      all        10        17         1    0.0588     0.647     0.111
83
84            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
85            10/99    15.1G       5.69      4.86         0      10.5        34       512:
              100% 5/5 [00:06<00:00,  1.39s/it]
86                    Class     Images   Targets         P         R   mAP@0.5        F1:
                      100% 1/1 [00:00<00:00,  2.60it/s]
87                      all        10        17         1     0.208     0.652     0.344
88
89            Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
90            11/99    15.1G       5.57      3.65         0      9.22        28       512:
              100% 5/5 [00:06<00:00,  1.39s/it]
```

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 91              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.69it/s]
 92                all        10        17     0.519     0.529     0.459     0.524
 93
 94      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
 95      12/99     15.1G        3.9       3.9         0       7.8        31       512:
         100% 5/5 [00:07<00:00,  1.41s/it]
 96              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.58it/s]
 97                all        10        17     0.155     0.471     0.121     0.234
 98
 99      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
100      13/99     15.1G       5.27      3.38         0      8.66        35       512:
         100% 5/5 [00:07<00:00,  1.42s/it]
101              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.15it/s]
102                all        10        17     0.158     0.824     0.674     0.265
103
104      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
105      14/99     15.1G       5.35      2.84         0      8.19        27       512:
         100% 5/5 [00:07<00:00,  1.47s/it]
106              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.76it/s]
107                all        10        17     0.156     0.695     0.239     0.255
108
109      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
110      15/99     15.1G        5.9      2.57         0      8.47        31       512:
         100% 5/5 [00:07<00:00,  1.41s/it]
111              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.56it/s]
112                all        10        17     0.101     0.706     0.108     0.177
113
114      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
115      16/99     15.1G       5.13      2.02         0      7.15        29       512:
         100% 5/5 [00:07<00:00,  1.42s/it]
116              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.59it/s]
117                all        10        17    0.0825     0.614    0.0793     0.145
118
119      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
120      17/99     15.1G       5.75      1.79         0      7.54        25       512:
         100% 5/5 [00:07<00:00,  1.42s/it]
121              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.66it/s]
122                all        10        17     0.168     0.824     0.436      0.28
123
124      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
125      18/99     15.1G       6.36      1.63         0      7.99        23       512:
         100% 5/5 [00:07<00:00,  1.43s/it]
126              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.16it/s]
127                all        10        17     0.133     0.765     0.116     0.226
128
129      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
130      19/99     15.1G       5.06      1.65         0      6.71        31       512:
         100% 5/5 [00:07<00:00,  1.46s/it]
131              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.56it/s]
132                all        10        17     0.201     0.824     0.606     0.324
133
134      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
135      20/99     15.1G       5.45      1.52         0      6.97        35       512:
         100% 5/5 [00:07<00:00,  1.45s/it]
136              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.60it/s]
137                all        10        17     0.242     0.824     0.482     0.374
138
139      Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
140      21/99     15.1G       4.02       1.4         0      5.42        24       512:
         100% 5/5 [00:07<00:00,  1.43s/it]
141              Class    Images   Targets         P         R    mAP@0.5        F1:
                 100% 1/1 [00:00<00:00,  2.49it/s]
142                all        10        17     0.203     0.882     0.536      0.33
```

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143
144        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
145        22/99    15.1G         4.07       1.37          0        5.45         22        512:
           100% 5/5 [00:07<00:00,  1.50s/it]
146                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.64it/s]
147                   all          10         17      0.239      0.765      0.618       0.364
148
149        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
150        23/99    15.1G         4.59       1.47          0        6.05         35        512:
           100% 5/5 [00:07<00:00,  1.42s/it]
151                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.61it/s]
152                   all          10         17      0.199      0.882      0.678       0.324
153
154        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
155        24/99    15.1G         5.02       1.48          0         6.5         30        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
156                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.64it/s]
157                   all          10         17      0.224      0.941      0.825       0.362
158
159        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
