- 1 ssh: //root@103.254.67.181:10006/usr/bin/python -u /home/sunfengzhen/pycharm/end-to-end-for-chinese-plate-recognition/keras\_train\_test.py
- 2 Using TensorFlow backend.
- 3 Epoch 1/25
- 4 2019-07-08 15:41:37.151454: I tensorflow /core/platform/cpu\_feature\_guard.cc:141
  ] Your CPU supports instructions that this TensorFlow binary was not compiled to use: AVX2 FMA
- 5 2019-07-08 15:41:37.405107: I tensorflow /core/common\_runtime/gpu/gpu\_device.cc: 1432] Found device 0 with properties:
- 6 name: GeForce GTX 1080 Ti major: 6 minor
  : 1 memoryClockRate(GHz): 1.582
- 7 pciBusID: 0000:02:00.0
- 8 total Memory: 10.92GiB freeMemory: 10.76GiB
- 9 2019-07-08 15:41:37.405180: I tensorflow /core/common\_runtime/gpu/gpu\_device.cc: 1511] Adding visible gpu devices: 0
- 10 2019-07-08 15:41:37.774701: I tensorflow /core/common\_runtime/gpu/gpu\_device.cc:

```
10 982] Device interconnect StreamExecutor
   with strength 1 edge matrix:
11 2019-07-08 15:41:37.774775: I tensorflow
   /core/common_runtime/gpu/gpu_device.cc:
   9881
             ()
12 2019-07-08 15:41:37.774787: I tensorflow
   /core/common_runtime/gpu/gpu_device.cc:
   1001] 0:
              N
13 2019-07-08 15:41:37.775179: I tensorflow
   /core/common_runtime/gpu/gpu_device.cc:
   1115] Created TensorFlow device (/job:
   localhost/replica: 0/task: 0/device: GPU: 0
   with 10409 MB memory) -> physical GPU (
   device: O, name: GeForce GTX 1080 Ti,
   pci bus id: 0000:02:00.0, compute
   capability: 6.1)
   - 1611s - loss: 8.4381 - c1_loss: 0.
14
   9336 - c2_loss: 0.4551 - c3_loss: 0.7290
   - c4_loss: 1.0010 - c5_loss: 1.4135 -
   c6_loss: 1.9877 - c7_loss: 1.9183 -
   c1_acc: 0.7459 - c2_acc: 0.8771 - c3_acc
   : 0.7980 - c4_acc: 0.7152 - c5_acc: 0.
   6070 - c6_acc: 0.4697 - c7_acc: 0.4817
   - val_loss: 2.1056 - val_c1_loss: 0.
```

```
14  0836 - val_c2_loss: 0.0106 - val_c3_loss
  : 0.0357 - val_c4_loss: 0.1087 -
  val_c5_loss: 0.3470 - val_c6_loss: 0.
  8332 - val_c7_Loss: 0.6868 - val_c1_acc
  : 0.9783 - val_c2_acc: 0.9979 -
  - val_c5_acc: 0.9037 - val_c6_acc: 0.
  7824 - val_c7_acc: 0.8209
15 Epoch 2/25
16 - 1623s - Ioss: 1.9606 - c1 Ioss: 0.
  1314 - c2_loss: 0.0197 - c3_loss: 0.0489
  - c4_loss: 0.1175 - c5_loss: 0.3294 -
  c6_loss: 0.7387 - c7_loss: 0.5749 -
  : 0.9862 - c4_acc: 0.9653 - c5_acc: 0.
  9060 - c6_acc: 0.8000 - c7_acc: 0.8409
  - val_loss: 0.9308 - val_c1_loss: 0.
  : 0.0177 - val_c4_loss: 0.0427 -
  val_c5_loss: 0.1457 - val_c6_loss: 0.
  3746 - val_c7_Loss: 0.2847 - val_c1_acc
  : 0.9843 - val_c2_acc: 0.9980 -
  - val_c5_acc: 0.9595 - val_c6_acc: 0.
