

File - att1

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1 ssh://root@103.254.67.181:10006/usr/bin/python -u /home/sunfengzhen/pycharm/attention/att1.py
2 Using TensorFlow backend.
3 X_train shape: (60000, 28, 28)
4 X_test shape: (10000, 28, 28)
5
6 Layer (type)                Output Shape                Param #    Connected to
7 -----
8 input_input (InputLayer)    (None, 28, 28)             0
9
10 input_drop (Dropout)        (None, 28, 28)             0          input_input[0][0]
11
12 bilstm (Bidirectional)      (None, 28, 128)            47616      input_drop[0][0]
13
14 att_input (Permute)         (None, 128, 28)            0          bilstm[0][0]
15
16 att_dense (Dense)           (None, 128, 28)            812        att_input[0][0]
17
18 att_vec (Permute)           (None, 28, 128)            0          att_dense[0][0]
19
20 att_mul (Multiply)          (None, 28, 128)            0          bilstm[0][0]
21                                     att_vec[0][0]
22
23 att_flat (Flatten)          (None, 3584)               0          att_mul[0][0]
24
25 out_drop (Dropout)          (None, 3584)               0          att_flat[0][0]
26
27 out_dense (Dense)           (None, 10)                 35850      out_drop[0][0]
28 =====
29 Total params: 84,278
30 Trainable params: 84,278
31 Non-trainable params: 0
32
33 None
34 Training-----
35 Epoch 1/100
36 2019-10-17 10:53:13.160808: I tensorflow/core/platform/cpu_feature_guard.cc:141] Your CPU supports
instructions that this TensorFlow binary was not compiled to use: AVX2 FMA
37 2019-10-17 10:53:13.433559: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1432] Found device 0 with
properties:
38 name: GeForce GTX 1080 Ti major: 6 minor: 1 memoryClockRate(GHz): 1.582
39 pciBusID: 0000:82:00.0
40 totalMemory: 10.92GiB freeMemory: 10.76GiB
41 2019-10-17 10:53:13.433650: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1511] Adding visible gpu
devices: 0
42 2019-10-17 10:53:15.127974: I tensorflow/core/common_runtime/gpu/gpu_device.cc:982] Device interconnect
StreamExecutor with strength 1 edge matrix:
43 2019-10-17 10:53:15.128039: I tensorflow/core/common_runtime/gpu/gpu_device.cc:988] 0
44 2019-10-17 10:53:15.128051: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1001] 0: N
45 2019-10-17 10:53:15.128429: 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: 0,
name: GeForce GTX 1080 Ti, pci bus id: 0000:82:00.0, compute capability: 6.1)
46 - 341s - loss: 0.3467 - acc: 0.8950
47 Epoch 2/100
48 - 343s - loss: 0.1387 - acc: 0.9569
49 Epoch 3/100
50 - 338s - loss: 0.1054 - acc: 0.9670
51 Epoch 4/100
52 - 346s - loss: 0.0868 - acc: 0.9725
53 Epoch 5/100
54 - 340s - loss: 0.0734 - acc: 0.9775
55 Epoch 6/100

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56 - 341s - loss: 0.0669 - acc: 0.9784
57 Epoch 7/100
58 - 338s - loss: 0.0603 - acc: 0.9808
59 Epoch 8/100
60 - 362s - loss: 0.0555 - acc: 0.9823
