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1 /Users/snehamishra/PycharmProjects/Test/venv/bin/python /
  Users/snehamishra/Desktop/UMKC/Fall2018/Python/Python-
  DeepLearning_Fall2018/Mod2_ICP7/Source/
  DeepLearning_SourceCode7/autoencoder_stacked.py
2 Using TensorFlow backend.
3 2018-12-10 18:29:44.243478: I tensorflow/core/platform/
  cpu_feature_guard.cc:141] Your CPU supports instructions
  that this TensorFlow binary was not compiled to use: AVX2
  FMA
4 Train on 60000 samples, validate on 10000 samples
5 Epoch 1/5
6
7   256/60000 [.....] - ETA: 1:05 -
  loss: 0.6937
8   1536/60000 [.....] - ETA: 12s -
  loss: 0.6929
9   2816/60000 [>.....] - ETA: 8s -
  loss: 0.6921
10  4096/60000 [=>.....] - ETA: 6s -
  loss: 0.6913
11  5120/60000 [=>.....] - ETA: 5s -
  loss: 0.6906
12  5888/60000 [=>.....] - ETA: 5s -
  loss: 0.6900
13  6400/60000 [==>.....] - ETA: 5s -
  loss: 0.6896
14  7168/60000 [==>.....] - ETA: 5s -
  loss: 0.6888
15  8192/60000 [===>.....] - ETA: 4s -
  loss: 0.6875
16  9472/60000 [===>.....] - ETA: 4s -
  loss: 0.6847
17  9984/60000 [===>.....] - ETA: 4s -
  loss: 0.6827
18 10752/60000 [===>.....] - ETA: 4s -
  loss: 0.6776
19 11520/60000 [===>.....] - ETA: 4s -
  loss: 0.6678
20 12288/60000 [====>.....] - ETA: 4s -
  loss: 0.6520
21 12800/60000 [====>.....] - ETA: 4s -
  loss: 0.6395
22 13568/60000 [====>.....] - ETA: 4s -
  loss: 0.6205
23 14336/60000 [====>.....] - ETA: 3s -
  loss: 0.6029
24 15360/60000 [====>.....] - ETA: 3s -
  loss: 0.5817
25 16384/60000 [====>.....] - ETA: 3s -
  loss: 0.5628
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26 17408/60000 [=====>.....] - ETA: 3s -  
    loss: 0.5459  
27 18176/60000 [=====>.....] - ETA: 3s -  
    loss: 0.5343  
28 18944/60000 [=====>.....] - ETA: 3s -  
    loss: 0.5238  
29 19712/60000 [=====>.....] - ETA: 3s -  
    loss: 0.5142  
30 20224/60000 [=====>.....] - ETA: 3s -  
    loss: 0.5081  
31 20992/60000 [=====>.....] - ETA: 3s -  
    loss: 0.4996  
32 21760/60000 [=====>.....] - ETA: 3s -  
    loss: 0.4915  
33 22784/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4816  
34 23808/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4726  
35 25088/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4622  
36 26368/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4529  
37 27136/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4477  
38 28416/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4397  
39 29184/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4352  
40 30464/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4282  
41 31232/60000 [=====>.....] - ETA: 2s -  
    loss: 0.4243  
42 32256/60000 [=====>.....] - ETA: 1s -  
    loss: 0.4194  
43 33280/60000 [=====>.....] - ETA: 1s -  
    loss: 0.4148  
44 34560/60000 [=====>.....] - ETA: 1s -  
    loss: 0.4094  
45 35840/60000 [=====>.....] - ETA: 1s -  
    loss: 0.4043  
46 37120/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3995  
47 38400/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3951  
48 39424/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3917  
49 40448/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3886  
50 41728/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3848
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51 42752/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3819  
52 44032/60000 [=====>.....] - ETA: 1s -  
    loss: 0.3785  
53 45312/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3753  
54 46336/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3729  
55 47104/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3711  
56 48128/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3688  