```

16 8980 - val\_c7\_acc: 0.9217 17 Epoch 3/25 18 - 1619s - loss: 1.2455 - c1\_loss: 0. 0885 - c2\_loss: 0.0126 - c3\_loss: 0.0311 - c4\_loss: 0.0685 - c5\_loss: 0.2056 c6\_loss: 0.4846 - c7\_loss: 0.3547 -: 0.9912 - c4\_acc: 0.9796 - c5\_acc: 0. 9411 - c6\_acc: 0.8665 - c7\_acc: 0.9003 - val\_loss: 0.6791 - val\_c1\_loss: 0. : 0.0137 - val\_c4\_loss: 0.0323 val\_c5\_loss: 0.1044 - val\_c6\_loss: 0. : 0.9890 - val\_c2\_acc: 0.9983 val\_c3\_acc: 0.9965 - val\_c4\_acc: 0.9907 - val\_c5\_acc: 0.9703 - val\_c6\_acc: 0. 9241 - val\_c7\_acc: 0.9410 19 Epoch 4/25 20 - 1620s - loss: 0.9394 - c1\_loss: 0. 0749 - c2\_loss: 0.0115 - c3\_loss: 0.0229 - c4\_loss: 0.0519 - c5\_loss: 0.1542 c6\_loss: 0.3532 - c7\_loss: 0.2707 -

```
20 : 0.9935 - c4_acc: 0.9848 - c5_acc: 0.
  9556 - c6_acc: 0.9009 - c7_acc: 0.9243
  - val_loss: 0.5442 - val_c1_loss: 0.
  : 0.0123 - val_c4_loss: 0.0262 -
  val_c5_loss: 0.0802 - val_c6_loss: 0.
  : 0.9882 - val_c2_acc: 0.9983 -
  - val_c5_acc: 0.9773 - val_c6_acc: 0.
  9431 - val_c7_acc: 0.9519
21 Epoch 5/25
22 - 1624s - loss: 0.7713 - c1_loss: 0.
  0653 - c2_loss: 0.0100 - c3_loss: 0.0192
  - c4_loss: 0.0434 - c5_loss: 0.1250 -
  c6_loss: 0.2843 - c7_loss: 0.2241 -
  : 0.9946 - c4_acc: 0.9873 - c5_acc: 0.
  9639 - c6_acc: 0.9195 - c7_acc: 0.9367
  - val_loss: 0.5066 - val_c1_loss: 0.
  : 0.0106 - val_c4_loss: 0.0234 -
  val_c5_loss: 0.0716 - val_c6_loss: 0.
  1929 - val_c7_Loss: 0.1651 - val_c1_acc
```

```
22 : 0.9893 - val_c2_acc: 0.9986 -
  - val_c5_acc: 0.9807 - val_c6_acc: 0.
  9477 - val_c7_acc: 0.9554
23 Epoch 6/25
24 - 1621s - loss: 0.6598 - c1_loss: 0.
  0586 - c2_loss: 0.0085 - c3_loss: 0.0155
   - c4_loss: 0.0346 - c5_loss: 0.1057 -
  c6_loss: 0.2395 - c7_loss: 0.1973 -
  c1 acc: 0.9827 - c2 acc: 0.9977 - c3 acc
  : 0.9955 - c4_acc: 0.9899 - c5_acc: 0.
  9695 - c6_acc: 0.9315 - c7_acc: 0.9446
  - val_loss: 0.4010 - val_c1_loss: 0.
  : 0.0102 - val_c4_loss: 0.0219 -
  val_c5_loss: 0.0564 - val_c6_loss: 0.
  1384 - val_c7_Loss: 0.1255 - val_c1_acc
  : 0.9881 - val_c2_acc: 0.9986 -
  - val_c5_acc: 0.9838 - val_c6_acc: 0.