61 Epoch 9/100
62 - 358s - loss: 0.0507 - acc: 0.9838
63 Epoch 10/100
64 - 356s - loss: 0.0482 - acc: 0.9841
65 Epoch 11/100
66 - 363s - loss: 0.0455 - acc: 0.9848
67 Epoch 12/100
68 - 362s - loss: 0.0437 - acc: 0.9859
69 Epoch 13/100
70 - 367s - loss: 0.0397 - acc: 0.9872
71 Epoch 14/100
72 - 365s - loss: 0.0411 - acc: 0.9864
73 Epoch 15/100
74 - 361s - loss: 0.0384 - acc: 0.9873
75 Epoch 16/100
76 - 364s - loss: 0.0356 - acc: 0.9877
77 Epoch 17/100
78 - 363s - loss: 0.0345 - acc: 0.9886
79 Epoch 18/100
80 - 363s - loss: 0.0334 - acc: 0.9889
81 Epoch 19/100
82 - 360s - loss: 0.0312 - acc: 0.9896
83 Epoch 20/100
84 - 357s - loss: 0.0292 - acc: 0.9908
85 Epoch 21/100
86 - 355s - loss: 0.0315 - acc: 0.9891
87 Epoch 22/100
88 - 351s - loss: 0.0283 - acc: 0.9908
89 Epoch 23/100
90 - 345s - loss: 0.0293 - acc: 0.9903
91 Epoch 24/100
92 - 348s - loss: 0.0283 - acc: 0.9906
93 Epoch 25/100
94 - 353s - loss: 0.0256 - acc: 0.9912
95 Epoch 26/100
96 - 349s - loss: 0.0261 - acc: 0.9913
97 Epoch 27/100
98 - 349s - loss: 0.0246 - acc: 0.9917
99 Epoch 28/100
100 - 347s - loss: 0.0247 - acc: 0.9914
101 Epoch 29/100
102 - 343s - loss: 0.0234 - acc: 0.9923
103 Epoch 30/100
104 - 351s - loss: 0.0232 - acc: 0.9922
105 Epoch 31/100
106 - 354s - loss: 0.0239 - acc: 0.9922
107 Epoch 32/100
108 - 355s - loss: 0.0222 - acc: 0.9927
109 Epoch 33/100
110 - 351s - loss: 0.0217 - acc: 0.9922
111 Epoch 34/100
112 - 351s - loss: 0.0217 - acc: 0.9926
113 Epoch 35/100
114 - 349s - loss: 0.0226 - acc: 0.9927
115 Epoch 36/100
116 - 349s - loss: 0.0208 - acc: 0.9929

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117 Epoch 37/100
118   - 337s - loss: 0.0233 - acc: 0.9924
119 Epoch 38/100
120   - 330s - loss: 0.0210 - acc: 0.9925
121 Epoch 39/100
122   - 326s - loss: 0.0208 - acc: 0.9930
123 Epoch 40/100
124   - 320s - loss: 0.0207 - acc: 0.9931
125 Epoch 41/100
126   - 321s - loss: 0.0199 - acc: 0.9934
127 Epoch 42/100
128   - 323s - loss: 0.0215 - acc: 0.9928
129 Epoch 43/100
130   - 323s - loss: 0.0201 - acc: 0.9932
131 Epoch 44/100
132   - 319s - loss: 0.0184 - acc: 0.9937
133 Epoch 45/100
134   - 320s - loss: 0.0187 - acc: 0.9937
135 Epoch 46/100
136   - 324s - loss: 0.0186 - acc: 0.9936
137 Epoch 47/100
138   - 323s - loss: 0.0193 - acc: 0.9934
139 Epoch 48/100
140   - 323s - loss: 0.0201 - acc: 0.9936
141 Epoch 49/100
142   - 324s - loss: 0.0197 - acc: 0.9933
143 Epoch 50/100
144   - 324s - loss: 0.0181 - acc: 0.9941
145 Epoch 51/100
146   - 322s - loss: 0.0179 - acc: 0.9943
147 Epoch 52/100
148   - 322s - loss: 0.0164 - acc: 0.9945
149 Epoch 53/100
150   - 319s - loss: 0.0189 - acc: 0.9939
151 Epoch 54/100
152   - 322s - loss: 0.0180 - acc: 0.9938
153 Epoch 55/100
154   - 322s - loss: 0.0173 - acc: 0.9941
155 Epoch 56/100
156   - 322s - loss: 0.0171 - acc: 0.9945
157 Epoch 57/100
158   - 321s - loss: 0.0182 - acc: 0.9938
159 Epoch 58/100
160   - 322s - loss: 0.0159 - acc: 0.9946
161 Epoch 59/100