160        25/99    15.1G         4.69        1.5          0        6.19         42        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
161                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.56it/s]
162                   all          10         17      0.195      0.765      0.248       0.311
163
164        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
165        26/99    15.1G         5.24       1.21          0        6.45         22        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
166                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.16it/s]
167                   all          10         17      0.207      0.941      0.819       0.339
168
169        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
170        27/99    15.1G         4.68       1.14          0        5.82         28        512:
           100% 5/5 [00:07<00:00,  1.50s/it]
171                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.62it/s]
172                   all          10         17      0.231      0.941      0.741        0.37
173
174        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
175        28/99    15.1G         5.05       1.35          0        6.41         41        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
176                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.63it/s]
177                   all          10         17      0.222      0.882      0.504       0.355
178
179        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
180        29/99    15.1G         5.27       1.23          0         6.5         29        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
181                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.55it/s]
182                   all          10         17      0.199      0.882       0.73       0.325
183
184        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
185        30/99    15.1G         4.74       1.25          0        5.99         30        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
186                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.63it/s]
187                   all          10         17      0.224      0.882      0.636       0.357
188
189        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
190        31/99    15.1G          4.4       1.18          0        5.58         34        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
191                 Class      Images    Targets          P          R     mAP@0.5          F1:
                    100% 1/1 [00:00<00:00,  2.08it/s]
192                   all          10         17      0.161      0.882      0.717       0.272
193
194        Epoch   gpu_mem        GIoU        obj        cls       total    targets   img_size
195        32/99    15.1G         3.45       1.26          0        4.71         41        512:
```

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                         100% 5/5 [00:07<00:00,  1.47s/it]
196                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.16it/s]
197                        all       10        17      0.155     0.941     0.714       0.266
198
199          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
200          33/99    15.1G       4.02      1.01          0       5.03         32        512:
                         100% 5/5 [00:07<00:00,  1.50s/it]
201                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.55it/s]
202                        all       10        17      0.159     0.882     0.534        0.27
203
204          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
205          34/99    15.1G       4.39      1.08          0       5.46         27        512:
                         100% 5/5 [00:07<00:00,  1.44s/it]
206                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.19it/s]
207                        all       10        17      0.144     0.882     0.522       0.247
208
209          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
210          35/99    15.1G       4.48      1.11          0       5.59         29        512:
                         100% 5/5 [00:07<00:00,  1.48s/it]
211                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.60it/s]
212                        all       10        17      0.207     0.941     0.589       0.339
213
214          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
215          36/99    15.1G       4.09     0.867          0       4.96         25        512:
                         100% 5/5 [00:07<00:00,  1.43s/it]
216                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.61it/s]
217                        all       10        17       0.13     0.824     0.326       0.225
218
219          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
220          37/99    15.1G       4.03      1.01          0       5.04         22        512:
                         100% 5/5 [00:07<00:00,  1.43s/it]
221                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.63it/s]
222                        all       10        17      0.153     0.882     0.465        0.26
223
224          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
225          38/99    15.1G       4.49      1.05          0       5.55         33        512:
                         100% 5/5 [00:07<00:00,  1.42s/it]
226                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.63it/s]
227                        all       10        17      0.178     0.882     0.477       0.296
228
229          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
230          39/99    15.1G       3.25      0.98          0       4.23         30        512:
                         100% 5/5 [00:07<00:00,  1.43s/it]
231                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.18it/s]