  9617 - val_c7_acc: 0.9653
25 Epoch 7/25
  - 1619s - loss: 0.6020 - c1_loss: 0.
26
  0544 - c2_loss: 0.0082 - c3_loss: 0.0164
```

```
- c4_loss: 0.0317 - c5_loss: 0.0943 -
26
  c6_loss: 0.2148 - c7_loss: 0.1822 -
  : 0.9953 - c4_acc: 0.9906 - c5_acc: 0.
  9725 - c6_acc: 0.9388 - c7_acc: 0.9491
  - val_loss: 0.3877 - val_c1_loss: 0.
  : 0.0105 - val_c4_loss: 0.0201 -
  val_c5_loss: 0.0535 - val_c6_loss: 0.
  1432 - val_c7_loss: 0.1235 - val_c1_acc
  : 0.9910 - val_c2_acc: 0.9988 -
  - val_c5_acc: 0.9846 - val_c6_acc: 0.
  9600 - val_c7_acc: 0.9646
27 Epoch 8/25
  - 1622s - Loss: 0.5718 - c1_Loss: 0.
28
  0546 - c2_loss: 0.0075 - c3_loss: 0.0154
  - c4_loss: 0.0305 - c5_loss: 0.0860 -
  c6_loss: 0.2031 - c7_loss: 0.1748 -
  : 0.9955 - c4_acc: 0.9908 - c5_acc: 0.
  9755 - c6_acc: 0.9427 - c7_acc: 0.9508
  - val_loss: 0.3051 - val_c1_loss: 0.
```

```
28 : 0.0078 - val_c4_loss: 0.0142 -
  val_c5_loss: 0.0429 - val_c6_loss: 0.
  : 0.9938 - val_c2_acc: 0.9989 -
  val_c3_acc: 0.9979 - val_c4_acc: 0.9960
  - val_c5_acc: 0.9878 - val_c6_acc: 0.
  9705 - val_c7_acc: 0.9699
29 Epoch 9/25
  - 1623s - Loss: 0.5223 - c1_Loss: 0.
30
  0485 - c2_loss: 0.0074 - c3_loss: 0.0147
  - c4 loss: 0.0270 - c5 loss: 0.0763 -
  c6_loss: 0.1831 - c7_loss: 0.1654 -
  : 0.9958 - c4 acc: 0.9923 - c5 acc: 0.
  9778 - c6_acc: 0.9495 - c7_acc: 0.9545
  - val_loss: 0.3008 - val_c1_loss: 0.
  : 0.0079 - val_c4_loss: 0.0130 -
  val_c5_loss: 0.0406 - val_c6_loss: 0.
  1085 - val_c7_Loss: 0.1066 - val_c1_acc
  : 0.9949 - val_c2_acc: 0.9986 -
  - val_c5_acc: 0.9883 - val_c6_acc: 0.
  9704 - val_c7_acc: 0.9710
```

```
31 Epoch 10/25
  - 1607s - loss: 0.4954 - c1 loss: 0.
32
  0485 - c2_loss: 0.0070 - c3_loss: 0.0141
  - c4 loss: 0.0276 - c5 loss: 0.0729 -
  c6_loss: 0.1710 - c7_loss: 0.1543 -
  c1 acc: 0.9860 - c2_acc: 0.9979 - c3_acc
  : 0.9960 - c4_acc: 0.9919 - c5_acc: 0.
  9790 - c6_acc: 0.9521 - c7_acc: 0.9565
  - val_loss: 0.3194 - val_c1_loss: 0.
  : 0.0078 - val_c4_loss: 0.0168 -
  val_c5_loss: 0.0467 - val_c6_loss: 0.
  : 0.9918 - val c2 acc: 0.9987 -
  - val_c5_acc: 0.9865 - val_c6_acc: 0.
  9693 - val_c7_acc: 0.9707
33 Epoch 11/25
  - 1610s - loss: 0.4705 - c1 loss: 0.