57 49408/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3661  
58 50688/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3635  
59 51968/60000 [=====>.....] - ETA: 0s -  
    loss: 0.3611  
60 52992/60000 [=====>....] - ETA: 0s -  
    loss: 0.3592  
61 54016/60000 [=====>...] - ETA: 0s -  
    loss: 0.3574  
62 55040/60000 [=====>...] - ETA: 0s -  
    loss: 0.3556  
63 56064/60000 [=====>..] - ETA: 0s -  
    loss: 0.3539  
64 57344/60000 [=====>..] - ETA: 0s -  
    loss: 0.3519  
65 58368/60000 [=====>.] - ETA: 0s -  
    loss: 0.3503  
66 59392/60000 [=====>.] - ETA: 0s -  
    loss: 0.3487  
67 60000/60000 [=====] - 4s 64us/  
    step - loss: 0.3479 - val_loss: 0.2641  
68 Epoch 2/5  
69  
70 256/60000 [.....] - ETA: 2s -  
    loss: 0.2657  
71 1536/60000 [.....] - ETA: 2s -  
    loss: 0.2617  
72 2560/60000 [>.....] - ETA: 3s -  
    loss: 0.2621  
73 2816/60000 [>.....] - ETA: 3s -  
    loss: 0.2613  
74 3840/60000 [>.....] - ETA: 3s -  
    loss: 0.2612  
75 4864/60000 [=>.....] - ETA: 3s -  
    loss: 0.2612  
76 6144/60000 [==>.....] - ETA: 3s -  
    loss: 0.2610
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77 7424/60000 [==>.....] - ETA: 2s -  
   loss: 0.2611  
78 8704/60000 [===>.....] - ETA: 2s -  
   loss: 0.2608  
79 9984/60000 [===>.....] - ETA: 2s -  
   loss: 0.2606  
80 11264/60000 [====>.....] - ETA: 2s -  
   loss: 0.2606  
81 12288/60000 [====>.....] - ETA: 2s -  
   loss: 0.2604  
82 13056/60000 [====>.....] - ETA: 2s -  
   loss: 0.2604  
83 13824/60000 [====>.....] - ETA: 2s -  
   loss: 0.2605  
84 14848/60000 [====>.....] - ETA: 2s -  
   loss: 0.2605  
85 16128/60000 [====>.....] - ETA: 2s -  
   loss: 0.2602  
86 16896/60000 [====>.....] - ETA: 2s -  
   loss: 0.2602  
87 18176/60000 [====>.....] - ETA: 2s -  
   loss: 0.2600  
88 19456/60000 [====>.....] - ETA: 2s -  
   loss: 0.2599  
89 20480/60000 [====>.....] - ETA: 2s -  
   loss: 0.2599  
90 20992/60000 [====>.....] - ETA: 2s -  
   loss: 0.2598  
91 21504/60000 [====>.....] - ETA: 2s -  
   loss: 0.2597  
92 22528/60000 [====>.....] - ETA: 2s -  
   loss: 0.2595  
93 23552/60000 [====>.....] - ETA: 2s -  
   loss: 0.2594  
94 24576/60000 [====>.....] - ETA: 1s -  
   loss: 0.2593  
95 25856/60000 [====>.....] - ETA: 1s -  
   loss: 0.2593  
96 27136/60000 [====>.....] - ETA: 1s -  
   loss: 0.2590  
97 28416/60000 [====>.....] - ETA: 1s -  
   loss: 0.2589  
98 29696/60000 [====>.....] - ETA: 1s -  
   loss: 0.2588  
99 30976/60000 [====>.....] - ETA: 1s -  
   loss: 0.2587  
100 32256/60000 [====>.....] - ETA: 1s -  
   loss: 0.2586  
101 33536/60000 [====>.....] - ETA: 1s -  
   loss: 0.2585
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102 34816/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2583  
103 36096/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2581  
104 37376/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2580  
105 38656/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2579  
106 39936/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2578  
107 41216/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2576  
108 42496/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2575  
109 43520/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2574  
110 44800/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2572  
111 46080/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2571  
112 47104/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2569  
113 48128/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2568  
114 49152/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2566  
115 50176/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2565  
116 51200/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2564  