232                        all       10        17      0.209     0.882     0.531       0.338
233
234          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
235          40/99    15.1G       3.49     0.929          0       4.42         29        512:
                         100% 5/5 [00:07<00:00,  1.46s/it]
236                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.57it/s]
237                        all       10        17      0.326     0.824     0.625       0.467
238
239          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
240          41/99    15.1G       4.66      1.05          0       5.71         28        512:
                         100% 5/5 [00:07<00:00,  1.43s/it]
241                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.64it/s]
242                        all       10        17      0.409     0.856     0.639       0.554
243
244          Epoch   gpu_mem       GIoU       obj        cls      total    targets   img_size
245          42/99    15.1G       3.73      1.04          0       4.76         33        512:
                         100% 5/5 [00:07<00:00,  1.43s/it]
246                      Class    Images   Targets          P         R    mAP@0.5         F1:
                         100% 1/1 [00:00<00:00,  2.59it/s]
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247                      all        10        17      0.465     0.824     0.698     0.594
248
249          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
250          43/99    15.1G        3.53      0.98         0      4.51        37      512:
             100% 5/5 [00:07<00:00,  1.45s/it]
251                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.58it/s]
252                      all        10        17       0.46     0.824      0.61     0.591
253
254          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
255          44/99    15.1G        3.55     0.987         0      4.54        31      512:
             100% 5/5 [00:07<00:00,  1.44s/it]
256                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.15it/s]
257                      all        10        17       0.55     0.765     0.679      0.64
258
259          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
260          45/99    15.1G        3.19     0.905         0      4.09        34      512:
             100% 5/5 [00:07<00:00,  1.43s/it]
261                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.59it/s]
262                      all        10        17      0.635     0.765     0.709     0.694
263
264          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
265          46/99    15.1G        3.48     0.845         0      4.32        22      512:
             100% 5/5 [00:07<00:00,  1.43s/it]
266                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.61it/s]
267                      all        10        17      0.632     0.765     0.679     0.692
268
269          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
270          47/99    15.1G        3.49     0.871         0      4.36        28      512:
             100% 5/5 [00:07<00:00,  1.42s/it]
271                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.17it/s]
272                      all        10        17      0.629     0.824     0.723     0.713
273
274          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
275          48/99    15.1G        4.58     0.836         0      5.41        23      512:
             100% 5/5 [00:07<00:00,  1.49s/it]
276                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.53it/s]
277                      all        10        17      0.546     0.824     0.696     0.656
278
279          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
280          49/99    15.1G        3.55     0.957         0      4.51        37      512:
             100% 5/5 [00:07<00:00,  1.43s/it]
281                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.66it/s]
282                      all        10        17      0.639     0.824     0.666      0.72
283
284          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
285          50/99    15.1G         4.2     0.964         0      5.16        27      512:
             100% 5/5 [00:07<00:00,  1.42s/it]
286                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.60it/s]
287                      all        10        17       0.61     0.824     0.721     0.701
288
289          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
290          51/99    15.1G        4.12      0.88         0         5        21      512:
             100% 5/5 [00:07<00:00,  1.43s/it]
291                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.63it/s]
292                      all        10        17      0.548     0.824     0.655     0.658
293
294          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
295          52/99    15.1G        4.43     0.924         0      5.35        28      512:
             100% 5/5 [00:07<00:00,  1.45s/it]
296                   Class     Images    Targets         P         R    mAP@0.5        F1:
             100% 1/1 [00:00<00:00,  2.15it/s]
297                      all        10        17      0.597     0.765     0.662      0.67
298
299          Epoch   gpu_mem       GIoU       obj       cls     total   targets  img_size
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300    53/99    15.1G    3.42    0.875        0    4.29    32    512:
               100% 5/5 [00:07<00:00,  1.50s/it]
301              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.64it/s]
302                all       10       17    0.504   0.765    0.649    0.608
303
304      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
305    54/99    15.1G    3.68    0.843        0    4.53    33    512:
               100% 5/5 [00:07<00:00,  1.42s/it]