34
  0462 - c2_loss: 0.0068 - c3_loss: 0.0129
  - c4_loss: 0.0260 - c5_loss: 0.0679 -
  c6_loss: 0.1638 - c7_loss: 0.1469 -
```

: 0.9963 - c4\_acc: 0.9923 - c5\_acc: 0.

```
34 9808 - c6_acc: 0.9542 - c7_acc: 0.9589
  - val loss: 0.3026 - val c1 loss: 0.
  : 0.0090 - val_c4_loss: 0.0150 -
  val_c5_loss: 0.0382 - val_c6_loss: 0.
  : 0.9938 - val_c2_acc: 0.9989 -
  - val_c5_acc: 0.9889 - val_c6_acc: 0.
  9717 - val_c7_acc: 0.9689
35 Epoch 12/25
  - 1606s - loss: 0.4686 - c1_loss: 0.
36
  - c4 loss: 0.0245 - c5 loss: 0.0678 -
  c6_loss: 0.1607 - c7_loss: 0.1488 -
  : 0.9963 - c4_acc: 0.9929 - c5_acc: 0.
  9811 - c6_acc: 0.9554 - c7_acc: 0.9595
  - val_loss: 0.3290 - val_c1_loss: 0.
  : 0.0100 - val_c4_loss: 0.0157 -
  val_c5_loss: 0.0467 - val_c6_loss: 0.
  1118 - val_c7_Loss: 0.1074 - val_c1_acc
  : 0.9912 - val c2 acc: 0.9985 -
```

```
36 val_c3_acc: 0.9973 - val_c4_acc: 0.9955
   - val_c5_acc: 0.9870 - val_c6_acc: 0.
  9689 - val_c7_acc: 0.9699
37 Epoch 13/25
  - 1596s - Loss: 0.4481 - c1_loss: 0.
38
  0429 - c2_loss: 0.0062 - c3_loss: 0.0124
  - c4_loss: 0.0244 - c5_loss: 0.0652 -
  c6_loss: 0.1529 - c7_loss: 0.1442 -
  : 0.9964 - c4 acc: 0.9931 - c5 acc: 0.
  9813 - c6_acc: 0.9570 - c7_acc: 0.9606
  - val_loss: 0.2481 - val_c1_loss: 0.
  : 0.0065 - val c4 loss: 0.0130 -
  val_c5_loss: 0.0289 - val_c6_loss: 0.
  : 0.9938 - val_c2_acc: 0.9988 -
  val_c3_acc: 0.9984 - val_c4_acc: 0.9966
  - val_c5_acc: 0.9919 - val_c6_acc: 0.
  9767 - val_c7_acc: 0.9739
39 Epoch 14/25
40 - 1567s - loss: 0.4299 - c1_loss: 0.
  0429 - c2_loss: 0.0068 - c3_loss: 0.0117
   - c4 loss: 0.0214 - c5 loss: 0.0615 -
```

```
40 c6_loss: 0.1442 - c7_loss: 0.1414 -
  : 0.9967 - c4_acc: 0.9938 - c5_acc: 0.
  9825 - c6_acc: 0.9593 - c7_acc: 0.9607
  - val_loss: 0.2410 - val_c1_loss: 0.
  : 0.0076 - val_c4_loss: 0.0131 -
  val_c5_loss: 0.0308 - val_c6_loss: 0.
  : 0.9938 - val_c2_acc: 0.9989 -
  - val_c5_acc: 0.9912 - val_c6_acc: 0.
  9777 - val_c7_acc: 0.9757
41 Epoch 15/25
  - 1567s - Loss: 0.4120 - c1_Loss: 0.
42
  0408 - c2_loss: 0.0064 - c3_loss: 0.0116
  - c4_loss: 0.0218 - c5_loss: 0.0575 -
  c6_loss: 0.1376 - c7_loss: 0.1363 -
  : 0.9968 - c4_acc: 0.9938 - c5_acc: 0.
