

File - att2

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1 "C:\Program Files\Anaconda3\python.exe" "D:/Program Files/JetBrains/local anacondapy3/attention/att2.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_1 (InputLayer)        (None, 28, 28)             0
9
10 lstm_layer (LSTM)           (None, 28, 32)             7808      input_1[0][0]
11
12 dense_1 (Dense)             (None, 28, 1)              33         lstm_layer[0][0]
13
14 flatten_1 (Flatten)         (None, 28)                 0          dense_1[0][0]
15
16 activation_1 (Activation)    (None, 28)                 0          flatten_1[0][0]
17
18 repeat_vector_1 (RepeatVector) (None, 32, 28)             0          activation_1[0][0]
19
20 attention_vec (Permute)      (None, 28, 32)             0          repeat_vector_1[0][0]
21
22 attention_mul (Multiply)     (None, 28, 32)             0          lstm_layer[0][0]
23                                     attention_vec[0][0]
24
25 flatten_2 (Flatten)         (None, 896)                0          attention_mul[0][0]
26
27 dense_2 (Dense)             (None, 10)                 8970       flatten_2[0][0]
28 =====
29 Total params: 16,811
30 Trainable params: 16,811
31 Non-trainable params: 0
32
33 None
34 Training-----
35 Epoch 1/100
36 2019-10-12 12:42:10.926900: I tensorflow/core/platform/cpu_feature_guard.cc:141] Your CPU supports
instructions that this TensorFlow binary was not compiled to use: AVX AVX2
37 2019-10-12 12:42:10.928900: I tensorflow/core/common_runtime/process_util.cc:69] Creating new thread pool
with default inter op setting: 8. Tune using inter_op_parallelism_threads for best performance.
38 - 40s - loss: 0.6218 - acc: 0.8305
39 Epoch 2/100
40 - 38s - loss: 0.2042 - acc: 0.9417
41 Epoch 3/100
42 - 38s - loss: 0.1496 - acc: 0.9562
43 Epoch 4/100
44 - 38s - loss: 0.1205 - acc: 0.9641
45 Epoch 5/100
46 - 38s - loss: 0.1035 - acc: 0.9693
47 Epoch 6/100
48 - 38s - loss: 0.0914 - acc: 0.9729
49 Epoch 7/100
50 - 38s - loss: 0.0803 - acc: 0.9763
51 Epoch 8/100
52 - 38s - loss: 0.0721 - acc: 0.9785
53 Epoch 9/100
54 - 38s - loss: 0.0663 - acc: 0.9802
55 Epoch 10/100
56 - 41s - loss: 0.0613 - acc: 0.9817
57 Epoch 11/100
58 - 40s - loss: 0.0565 - acc: 0.9826
59 Epoch 12/100

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60 - 38s - loss: 0.0522 - acc: 0.9840
61 Epoch 13/100
62 - 39s - loss: 0.0489 - acc: 0.9853
63 Epoch 14/100
64 - 39s - loss: 0.0462 - acc: 0.9860
65 Epoch 15/100
66 - 40s - loss: 0.0422 - acc: 0.9870
67 Epoch 16/100
68 - 39s - loss: 0.0411 - acc: 0.9873
69 Epoch 17/100
70 - 38s - loss: 0.0394 - acc: 0.9880
71 Epoch 18/100
72 - 38s - loss: 0.0366 - acc: 0.9888
73 Epoch 19/100
74 - 38s - loss: 0.0347 - acc: 0.9894
75 Epoch 20/100
76 - 38s - loss: 0.0332 - acc: 0.9899
77 Epoch 21/100
78 - 38s - loss: 0.0325 - acc: 0.9899
79 Epoch 22/100
80 - 38s - loss: 0.0288 - acc: 0.9911
81 Epoch 23/100
82 - 38s - loss: 0.0297 - acc: 0.9903
83 Epoch 24/100
84 - 38s - loss: 0.0278 - acc: 0.9914
85 Epoch 25/100
86 - 38s - loss: 0.0262 - acc: 0.9918