117 51968/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2563  
118 52992/60000 [=====>....] - ETA: 0s -  
    loss: 0.2561  
119 54016/60000 [=====>...] - ETA: 0s -  
    loss: 0.2559  
120 55040/60000 [=====>...] - ETA: 0s -  
    loss: 0.2558  
121 56320/60000 [=====>..] - ETA: 0s -  
    loss: 0.2556  
122 57600/60000 [=====>..] - ETA: 0s -  
    loss: 0.2554  
123 58880/60000 [=====>.] - ETA: 0s -  
    loss: 0.2552  
124 60000/60000 [=====] - 3s 53us/  
    step - loss: 0.2551 - val_loss: 0.2461  
125 Epoch 3/5  
126  
127 256/60000 [.....] - ETA: 3s -  
    loss: 0.2564
```

```
128 1536/60000 [.....] - ETA: 2s -  
    loss: 0.2487  
129 2816/60000 [>.....] - ETA: 2s -  
    loss: 0.2473  
130 4096/60000 [=>.....] - ETA: 2s -  
    loss: 0.2463  
131 5376/60000 [=>.....] - ETA: 2s -  
    loss: 0.2457  
132 6656/60000 [==>.....] - ETA: 2s -  
    loss: 0.2453  
133 7936/60000 [==>.....] - ETA: 2s -  
    loss: 0.2455  
134 9216/60000 [===>.....] - ETA: 2s -  
    loss: 0.2452  
135 10496/60000 [===>.....] - ETA: 2s -  
    loss: 0.2452  
136 11776/60000 [===>.....] - ETA: 2s -  
    loss: 0.2449  
137 13056/60000 [====>.....] - ETA: 2s -  
    loss: 0.2443  
138 14336/60000 [====>.....] - ETA: 1s -  
    loss: 0.2442  
139 15616/60000 [====>.....] - ETA: 1s -  
    loss: 0.2443  
140 16896/60000 [====>.....] - ETA: 1s -  
    loss: 0.2439  
141 18176/60000 [====>.....] - ETA: 1s -  
    loss: 0.2437  
142 19456/60000 [====>.....] - ETA: 1s -  
    loss: 0.2435  
143 20736/60000 [====>.....] - ETA: 1s -  
    loss: 0.2431  
144 22016/60000 [====>.....] - ETA: 1s -  
    loss: 0.2429  
145 23296/60000 [====>.....] - ETA: 1s -  
    loss: 0.2427  
146 24576/60000 [====>.....] - ETA: 1s -  
    loss: 0.2425  
147 25856/60000 [====>.....] - ETA: 1s -  
    loss: 0.2423  
148 27136/60000 [====>.....] - ETA: 1s -  
    loss: 0.2422  
149 28416/60000 [====>.....] - ETA: 1s -  
    loss: 0.2422  
150 29696/60000 [====>.....] - ETA: 1s -  
    loss: 0.2420  
151 30976/60000 [====>.....] - ETA: 1s -  
    loss: 0.2419  
152 32256/60000 [====>.....] - ETA: 1s -  
    loss: 0.2418
```

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153 33280/60000 [=====>.....] - ETA: 1s -
    loss: 0.2417
154 34560/60000 [=====>.....] - ETA: 1s -
    loss: 0.2415
155 35840/60000 [=====>.....] - ETA: 1s -
    loss: 0.2413
156 37120/60000 [=====>.....] - ETA: 1s -
    loss: 0.2411
157 38400/60000 [=====>.....] - ETA: 0s -
    loss: 0.2410
158 39680/60000 [=====>.....] - ETA: 0s -
    loss: 0.2407
159 40960/60000 [=====>.....] - ETA: 0s -
    loss: 0.2405
160 42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2403
161 43264/60000 [=====>.....] - ETA: 0s -
    loss: 0.2402
162 44544/60000 [=====>.....] - ETA: 0s -
    loss: 0.2399
163 45824/60000 [=====>.....] - ETA: 0s -
    loss: 0.2397
164 47104/60000 [=====>.....] - ETA: 0s -
    loss: 0.2394
165 48128/60000 [=====>.....] - ETA: 0s -
    loss: 0.2393
166 49408/60000 [=====>.....] - ETA: 0s -
    loss: 0.2391
167 50688/60000 [=====>.....] - ETA: 0s -
    loss: 0.2389
168 51712/60000 [=====>.....] - ETA: 0s -
    loss: 0.2387
169 52736/60000 [=====>....] - ETA: 0s -
    loss: 0.2386
170 53760/60000 [=====>....] - ETA: 0s -
    loss: 0.2384
171 55040/60000 [=====>...] - ETA: 0s -
    loss: 0.2382
172 56320/60000 [=====>..] - ETA: 0s -
    loss: 0.2381
173 57600/60000 [=====>..] - ETA: 0s -
    loss: 0.2379
174 58880/60000 [=====>.] - ETA: 0s -
    loss: 0.2377
175 60000/60000 [=====] - 3s 48us/
    step - loss: 0.2376 - val_loss: 0.2280
176 Epoch 4/5
177
178 256/60000 [.....] - ETA: 3s -
    loss: 0.2301

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179 1536/60000 [.....] - ETA: 2s -  