  9836 - c6_acc: 0.9620 - c7_acc: 0.9627
  - val_loss: 0.2235 - val_c1_loss: 0.
  : 0.0058 - val c4 loss: 0.0099 -
```

```
42 val_c5_loss: 0.0263 - val_c6_loss: 0.
  0793 - val_c7_loss: 0.0828 - val_c1_acc
  : 0.9956 - val_c2_acc: 0.9991 -
  - val_c5_acc: 0.9926 - val_c6_acc: 0.
  9780 - val_c7_acc: 0.9772
43 Epoch 16/25
  - 1569s - Loss: 0.4054 - c1_loss: 0.
44
  0410 - c2_loss: 0.0056 - c3_loss: 0.0121
  - c4 loss: 0.0199 - c5 loss: 0.0556 -
  c6_loss: 0.1396 - c7_loss: 0.1316 -
  : 0.9965 - c4_acc: 0.9941 - c5_acc: 0.
  9844 - c6 acc: 0.9614 - c7 acc: 0.9644
  - val_loss: 0.2324 - val_c1_loss: 0.
  : 0.0077 - val_c4_loss: 0.0138 -
  val_c5_loss: 0.0285 - val_c6_loss: 0.
  : 0.9947 - val_c2_acc: 0.9990 -
  - val_c5_acc: 0.9921 - val_c6_acc: 0.
  9803 - val_c7_acc: 0.9771
45 Epoch 17/25
```

```
- 1568s - loss: 0.3986 - c1_loss: 0.
46
  0382 - c2 loss: 0.0061 - c3 loss: 0.0117
  - c4_loss: 0.0218 - c5_loss: 0.0559 -
  c6_loss: 0.1345 - c7_loss: 0.1304 -
  : 0.9967 - c4_acc: 0.9936 - c5_acc: 0.
  9841 - c6_acc: 0.9630 - c7_acc: 0.9647
  - val_loss: 0.2497 - val_c1_loss: 0.
  : 0.0076 - val c4 loss: 0.0131 -
  val_c5_loss: 0.0350 - val_c6_loss: 0.
  : 0.9915 - val_c2_acc: 0.9988 -
  - val_c5_acc: 0.9901 - val_c6_acc: 0.
  9781 - val_c7_acc: 0.9779
47 Epoch 18/25
  - 1567s - loss: 0.3996 - c1_loss: 0.
48
  0420 - c2 loss: 0.0065 - c3 loss: 0.0122
  - c4_loss: 0.0202 - c5_loss: 0.0577 -
  c6_loss: 0.1329 - c7_loss: <u>0.1280 -</u>
  0.9966 - c4_acc: 0.9939 - c5_acc: 0.
  9838 - c6_acc: 0.9632 - c7_acc: 0.9651
```

```
- val_loss: 0.2483 - val_c1_loss: 0.
48
  : 0.0073 - val_c4_loss: 0.0119 -
  val_c5_loss: 0.0331 - val_c6_loss: 0.
  : 0.9947 - val_c2_acc: 0.9990 -
  - val_c5_acc: 0.9907 - val_c6_acc: 0.
  9787 - val_c7_acc: 0.9745
49 Epoch 19/25
  - 1569s - Loss: 0.3834 - c1 Loss: 0.
50
  0369 - c2_loss: 0.0052 - c3_loss: 0.0101
  - c4_loss: 0.0202 - c5_loss: 0.0535 -
  c6 loss: 0.1294 - c7 loss: 0.1281 -
  : 0.9973 - c4 acc: 0.9941 - c5 acc: 0.
  9849 - c6_acc: 0.9644 - c7_acc: 0.9652
  - val_loss: 0.2290 - val_c1_loss: 0.
  : 0.0076 - val_c4_loss: 0.0123 -
  val_c5_loss: 0.0309 - val_c6_loss: 0.
