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1 /Users/snehamishra/PycharmProjects/Test/venv/bin/python /
  Users/snehamishra/Desktop/UMKC/Fall2018/Python/Python-
  DeepLearning_Fall2018/Mod2_Lab1/Source/DeepLearning_Lesson2
  /mod2_Lab1_2.2.py
2 Using TensorFlow backend.
3 /Users/snehamishra/Desktop/UMKC/Fall2018/Python/Python-
  DeepLearning_Fall2018/Mod2_Lab1/Source/DeepLearning_Lesson2
  /mod2_Lab1_2.2.py:26: UserWarning: Update your `Dense` call
    to the Keras 2 API: `Dense(input_shape=(784,), activation
    ="softmax", units=10, kernel_initializer="normal")`"
4   model.add(Dense(output_dim=10, input_shape=(784,), init='
    normal', activation='softmax'))
5 _____
6 Layer (type)           Output Shape
  Param #
7 =====
  =====
8 dense_1 (Dense)        (None, 10)          7850
9 =====
  =====
10 Total params: 7,850
11 Trainable params: 7,850
12 Non-trainable params: 0
13 _____
14 /Users/snehamishra/Desktop/UMKC/Fall2018/Python/Python-
  DeepLearning_Fall2018/Mod2_Lab1/Source/DeepLearning_Lesson2
  /mod2_Lab1_2.2.py:32: UserWarning: The `nb_epoch` argument
  in `fit` has been renamed `epochs`.
15   model.fit(X_train, Y_Train, nb_epoch=nb_epoch, batch_size
    =batch_size, callbacks=[tensorboard])
16 2018-11-07 16:17:58.490761: I tensorflow/core/platform/
    cpu_feature_guard.cc:141] Your CPU supports instructions
    that this TensorFlow binary was not compiled to use: AVX2
    FMA
17 Epoch 1/100
18
19 128/60000 [.....] - ETA: 38s -
  loss: 2.3737 - acc: 0.0625
20 6656/60000 [==>.....] - ETA: 1s -
  loss: 1.4754 - acc: 0.6369
21 13184/60000 [=====>.....] - ETA: 0s -
  loss: 1.1537 - acc: 0.7297
22 19456/60000 [=====>.....] - ETA: 0s -
  loss: 0.9808 - acc: 0.7705
23 25856/60000 [=====>.....] - ETA: 0s -
  loss: 0.8634 - acc: 0.7967
24 30720/60000 [=====>.....] - ETA: 0s -

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24 loss: 0.8003 - acc: 0.8096
25 36096/60000 [=====>.....] - ETA: 0s -
    loss: 0.7434 - acc: 0.8211
26 41856/60000 [=====>.....] - ETA: 0s -
    loss: 0.6986 - acc: 0.8299
27 48640/60000 [=====>.....] - ETA: 0s -
    loss: 0.6556 - acc: 0.8383
28 55168/60000 [=====>...] - ETA: 0s -
    loss: 0.6218 - acc: 0.8450
29 60000/60000 [=====] - 1s 10us/step
    - loss: 0.6009 - acc: 0.8492
30 Epoch 2/100
31
32 128/60000 [.....] - ETA: 1s -
    loss: 0.3915 - acc: 0.8516
33 5888/60000 [=>.....] - ETA: 0s -
    loss: 0.3566 - acc: 0.9032
34 12672/60000 [====>.....] - ETA: 0s -
    loss: 0.3421 - acc: 0.9072
35 19456/60000 [====>.....] - ETA: 0s -
    loss: 0.3437 - acc: 0.9059
36 26240/60000 [=====>.....] - ETA: 0s -
    loss: 0.3429 - acc: 0.9047
37 31360/60000 [=====>.....] - ETA: 0s -
    loss: 0.3412 - acc: 0.9047
38 36608/60000 [=====>.....] - ETA: 0s -
    loss: 0.3371 - acc: 0.9063
39 42752/60000 [=====>.....] - ETA: 0s -
    loss: 0.3368 - acc: 0.9065
40 49664/60000 [=====>.....] - ETA: 0s -
    loss: 0.3357 - acc: 0.9067
41 54912/60000 [=====>...] - ETA: 0s -
    loss: 0.3326 - acc: 0.9076
42 60000/60000 [=====] - 1s 8us/step
    - loss: 0.3304 - acc: 0.9082
43 Epoch 3/100
44
45 128/60000 [.....] - ETA: 0s -
    loss: 0.2245 - acc: 0.9609
46 6656/60000 [=>.....] - ETA: 0s -
    loss: 0.2895 - acc: 0.9178
47 13440/60000 [====>.....] - ETA: 0s -
    loss: 0.2942 - acc: 0.9172
48 20224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2976 - acc: 0.9168
49 25600/60000 [=====>.....] - ETA: 0s -
    loss: 0.3032 - acc: 0.9156
50 30976/60000 [=====>.....] - ETA: 0s -
    loss: 0.3028 - acc: 0.9164
51 36864/60000 [=====>.....] - ETA: 0s -