162   - 322s - loss: 0.0161 - acc: 0.9949
163 Epoch 60/100
164   - 319s - loss: 0.0177 - acc: 0.9942
165 Epoch 61/100
166   - 318s - loss: 0.0171 - acc: 0.9943
167 Epoch 62/100
168   - 320s - loss: 0.0161 - acc: 0.9945
169 Epoch 63/100
170   - 323s - loss: 0.0161 - acc: 0.9945
171 Epoch 64/100
172   - 320s - loss: 0.0167 - acc: 0.9946
173 Epoch 65/100
174   - 322s - loss: 0.0153 - acc: 0.9946
175 Epoch 66/100
176   - 322s - loss: 0.0157 - acc: 0.9945
177 Epoch 67/100
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178 - 321s - loss: 0.0164 - acc: 0.9946
179 Epoch 68/100
180 - 321s - loss: 0.0172 - acc: 0.9944
181 Epoch 69/100
182 - 322s - loss: 0.0133 - acc: 0.9957
183 Epoch 70/100
184 - 325s - loss: 0.0150 - acc: 0.9950
185 Epoch 71/100
186 - 324s - loss: 0.0166 - acc: 0.9946
187 Epoch 72/100
188 - 324s - loss: 0.0144 - acc: 0.9950
189 Epoch 73/100
190 - 324s - loss: 0.0163 - acc: 0.9946
191 Epoch 74/100
192 - 322s - loss: 0.0157 - acc: 0.9952
193 Epoch 75/100
194 - 321s - loss: 0.0152 - acc: 0.9950
195 Epoch 76/100
196 - 319s - loss: 0.0149 - acc: 0.9950
197 Epoch 77/100
198 - 323s - loss: 0.0145 - acc: 0.9955
199 Epoch 78/100
200 - 335s - loss: 0.0155 - acc: 0.9950
201 Epoch 79/100
202 - 334s - loss: 0.0145 - acc: 0.9953
203 Epoch 80/100
204 - 335s - loss: 0.0142 - acc: 0.9950
205 Epoch 81/100
206 - 334s - loss: 0.0150 - acc: 0.9950
207 Epoch 82/100
208 - 327s - loss: 0.0145 - acc: 0.9952
209 Epoch 83/100
210 - 324s - loss: 0.0144 - acc: 0.9950
211 Epoch 84/100
212 - 325s - loss: 0.0149 - acc: 0.9953
213 Epoch 85/100
214 - 327s - loss: 0.0154 - acc: 0.9950
215 Epoch 86/100
216 - 326s - loss: 0.0132 - acc: 0.9954
217 Epoch 87/100
218 - 327s - loss: 0.0138 - acc: 0.9956
219 Epoch 88/100
220 - 327s - loss: 0.0151 - acc: 0.9946
221 Epoch 89/100
222 - 327s - loss: 0.0139 - acc: 0.9954
223 Epoch 90/100
224 - 324s - loss: 0.0142 - acc: 0.9952
225 Epoch 91/100
226 - 322s - loss: 0.0141 - acc: 0.9954
227 Epoch 92/100
228 - 328s - loss: 0.0137 - acc: 0.9951
229 Epoch 93/100
230 - 327s - loss: 0.0138 - acc: 0.9952
231 Epoch 94/100
232 - 324s - loss: 0.0139 - acc: 0.9954
233 Epoch 95/100
234 - 323s - loss: 0.0137 - acc: 0.9955
235 Epoch 96/100
236 - 327s - loss: 0.0135 - acc: 0.9956
237 Epoch 97/100
238 - 326s - loss: 0.0145 - acc: 0.9953

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239 Epoch 98/100
240   - 327s - loss: 0.0131 - acc: 0.9952
241 Epoch 99/100
242   - 325s - loss: 0.0138 - acc: 0.9958
243 Epoch 100/100
244   - 325s - loss: 0.0140 - acc: 0.9955
245 Testing-----
246   32/10000 [.....] - ETA: 1:43
247   96/10000 [.....] - ETA: 41s
248  160/10000 [.....] - ETA: 29s
249  224/10000 [.....] - ETA: 24s
250  288/10000 [.....] - ETA: 21s
251  352/10000 [>.....] - ETA: 19s
252  416/10000 [>.....] - ETA: 17s
253  480/10000 [>.....] - ETA: 16s
254  544/10000 [>.....] - ETA: 16s
255  608/10000 [>.....] - ETA: 15s
256  672/10000 [=>.....] - ETA: 14s