  : 0.9958 - val_c2_acc: 0.9990 -
  val_c3_acc: 0.9981 - val_c4_acc: 0.9969
```

```
- val_c5_acc: 0.9916 - val_c6_acc: 0.
50
  9795 - val_c7_acc: 0.9772
51 Epoch 20/25
  - 1571s - loss: 0.3772 - c1 loss: 0.
52
  0385 - c2_loss: 0.0055 - c3_loss: 0.0103
  - c4_loss: 0.0204 - c5_loss: 0.0522 -
  c6_loss: 0.1256 - c7_loss: 0.1247 -
  : 0.9970 - c4_acc: 0.9941 - c5_acc: 0.
  9855 - c6 acc: 0.9650 - c7 acc: 0.9656
  - val_loss: 0.2519 - val_c1_loss: 0.
  : 0.0082 - val_c4_loss: 0.0129 -
  val c5 loss: 0.0325 - val c6 loss: 0.
  : 0.9918 - val_c2_acc: 0.9988 -
  - val_c5_acc: 0.9906 - val_c6_acc: 0.
  9777 - val_c7_acc: 0.9770
53 Epoch 21/25
  - 1582s - loss: 0.3721 - c1_loss: 0.
54
  0372 - c2_loss: 0.0061 - c3_loss: 0.0103
  - c4_loss: 0.0196 - c5_loss: 0.0513 -
  c6 loss: 0.1222 - c7 loss: 0.1254
```

```
54 c1_acc: 0.9894 - c2_acc: 0.9984 - c3_acc
    0.9970 - c4_acc: 0.9948 - c5_acc: 0.
  9859 - c6 acc: 0.9669 - c7_acc: 0.9661
   - val_loss: 0.1904 - val_c1_loss: 0.
  : 0.0062 - val_c4_loss: 0.0099 -
  val_c5_loss: 0.0228 - val_c6_loss: 0.
  0.9954 - val_c2_acc: 0.9991 -
  val_c3_acc: 0.9984 - val_c4_acc: 0.9976
   - val_c5_acc: 0.9934 - val_c6_acc: 0.
  9832 - val_c7_acc: 0.9807
55 Epoch 22/25
56 ^CTraceback (most recent call last):
   File "/home/sunfengzhen/pycharm/end-to
57
  -end-for-chi nese-pl ate-recogni ti on/
  keras_train_test.py", line 122, in
  module>
      verbose=2, callbacks=[best_model])
58
  每个epoch输出一行记录
    File "/usr/local/lib/python2.7/dist-
59
  packages/keras/Legacy/interfaces.py",
  line 91, in wrapper
   return func(*args, **kwargs
60
```

```
File "/usr/local/lib/python2.7/dist-
61
   packages/keras/engine/training.py", line
    1418, in fit_generator
       initial_epoch=initial_epoch)
62
     File "/usr/local/lib/python2.7/dist-
63
   packages/keras/engi ne/trai ni ng_generator
   .py", line 217, in fit_generator
       class_weight=class_weight)
64
     File "/usr/local/lib/python2.7/dist-
65
   packages/keras/engine/training.py", line
    1217, in train_on_batch
       outputs = self.train_function(ins)
66
     File "/usr/local/lib/python2.7/dist-
67
   packages/keras/backend/
   tensorflow_backend.py", line 2715, in
     call
       return self._call(inputs)
68
     File "/usr/local/lib/python2.7/dist-
69
   packages/keras/backend/
   tensorflow_backend.py", line 2675, in
   call
       fetched = self._callable_fn(*
70
   array_vals)
     File "/usr/local/lib/python2.7/dist-
71
```

```
71 packages/tensorflow/python/client/
   session.py", line 1439, in __call__
72   run_metadata_ptr)
73 KeyboardInterrupt
74
75 Process finished with exit code 1
76
```