306              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.63it/s]
307                all       10       17     0.66   0.765     0.69    0.708
308
309      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
310    55/99    15.1G     4.1    0.86        0    4.96    28    512:
               100% 5/5 [00:07<00:00,  1.43s/it]
311              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.61it/s]
312                all       10       17    0.548   0.765    0.662    0.638
313
314      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
315    56/99    15.1G    3.34    0.862        0     4.2    35    512:
               100% 5/5 [00:07<00:00,  1.44s/it]
316              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.64it/s]
317                all       10       17    0.493   0.765    0.642      0.6
318
319      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
320    57/99    15.1G    3.78    0.87        0    4.65    31    512:
               100% 5/5 [00:07<00:00,  1.43s/it]
321              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.24it/s]
322                all       10       17     0.58   0.733    0.661    0.648
323
324      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
325    58/99    15.1G    3.39    0.793        0    4.18    35    512:
               100% 5/5 [00:07<00:00,  1.44s/it]
326              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.60it/s]
327                all       10       17    0.585   0.765    0.673    0.663
328
329      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
330    59/99    15.1G    2.41    0.801        0    3.21    31    512:
               100% 5/5 [00:07<00:00,  1.44s/it]
331              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.61it/s]
332                all       10       17    0.772   0.706    0.708    0.738
333
334      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
335    60/99    15.1G    3.59    0.754        0    4.34    34    512:
               100% 5/5 [00:07<00:00,  1.45s/it]
336              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.05it/s]
337                all       10       17    0.778   0.706    0.674     0.74
338
339      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
340    61/99    15.1G    2.71    0.768        0    3.48    29    512:
               100% 5/5 [00:07<00:00,  1.52s/it]
341              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.40it/s]
342                all       10       17    0.823   0.823    0.767    0.823
343
344      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
345    62/99    15.1G    3.01    0.752        0    3.76    31    512:
               100% 5/5 [00:07<00:00,  1.43s/it]
346              Class    Images   Targets       P      R   mAP@0.5       F1:
               100% 1/1 [00:00<00:00,  2.65it/s]
347                all       10       17    0.836   0.824    0.816    0.829
348
349      Epoch  gpu_mem     GIoU     obj     cls    total  targets  img_size
350    63/99    15.1G    3.08    0.809        0    3.89    32    512:
               100% 5/5 [00:07<00:00,  1.43s/it]
351              Class    Images   Targets       P      R   mAP@0.5       F1:
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                            100% 1/1 [00:00<00:00,  2.59it/s]
352                  all        10        17       0.856      0.824      0.81      0.839
353
354        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
355        64/99     15.1G       2.93      0.857         0       3.79         35       512:
           100% 5/5 [00:07<00:00,  1.44s/it]
356                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.58it/s]
357                  all        10        17       0.851      0.824      0.819      0.837
358
359        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
360        65/99     15.1G       2.43      0.797         0       3.23         31       512:
           100% 5/5 [00:07<00:00,  1.43s/it]
361                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.19it/s]
362                  all        10        17        0.63      0.765      0.656      0.691
363
364        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
365        66/99     15.1G       3.26      0.794         0       4.05         26       512:
           100% 5/5 [00:07<00:00,  1.47s/it]
366                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.56it/s]
367                  all        10        17       0.841      0.824      0.813      0.832
368
369        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
370        67/99     15.1G        2.4      0.737         0       3.14         28       512:
           100% 5/5 [00:07<00:00,  1.42s/it]
371                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.61it/s]
372                  all        10        17       0.844      0.824      0.804      0.834
373
374        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
375        68/99     15.1G       2.67      0.678         0       3.35         25       512:
           100% 5/5 [00:07<00:00,  1.43s/it]
376                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.62it/s]
377                  all        10        17       0.846      0.824      0.792      0.835
378
379        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
380        69/99     15.1G       2.45      0.694         0       3.15         24       512:
           100% 5/5 [00:07<00:00,  1.46s/it]
381                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.61it/s]
382                  all        10        17       0.722      0.824      0.758      0.77
383
384        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
385        70/99     15.1G       2.99      0.733         0       3.72         32       512:
           100% 5/5 [00:07<00:00,  1.44s/it]
386                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  1.88it/s]