87 Epoch 26/100
88 - 39s - loss: 0.0252 - acc: 0.9920
89 Epoch 27/100
90 - 39s - loss: 0.0247 - acc: 0.9925
91 Epoch 28/100
92 - 39s - loss: 0.0234 - acc: 0.9932
93 Epoch 29/100
94 - 39s - loss: 0.0225 - acc: 0.9933
95 Epoch 30/100
96 - 39s - loss: 0.0214 - acc: 0.9937
97 Epoch 31/100
98 - 39s - loss: 0.0212 - acc: 0.9936
99 Epoch 32/100
100 - 39s - loss: 0.0199 - acc: 0.9936
101 Epoch 33/100
102 - 39s - loss: 0.0195 - acc: 0.9940
103 Epoch 34/100
104 - 38s - loss: 0.0180 - acc: 0.9946
105 Epoch 35/100
106 - 39s - loss: 0.0184 - acc: 0.9940
107 Epoch 36/100
108 - 39s - loss: 0.0172 - acc: 0.9947
109 Epoch 37/100
110 - 39s - loss: 0.0161 - acc: 0.9954
111 Epoch 38/100
112 - 39s - loss: 0.0155 - acc: 0.9952
113 Epoch 39/100
114 - 39s - loss: 0.0160 - acc: 0.9952
115 Epoch 40/100
116 - 39s - loss: 0.0152 - acc: 0.9954
117 Epoch 41/100
118 - 39s - loss: 0.0152 - acc: 0.9957
119 Epoch 42/100
120 - 39s - loss: 0.0140 - acc: 0.9959

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121 Epoch 43/100
122   - 39s - loss: 0.0141 - acc: 0.9961
123 Epoch 44/100
124   - 39s - loss: 0.0134 - acc: 0.9963
125 Epoch 45/100
126   - 39s - loss: 0.0134 - acc: 0.9961
127 Epoch 46/100
128   - 39s - loss: 0.0129 - acc: 0.9960
129 Epoch 47/100
130   - 39s - loss: 0.0117 - acc: 0.9965
131 Epoch 48/100
132   - 39s - loss: 0.0120 - acc: 0.9966
133 Epoch 49/100
134   - 38s - loss: 0.0114 - acc: 0.9967
135 Epoch 50/100
136   - 39s - loss: 0.0121 - acc: 0.9968
137 Epoch 51/100
138   - 39s - loss: 0.0115 - acc: 0.9967
139 Epoch 52/100
140   - 39s - loss: 0.0109 - acc: 0.9969
141 Epoch 53/100
142   - 39s - loss: 0.0102 - acc: 0.9971
143 Epoch 54/100
144   - 39s - loss: 0.0099 - acc: 0.9974
145 Epoch 55/100
146   - 39s - loss: 0.0105 - acc: 0.9970
147 Epoch 56/100
148   - 39s - loss: 0.0104 - acc: 0.9969
149 Epoch 57/100
150   - 38s - loss: 0.0100 - acc: 0.9971
151 Epoch 58/100
152   - 38s - loss: 0.0097 - acc: 0.9972
153 Epoch 59/100
154   - 39s - loss: 0.0094 - acc: 0.9973
155 Epoch 60/100
156   - 39s - loss: 0.0092 - acc: 0.9975
157 Epoch 61/100
158   - 39s - loss: 0.0076 - acc: 0.9980
159 Epoch 62/100
160   - 39s - loss: 0.0099 - acc: 0.9972
161 Epoch 63/100
162   - 39s - loss: 0.0087 - acc: 0.9975
163 Epoch 64/100
164   - 38s - loss: 0.0093 - acc: 0.9974
165 Epoch 65/100
166   - 38s - loss: 0.0085 - acc: 0.9978
167 Epoch 66/100
168   - 39s - loss: 0.0085 - acc: 0.9976
169 Epoch 67/100
170   - 39s - loss: 0.0071 - acc: 0.9980
171 Epoch 68/100
172   - 39s - loss: 0.0082 - acc: 0.9978
173 Epoch 69/100
174   - 39s - loss: 0.0084 - acc: 0.9977
175 Epoch 70/100
176   - 39s - loss: 0.0071 - acc: 0.9982
177 Epoch 71/100
178   - 39s - loss: 0.0083 - acc: 0.9975
179 Epoch 72/100
180   - 39s - loss: 0.0069 - acc: 0.9981
181 Epoch 73/100
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182 - 39s - loss: 0.0080 - acc: 0.9974
183 Epoch 74/100
184 - 39s - loss: 0.0073 - acc: 0.9981
185 Epoch 75/100
186 - 39s - loss: 0.0073 - acc: 0.9980
187 Epoch 76/100
188 - 39s - loss: 0.0075 - acc: 0.9978