257  736/10000 [=>.....] - ETA: 14s
258  800/10000 [=>.....] - ETA: 14s
259  864/10000 [=>.....] - ETA: 13s
260  928/10000 [=>.....] - ETA: 13s
261  992/10000 [=>.....] - ETA: 13s
262 1056/10000 [==>.....] - ETA: 12s
263 1120/10000 [==>.....] - ETA: 12s
264 1184/10000 [==>.....] - ETA: 12s
265 1248/10000 [==>.....] - ETA: 12s
266 1312/10000 [==>.....] - ETA: 12s
267 1376/10000 [===>.....] - ETA: 11s
268 1440/10000 [===>.....] - ETA: 11s
269 1504/10000 [===>.....] - ETA: 11s
270 1568/10000 [===>.....] - ETA: 11s
271 1632/10000 [===>.....] - ETA: 11s
272 1696/10000 [====>.....] - ETA: 11s
273 1760/10000 [====>.....] - ETA: 11s
274 1824/10000 [====>.....] - ETA: 10s
275 1888/10000 [====>.....] - ETA: 10s
276 1952/10000 [====>.....] - ETA: 10s
277 2016/10000 [=====>.....] - ETA: 10s
278 2080/10000 [=====>.....] - ETA: 10s
279 2144/10000 [=====>.....] - ETA: 10s
280 2208/10000 [=====>.....] - ETA: 10s
281 2272/10000 [=====>.....] - ETA: 10s
282 2336/10000 [=====>.....] - ETA: 9s
283 2400/10000 [=====>.....] - ETA: 9s
284 2464/10000 [=====>.....] - ETA: 9s
285 2528/10000 [=====>.....] - ETA: 9s
286 2592/10000 [=====>.....] - ETA: 9s
287 2656/10000 [=====>.....] - ETA: 9s
288 2720/10000 [=====>.....] - ETA: 9s
289 2784/10000 [=====>.....] - ETA: 9s
290 2848/10000 [=====>.....] - ETA: 9s
291 2912/10000 [=====>.....] - ETA: 9s
292 2976/10000 [=====>.....] - ETA: 8s
293 3040/10000 [=====>.....] - ETA: 8s
294 3104/10000 [=====>.....] - ETA: 8s
295 3168/10000 [=====>.....] - ETA: 8s
296 3232/10000 [=====>.....] - ETA: 8s
297 3296/10000 [=====>.....] - ETA: 8s
298 3360/10000 [=====>.....] - ETA: 8s
299 3424/10000 [=====>.....] - ETA: 8s
```

300 3488/10000 [=====>.....] - ETA: 8s
301 3552/10000 [=====>.....] - ETA: 8s
302 3616/10000 [=====>.....] - ETA: 7s
303 3680/10000 [=====>.....] - ETA: 7s
304 3744/10000 [=====>.....] - ETA: 7s
305 3808/10000 [=====>.....] - ETA: 7s
306 3872/10000 [=====>.....] - ETA: 7s
307 3936/10000 [=====>.....] - ETA: 7s
308 4000/10000 [=====>.....] - ETA: 7s
309 4064/10000 [=====>.....] - ETA: 7s
310 4128/10000 [=====>.....] - ETA: 7s
311 4192/10000 [=====>.....] - ETA: 7s
312 4256/10000 [=====>.....] - ETA: 7s
313 4320/10000 [=====>.....] - ETA: 6s
314 4384/10000 [=====>.....] - ETA: 6s
315 4448/10000 [=====>.....] - ETA: 6s
316 4512/10000 [=====>.....] - ETA: 6s
317 4576/10000 [=====>.....] - ETA: 6s
318 4640/10000 [=====>.....] - ETA: 6s
319 4704/10000 [=====>.....] - ETA: 6s
320 4768/10000 [=====>.....] - ETA: 6s
321 4832/10000 [=====>.....] - ETA: 6s
322 4896/10000 [=====>.....] - ETA: 6s
323 4960/10000 [=====>.....] - ETA: 6s
324 5024/10000 [=====>.....] - ETA: 5s
325 5088/10000 [=====>.....] - ETA: 5s
326 5152/10000 [=====>.....] - ETA: 5s
327 5216/10000 [=====>.....] - ETA: 5s
328 5280/10000 [=====>.....] - ETA: 5s
329 5344/10000 [=====>.....] - ETA: 5s
330 5408/10000 [=====>.....] - ETA: 5s
331 5472/10000 [=====>.....] - ETA: 5s