387                  all        10        17       0.726      0.824      0.81      0.772
388
389        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
390        71/99     15.1G          2      0.724         0       2.73         25       512:
           100% 5/5 [00:07<00:00,  1.52s/it]
391                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.55it/s]
392                  all        10        17       0.718      0.824      0.79      0.767
393
394        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
395        72/99     15.1G       2.47      0.742         0       3.21         28       512:
           100% 5/5 [00:07<00:00,  1.43s/it]
396                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.55it/s]
397                  all        10        17       0.707      0.824      0.828      0.761
398
399        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
400        73/99     15.1G       2.32      0.689         0       3.01         27       512:
           100% 5/5 [00:07<00:00,  1.43s/it]
401                Class     Images   Targets        P         R    mAP@0.5         F1:
                   100% 1/1 [00:00<00:00,  2.26it/s]
402                  all        10        17        0.73      0.824      0.818      0.774
403
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404        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
405        74/99     15.1G       2.64     0.645         0       3.29         26        512:
           100% 5/5 [00:07<00:00,  1.49s/it]
406                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.58it/s]
407                   all         10        17     0.711     0.824      0.824        0.763
408
409        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
410        75/99     15.1G       2.27     0.648         0       2.92         29        512:
           100% 5/5 [00:07<00:00,  1.44s/it]
411                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.60it/s]
412                   all         10        17      0.75     0.824      0.799        0.785
413
414        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
415        76/99     15.1G       2.15     0.636         0       2.78         32        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
416                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.60it/s]
417                   all         10        17     0.767     0.824      0.802        0.794
418
419        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
420        77/99     15.1G       2.17     0.681         0       2.85         27        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
421                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.65it/s]
422                   all         10        17     0.766     0.824       0.83        0.794
423
424        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
425        78/99     15.1G       1.87     0.682         0       2.56         37        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
426                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.09it/s]
427                   all         10        17      0.74     0.824      0.823         0.78
428
429        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
430        79/99     15.1G       2.27      0.64         0       2.91         25        512:
           100% 5/5 [00:07<00:00,  1.47s/it]
431                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.60it/s]
432                   all         10        17     0.748     0.824       0.82        0.784
433
434        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
435        80/99     15.1G       2.55     0.727         0       3.28         28        512:
           100% 5/5 [00:07<00:00,  1.45s/it]
436                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.60it/s]
437                   all         10        17     0.751     0.824       0.82        0.785
438
439        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
440        81/99     15.1G       2.25     0.646         0        2.9         24        512:
           100% 5/5 [00:07<00:00,  1.43s/it]
441                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.57it/s]
442                   all         10        17     0.733     0.824      0.823        0.775
443
444        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
445        82/99     15.1G       1.72     0.727         0       2.45         37        512:
           100% 5/5 [00:07<00:00,  1.46s/it]
446                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.54it/s]
447                   all         10        17     0.732     0.824      0.809        0.775
448
449        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
450        83/99     15.1G       2.22     0.675         0       2.89         38        512:
           100% 5/5 [00:07<00:00,  1.44s/it]
451                 Class      Images    Targets         P        R     mAP@0.5         F1:
           100% 1/1 [00:00<00:00,  2.36it/s]
452                   all         10        17     0.728     0.824      0.795        0.773
453
454        Epoch    gpu_mem      GIoU       obj       cls      total    targets   img_size
455        84/99     15.1G        2.3     0.632         0       2.93         26        512:
           100% 5/5 [00:07<00:00,  1.44s/it]
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456                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.59it/s]
457                      all       10       17    0.725    0.824    0.803    0.771
458
459      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
460      85/99   15.1G       1.99    0.625        0     2.61       26      512:
                   100% 5/5 [00:07<00:00,  1.43s/it]