    loss: 0.2289  
180 2816/60000 [>.....] - ETA: 2s -  
    loss: 0.2290  
181 4096/60000 [=>.....] - ETA: 2s -  
    loss: 0.2289  
182 5376/60000 [=>.....] - ETA: 2s -  
    loss: 0.2289  
183 6656/60000 [==>.....] - ETA: 2s -  
    loss: 0.2288  
184 7936/60000 [==>.....] - ETA: 2s -  
    loss: 0.2290  
185 9216/60000 [===>.....] - ETA: 2s -  
    loss: 0.2289  
186 10496/60000 [===>.....] - ETA: 2s -  
    loss: 0.2287  
187 11776/60000 [===>.....] - ETA: 2s -  
    loss: 0.2286  
188 13056/60000 [====>.....] - ETA: 2s -  
    loss: 0.2285  
189 14336/60000 [====>.....] - ETA: 1s -  
    loss: 0.2285  
190 15616/60000 [====>.....] - ETA: 1s -  
    loss: 0.2283  
191 16896/60000 [====>.....] - ETA: 1s -  
    loss: 0.2281  
192 18176/60000 [====>.....] - ETA: 1s -  
    loss: 0.2279  
193 19456/60000 [====>.....] - ETA: 1s -  
    loss: 0.2279  
194 20736/60000 [====>.....] - ETA: 1s -  
    loss: 0.2278  
195 22016/60000 [====>.....] - ETA: 1s -  
    loss: 0.2279  
196 23296/60000 [====>.....] - ETA: 1s -  
    loss: 0.2278  
197 24576/60000 [====>.....] - ETA: 1s -  
    loss: 0.2277  
198 25600/60000 [====>.....] - ETA: 1s -  
    loss: 0.2276  
199 26368/60000 [====>.....] - ETA: 1s -  
    loss: 0.2276  
200 27392/60000 [====>.....] - ETA: 1s -  
    loss: 0.2275  
201 28160/60000 [====>.....] - ETA: 1s -  
    loss: 0.2274  
202 28928/60000 [====>.....] - ETA: 1s -  
    loss: 0.2274  
203 29696/60000 [====>.....] - ETA: 1s -  
    loss: 0.2273
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204 30720/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2273  
205 31488/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2273  
206 32512/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2272  
207 33280/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2271  
208 34048/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2271  
209 35072/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2271  
210 35840/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2271  
211 36864/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2270  
212 37888/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2269  
213 38656/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2268  
214 39424/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2268  
215 40448/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2269  
216 41472/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2269  
217 42496/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2268  
218 43520/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2267  
219 44544/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2267  
220 45312/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2266  
221 46336/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2265  
222 47104/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2265  
223 48128/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2263  
224 49152/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2263  
225 50176/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2262  
226 50944/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2261  
227 51968/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2261  
228 52736/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2261
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229 53504/60000 [=====>....] - ETA: 0s -
    loss: 0.2260
230 54272/60000 [=====>...] - ETA: 0s -
    loss: 0.2260
231 55296/60000 [=====>...] - ETA: 0s -
    loss: 0.2259
232 56064/60000 [=====>..] - ETA: 0s -
    loss: 0.2258
233 57088/60000 [=====>..] - ETA: 0s -
    loss: 0.2258
234 58112/60000 [=====>.] - ETA: 0s -
    loss: 0.2257
235 59136/60000 [=====>.] - ETA: 0s -