189 Epoch 77/100
190 - 40s - loss: 0.0073 - acc: 0.9980
191 Epoch 78/100
192 - 40s - loss: 0.0066 - acc: 0.9982
193 Epoch 79/100
194 - 40s - loss: 0.0065 - acc: 0.9983
195 Epoch 80/100
196 - 39s - loss: 0.0070 - acc: 0.9979
197 Epoch 81/100
198 - 40s - loss: 0.0071 - acc: 0.9978
199 Epoch 82/100
200 - 39s - loss: 0.0062 - acc: 0.9985
201 Epoch 83/100
202 - 42s - loss: 0.0056 - acc: 0.9985
203 Epoch 84/100
204 - 40s - loss: 0.0065 - acc: 0.9982
205 Epoch 85/100
206 - 40s - loss: 0.0053 - acc: 0.9987
207 Epoch 86/100
208 - 39s - loss: 0.0057 - acc: 0.9986
209 Epoch 87/100
210 - 40s - loss: 0.0061 - acc: 0.9984
211 Epoch 88/100
212 - 40s - loss: 0.0058 - acc: 0.9983
213 Epoch 89/100
214 - 40s - loss: 0.0060 - acc: 0.9982
215 Epoch 90/100
216 - 41s - loss: 0.0067 - acc: 0.9980
217 Epoch 91/100
218 - 40s - loss: 0.0059 - acc: 0.9985
219 Epoch 92/100
220 - 39s - loss: 0.0070 - acc: 0.9978
221 Epoch 93/100
222 - 39s - loss: 0.0051 - acc: 0.9987
223 Epoch 94/100
224 - 39s - loss: 0.0057 - acc: 0.9986
225 Epoch 95/100
226 - 39s - loss: 0.0057 - acc: 0.9986
227 Epoch 96/100
228 - 39s - loss: 0.0066 - acc: 0.9981
229 Epoch 97/100
230 - 39s - loss: 0.0054 - acc: 0.9985
231 Epoch 98/100
232 - 39s - loss: 0.0052 - acc: 0.9988
233 Epoch 99/100
234 - 40s - loss: 0.0061 - acc: 0.9981
235 Epoch 100/100
236 - 40s - loss: 0.0044 - acc: 0.9990
237 Testing-----
238
239 32/10000 [.....] - ETA: 40s
240 224/10000 [.....] - ETA: 9s
241 448/10000 [>.....] - ETA: 5s
242 576/10000 [>.....] - ETA: 5s
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```
243 1312/10000 [==>.....] - ETA: 2s
244 1568/10000 [===>.....] - ETA: 2s
245 1888/10000 [====>.....] - ETA: 2s
246 2048/10000 [=====>.....] - ETA: 2s
247 2400/10000 [=====>.....] - ETA: 2s
248 2528/10000 [=====>.....] - ETA: 2s
249 2784/10000 [=====>.....] - ETA: 2s
250 2880/10000 [=====>.....] - ETA: 2s
251 3104/10000 [=====>.....] - ETA: 2s
252 3392/10000 [=====>.....] - ETA: 1s
253 3520/10000 [=====>.....] - ETA: 1s
254 3712/10000 [=====>.....] - ETA: 1s
255 3904/10000 [=====>.....] - ETA: 1s
256 4160/10000 [=====>.....] - ETA: 1s
257 4512/10000 [=====>.....] - ETA: 1s
258 4896/10000 [=====>.....] - ETA: 1s
259 5120/10000 [=====>.....] - ETA: 1s
260 5280/10000 [=====>.....] - ETA: 1s
261 5568/10000 [=====>.....] - ETA: 1s
262 5792/10000 [=====>.....] - ETA: 1s
263 6016/10000 [=====>.....] - ETA: 1s
264 6080/10000 [=====>.....] - ETA: 1s
265 6336/10000 [=====>.....] - ETA: 1s
266 6560/10000 [=====>.....] - ETA: 0s
267 6848/10000 [=====>.....] - ETA: 0s
268 7008/10000 [=====>.....] - ETA: 0s
269 7488/10000 [=====>.....] - ETA: 0s
270 7680/10000 [=====>.....] - ETA: 0s
271 8352/10000 [=====>.....] - ETA: 0s
272 8832/10000 [=====>.....] - ETA: 0s
273 9152/10000 [=====>.....] - ETA: 0s
274 9280/10000 [=====>.....] - ETA: 0s
275 9632/10000 [=====>.....] - ETA: 0s
276 9888/10000 [=====>.....] - ETA: 0s
277 10000/10000 [=====] - 3s 252us/step
278 test loss: 0.06649568242422683
279 test accuracy: 0.9842
280
281 Process finished with exit code 0
282
```