332 5536/10000 [=====>.....] - ETA: 5s
333 5600/10000 [=====>.....] - ETA: 5s
334 5664/10000 [=====>.....] - ETA: 5s
335 5728/10000 [=====>.....] - ETA: 5s
336 5792/10000 [=====>.....] - ETA: 5s
337 5856/10000 [=====>.....] - ETA: 4s
338 5920/10000 [=====>.....] - ETA: 4s
339 5984/10000 [=====>.....] - ETA: 4s
340 6048/10000 [=====>.....] - ETA: 4s
341 6112/10000 [=====>.....] - ETA: 4s
342 6176/10000 [=====>.....] - ETA: 4s
343 6240/10000 [=====>.....] - ETA: 4s
344 6304/10000 [=====>.....] - ETA: 4s
345 6368/10000 [=====>.....] - ETA: 4s
346 6432/10000 [=====>.....] - ETA: 4s
347 6496/10000 [=====>.....] - ETA: 4s
348 6560/10000 [=====>.....] - ETA: 4s
349 6624/10000 [=====>.....] - ETA: 3s
350 6688/10000 [=====>.....] - ETA: 3s
351 6752/10000 [=====>.....] - ETA: 3s
352 6816/10000 [=====>.....] - ETA: 3s
353 6880/10000 [=====>.....] - ETA: 3s
354 6944/10000 [=====>.....] - ETA: 3s
355 7008/10000 [=====>.....] - ETA: 3s
356 7072/10000 [=====>.....] - ETA: 3s
357 7136/10000 [=====>.....] - ETA: 3s
358 7200/10000 [=====>.....] - ETA: 3s
359 7264/10000 [=====>.....] - ETA: 3s
360 7328/10000 [=====>.....] - ETA: 3s

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361 7392/10000 [=====>.....] - ETA: 3s
362 7456/10000 [=====>.....] - ETA: 2s
363 7520/10000 [=====>.....] - ETA: 2s
364 7584/10000 [=====>.....] - ETA: 2s
365 7648/10000 [=====>.....] - ETA: 2s
366 7712/10000 [=====>.....] - ETA: 2s
367 7776/10000 [=====>.....] - ETA: 2s
368 7840/10000 [=====>.....] - ETA: 2s
369 7904/10000 [=====>.....] - ETA: 2s
370 7968/10000 [=====>.....] - ETA: 2s
371 8032/10000 [=====>.....] - ETA: 2s
372 8096/10000 [=====>.....] - ETA: 2s
373 8160/10000 [=====>.....] - ETA: 2s
374 8224/10000 [=====>.....] - ETA: 2s
375 8288/10000 [=====>.....] - ETA: 1s
376 8352/10000 [=====>.....] - ETA: 1s
377 8416/10000 [=====>.....] - ETA: 1s
378 8480/10000 [=====>.....] - ETA: 1s
379 8544/10000 [=====>.....] - ETA: 1s
380 8608/10000 [=====>.....] - ETA: 1s
381 8672/10000 [=====>.....] - ETA: 1s
382 8736/10000 [=====>.....] - ETA: 1s
383 8800/10000 [=====>.....] - ETA: 1s
384 8864/10000 [=====>.....] - ETA: 1s
385 8928/10000 [=====>.....] - ETA: 1s
386 8992/10000 [=====>.....] - ETA: 1s
387 9056/10000 [=====>.....] - ETA: 1s
388 9120/10000 [=====>.....] - ETA: 1s
389 9184/10000 [=====>.....] - ETA: 0s
390 9248/10000 [=====>.....] - ETA: 0s
391 9312/10000 [=====>.....] - ETA: 0s
392 9376/10000 [=====>.....] - ETA: 0s
393 9440/10000 [=====>.....] - ETA: 0s
394 9504/10000 [=====>.....] - ETA: 0s
395 9568/10000 [=====>.....] - ETA: 0s
396 9632/10000 [=====>.....] - ETA: 0s
397 9696/10000 [=====>.....] - ETA: 0s
398 9760/10000 [=====>.....] - ETA: 0s
399 9824/10000 [=====>.....] - ETA: 0s
400 9888/10000 [=====>.....] - ETA: 0s
401 9952/10000 [=====>.....] - ETA: 0s
402 10000/10000 [=====] - 12s 1ms/step
403 test loss: 0.03540241956923664
404 test accuracy: 0.9904
405
406 Process finished with exit code 0
407
```