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51 loss: 0.3030 - acc: 0.9160
52 43648/60000 [=====>.....] - ETA: 0s -
loss: 0.3038 - acc: 0.9161
53 50048/60000 [=====>....] - ETA: 0s -
loss: 0.3024 - acc: 0.9166
54 55552/60000 [=====>...] - ETA: 0s -
loss: 0.3018 - acc: 0.9163
55 60000/60000 [=====] - 0s 8us/step
- loss: 0.3015 - acc: 0.9162
56 Epoch 4/100
57
58 128/60000 [.....] - ETA: 0s -
loss: 0.1980 - acc: 0.9375
59 6912/60000 [==>.....] - ETA: 0s -
loss: 0.2746 - acc: 0.9248
60 13696/60000 [====>.....] - ETA: 0s -
loss: 0.2819 - acc: 0.9215
61 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2894 - acc: 0.9194
62 24448/60000 [=====>.....] - ETA: 0s -
loss: 0.2950 - acc: 0.9184
63 30720/60000 [=====>.....] - ETA: 0s -
loss: 0.2941 - acc: 0.9182
64 37120/60000 [=====>.....] - ETA: 0s -
loss: 0.2910 - acc: 0.9188
65 43520/60000 [=====>.....] - ETA: 0s -
loss: 0.2894 - acc: 0.9196
66 49408/60000 [=====>.....] - ETA: 0s -
loss: 0.2873 - acc: 0.9202
67 55296/60000 [=====>...] - ETA: 0s -
loss: 0.2882 - acc: 0.9201
68 60000/60000 [=====] - 0s 8us/step
- loss: 0.2880 - acc: 0.9203
69 Epoch 5/100
70
71 128/60000 [.....] - ETA: 1s -
loss: 0.3525 - acc: 0.8828
72 6912/60000 [==>.....] - ETA: 0s -
loss: 0.2769 - acc: 0.9285
73 13696/60000 [====>.....] - ETA: 0s -
loss: 0.2704 - acc: 0.9260
74 19200/60000 [=====>.....] - ETA: 0s -
loss: 0.2722 - acc: 0.9229
75 24576/60000 [=====>.....] - ETA: 0s -
loss: 0.2743 - acc: 0.9226
76 30848/60000 [=====>.....] - ETA: 0s -
loss: 0.2777 - acc: 0.9217
77 37632/60000 [=====>.....] - ETA: 0s -
loss: 0.2773 - acc: 0.9222
78 43904/60000 [=====>.....] - ETA: 0s -
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78 loss: 0.2776 - acc: 0.9228
79 49536/60000 [=====>.....] - ETA: 0s -
    loss: 0.2775 - acc: 0.9224
80 55424/60000 [=====>...] - ETA: 0s -
    loss: 0.2797 - acc: 0.9221
81 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2802 - acc: 0.9223
82 Epoch 6/100
83
84 128/60000 [.....] - ETA: 0s -
    loss: 0.2594 - acc: 0.9297
85 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2575 - acc: 0.9284
86 13696/60000 [====>.....] - ETA: 0s -
    loss: 0.2703 - acc: 0.9249
87 19072/60000 [=====>.....] - ETA: 0s -
    loss: 0.2727 - acc: 0.9239
88 24448/60000 [=====>.....] - ETA: 0s -
    loss: 0.2762 - acc: 0.9235
89 30720/60000 [=====>.....] - ETA: 0s -
    loss: 0.2778 - acc: 0.9241
90 37504/60000 [=====>.....] - ETA: 0s -
    loss: 0.2762 - acc: 0.9242
91 43648/60000 [=====>.....] - ETA: 0s -
    loss: 0.2758 - acc: 0.9243
92 49280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2759 - acc: 0.9241
93 55296/60000 [=====>...] - ETA: 0s -
    loss: 0.2742 - acc: 0.9244
94 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2745 - acc: 0.9243
95 Epoch 7/100
96
97 128/60000 [.....] - ETA: 0s -
    loss: 0.1989 - acc: 0.9297
98 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2553 - acc: 0.9300
99 13696/60000 [====>.....] - ETA: 0s -
    loss: 0.2665 - acc: 0.9278
100 18816/60000 [=====>.....] - ETA: 0s -
    loss: 0.2661 - acc: 0.9272
101 23808/60000 [=====>.....] - ETA: 0s -
    loss: 0.2689 - acc: 0.9265
102 29824/60000 [=====>.....] - ETA: 0s -
    loss: 0.2698 - acc: 0.9252
103 36736/60000 [=====>.....] - ETA: 0s -
    loss: 0.2692 - acc: 0.9255
104 43136/60000 [=====>.....] - ETA: 0s -
    loss: 0.2716 - acc: 0.9253
105 48896/60000 [=====>.....] - ETA: 0s -
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105 loss: 0.2717 - acc: 0.9255
106 54784/60000 [=====>...] - ETA: 0s -
    loss: 0.2713 - acc: 0.9256