    loss: 0.2257
236 59904/60000 [=====>.] - ETA: 0s -
    loss: 0.2256
237 60000/60000 [=====] - 4s 60us/
    step - loss: 0.2256 - val_loss: 0.2205
238 Epoch 5/5
239
240   256/60000 [.....] - ETA: 4s -
    loss: 0.2239
241  1280/60000 [.....] - ETA: 3s -
    loss: 0.2213
242  2560/60000 [>.....] - ETA: 3s -
    loss: 0.2220
243  3584/60000 [>.....] - ETA: 2s -
    loss: 0.2223
244  4864/60000 [=>.....] - ETA: 2s -
    loss: 0.2217
245  6144/60000 [==>.....] - ETA: 2s -
    loss: 0.2214
246  7424/60000 [==>.....] - ETA: 2s -
    loss: 0.2213
247  8704/60000 [===>.....] - ETA: 2s -
    loss: 0.2209
248  9984/60000 [===>.....] - ETA: 2s -
    loss: 0.2206
249 11008/60000 [===>.....] - ETA: 2s -
    loss: 0.2205
250 12032/60000 [====>.....] - ETA: 2s -
    loss: 0.2204
251 13312/60000 [====>.....] - ETA: 2s -
    loss: 0.2203
252 14592/60000 [====>.....] - ETA: 2s -
    loss: 0.2200
253 15872/60000 [====>.....] - ETA: 2s -
    loss: 0.2200
254 17152/60000 [====>.....] - ETA: 1s -
    loss: 0.2199

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```
255 18432/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2199  
256 19712/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2197  
257 20992/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2194  
258 22272/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2192  
259 23296/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2190  
260 24576/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2188  
261 25856/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2186  
262 27136/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2184  
263 28416/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2183  
264 29696/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2181  
265 30976/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2178  
266 32256/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2176  
267 33536/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2174  
268 34816/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2170  
269 35840/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2168  
270 36864/60000 [=====>.....] - ETA: 1s -  
    loss: 0.2165  
271 37888/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2163  
272 38912/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2162  
273 39680/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2160  
274 40704/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2158  
275 41472/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2156  
276 42496/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2154  
277 43520/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2152  
278 44544/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2150  
279 45568/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2147
```

```
280 46592/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2146  
281 47616/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2144  
282 48640/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2142  
283 49920/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2139  
284 51200/60000 [=====>.....] - ETA: 0s -  
    loss: 0.2136  
285 52480/60000 [=====>....] - ETA: 0s -  
    loss: 0.2133  
286 53504/60000 [=====>....] - ETA: 0s -  
    loss: 0.2131  
287 54784/60000 [=====>...] - ETA: 0s -  
    loss: 0.2129  
288 55808/60000 [=====>...] - ETA: 0s -  
    loss: 0.2127  
289 56832/60000 [=====>..] - ETA: 0s -  
    loss: 0.2124  
290 57856/60000 [=====>..] - ETA: 0s -  
    loss: 0.2123  
291 59136/60000 [=====>.] - ETA: 0s -  
    loss: 0.2120  
292 60000/60000 [=====] - 3s 51us/  
    step - loss: 0.2118 - val_loss: 0.1983  
293  
294 Process finished with exit code 0  
295
```