461                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.57it/s]
462                      all       10       17    0.729    0.824    0.821    0.773
463
464      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
465      86/99   15.1G       1.94     0.57        0     2.51       29      512:
                   100% 5/5 [00:07<00:00,  1.43s/it]
466                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.13it/s]
467                      all       10       17    0.725    0.824    0.818    0.771
468
469      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
470      87/99   15.1G       2.24    0.639        0     2.88       30      512:
                   100% 5/5 [00:07<00:00,  1.51s/it]
471                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.65it/s]
472                      all       10       17    0.734    0.824    0.815    0.776
473
474      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
475      88/99   15.1G       2.48    0.615        0      3.1       21      512:
                   100% 5/5 [00:07<00:00,  1.44s/it]
476                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.51it/s]
477                      all       10       17     0.72    0.765    0.821    0.742
478
479      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
480      89/99   15.1G       1.81    0.608        0     2.42       28      512:
                   100% 5/5 [00:07<00:00,  1.42s/it]
481                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.64it/s]
482                      all       10       17    0.714    0.765    0.834    0.739
483
484      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
485      90/99   15.1G       1.72    0.659        0     2.38       38      512:
                   100% 5/5 [00:07<00:00,  1.43s/it]
486                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.62it/s]
487                      all       10       17    0.715    0.765    0.834    0.739
488
489      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
490      91/99   15.1G       1.95    0.581        0     2.53       32      512:
                   100% 5/5 [00:07<00:00,  1.43s/it]
491                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.07it/s]
492                      all       10       17    0.709    0.765    0.825    0.736
493
494      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
495      92/99   15.1G       1.52    0.564        0     2.09       20      512:
                   100% 5/5 [00:07<00:00,  1.46s/it]
496                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.57it/s]
497                      all       10       17    0.684    0.765    0.821    0.722
498
499      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
500      93/99   15.1G       1.52    0.628        0     2.14       31      512:
                   100% 5/5 [00:07<00:00,  1.43s/it]
501                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.65it/s]
502                      all       10       17    0.686    0.771    0.841    0.726
503
504      Epoch  gpu_mem       GIoU      obj      cls    total  targets img_size
505      94/99   15.1G       2.45    0.624        0     3.08       31      512:
                   100% 5/5 [00:07<00:00,  1.42s/it]
506                    Class   Images  Targets        P        R   mAP@0.5        F1:
                   100% 1/1 [00:00<00:00,  2.35it/s]
507                      all       10       17    0.688    0.765    0.837    0.724
```

```
508
509       Epoch    gpu_mem       GIoU        obj        cls      total    targets   img_size
510       95/99     15.1G        1.78      0.588          0       2.37         32       512:
          100% 5/5 [00:07<00:00,  1.50s/it]
511                 Class     Images    Targets          P          R    mAP@0.5         F1:
                    100% 1/1 [00:00<00:00,  2.50it/s]
512                   all        10         17      0.685      0.767      0.811      0.723
513
514       Epoch    gpu_mem       GIoU        obj        cls      total    targets   img_size
515       96/99     15.1G        1.67      0.596          0       2.27         24       512:
          100% 5/5 [00:07<00:00,  1.43s/it]
516                 Class     Images    Targets          P          R    mAP@0.5         F1:
                    100% 1/1 [00:00<00:00,  2.64it/s]
517                   all        10         17      0.691      0.765      0.818      0.726
518
519       Epoch    gpu_mem       GIoU        obj        cls      total    targets   img_size
520       97/99     15.1G        1.61      0.611          0       2.22         34       512:
          100% 5/5 [00:07<00:00,  1.43s/it]
521                 Class     Images    Targets          P          R    mAP@0.5         F1:
                    100% 1/1 [00:00<00:00,  2.59it/s]
522                   all        10         17      0.687      0.765       0.82      0.724
523
524       Epoch    gpu_mem       GIoU        obj        cls      total    targets   img_size
525       98/99     15.1G        1.68      0.526          0       2.21         31       512:
          100% 5/5 [00:07<00:00,  1.43s/it]
526                 Class     Images    Targets          P          R    mAP@0.5         F1:
                    100% 1/1 [00:00<00:00,  2.62it/s]
527                   all        10         17      0.695      0.765      0.824      0.728
528
529       Epoch    gpu_mem       GIoU        obj        cls      total    targets   img_size
530       99/99     15.1G        1.37      0.517          0       1.88         29       512:
          100% 5/5 [00:07<00:00,  1.44s/it]
531                 Class     Images    Targets          P          R    mAP@0.5         F1:
                    100% 1/1 [00:00<00:00,  2.11it/s]
532                   all        10         17      0.695      0.765       0.82      0.728
533    100 epochs completed in 0.217 hours.
```