107 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2704 - acc: 0.9251
108 Epoch 8/100
109
110 128/60000 [.....] - ETA: 1s -
    loss: 0.2643 - acc: 0.9219
111 7040/60000 [==>.....] - ETA: 0s -
    loss: 0.2661 - acc: 0.9280
112 13952/60000 [====>.....] - ETA: 0s -
    loss: 0.2617 - acc: 0.9275
113 18944/60000 [=====>.....] - ETA: 0s -
    loss: 0.2660 - acc: 0.9263
114 24192/60000 [=====>.....] - ETA: 0s -
    loss: 0.2627 - acc: 0.9277
115 30592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2616 - acc: 0.9279
116 37504/60000 [=====>.....] - ETA: 0s -
    loss: 0.2673 - acc: 0.9270
117 43648/60000 [=====>.....] - ETA: 0s -
    loss: 0.2672 - acc: 0.9268
118 49408/60000 [=====>.....] - ETA: 0s -
    loss: 0.2670 - acc: 0.9267
119 55680/60000 [=====>...] - ETA: 0s -
    loss: 0.2669 - acc: 0.9268
120 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2674 - acc: 0.9267
121 Epoch 9/100
122
123 128/60000 [.....] - ETA: 1s -
    loss: 0.2624 - acc: 0.9062
124 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2554 - acc: 0.9323
125 12416/60000 [====>.....] - ETA: 0s -
    loss: 0.2602 - acc: 0.9292
126 17664/60000 [=====>.....] - ETA: 0s -
    loss: 0.2538 - acc: 0.9306
127 23680/60000 [=====>.....] - ETA: 0s -
    loss: 0.2577 - acc: 0.9292
128 30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2607 - acc: 0.9284
129 37376/60000 [=====>.....] - ETA: 0s -
    loss: 0.2621 - acc: 0.9282
130 42752/60000 [=====>.....] - ETA: 0s -
    loss: 0.2618 - acc: 0.9280
131 48768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2633 - acc: 0.9276
132 55552/60000 [=====>...] - ETA: 0s -
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132 loss: 0.2642 - acc: 0.9275
133 60000/60000 [=====] - 0s 8us/step
     - loss: 0.2648 - acc: 0.9274
134 Epoch 10/100
135
136    128/60000 [.....] - ETA: 1s -
     loss: 0.4080 - acc: 0.8906
137    6912/60000 [==>.....] - ETA: 0s -
     loss: 0.2633 - acc: 0.9256
138    12544/60000 [====>.....] - ETA: 0s -
     loss: 0.2615 - acc: 0.9272
139    18176/60000 [=====>.....] - ETA: 0s -
     loss: 0.2674 - acc: 0.9271
140    24448/60000 [======>.....] - ETA: 0s -
     loss: 0.2677 - acc: 0.9269
141    31360/60000 [======>.....] - ETA: 0s -
     loss: 0.2660 - acc: 0.9273
142    38400/60000 [======>.....] - ETA: 0s -
     loss: 0.2645 - acc: 0.9277
143    44032/60000 [======>.....] - ETA: 0s -
     loss: 0.2627 - acc: 0.9276
144    50048/60000 [======>.....] - ETA: 0s -
     loss: 0.2667 - acc: 0.9272
145    56832/60000 [======>..] - ETA: 0s -
     loss: 0.2632 - acc: 0.9282
146    60000/60000 [=====] - 0s 8us/step
     - loss: 0.2624 - acc: 0.9282
147 Epoch 11/100
148
149    128/60000 [.....] - ETA: 0s -
     loss: 0.2763 - acc: 0.8984
150    5888/60000 [=>.....] - ETA: 0s -
     loss: 0.2652 - acc: 0.9285
151    11392/60000 [====>.....] - ETA: 0s -
     loss: 0.2675 - acc: 0.9283
152    17280/60000 [=====>.....] - ETA: 0s -
     loss: 0.2667 - acc: 0.9274
153    24064/60000 [======>.....] - ETA: 0s -
     loss: 0.2676 - acc: 0.9265
154    30848/60000 [======>.....] - ETA: 0s -
     loss: 0.2649 - acc: 0.9272
155    36480/60000 [======>.....] - ETA: 0s -
     loss: 0.2617 - acc: 0.9279
156    42496/60000 [======>.....] - ETA: 0s -
     loss: 0.2616 - acc: 0.9279
157    48640/60000 [======>.....] - ETA: 0s -
     loss: 0.2613 - acc: 0.9279
158    55424/60000 [======>..] - ETA: 0s -
     loss: 0.2599 - acc: 0.9281
159    60000/60000 [=====] - 0s 8us/step
```

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159  - loss: 0.2608 - acc: 0.9280
160 Epoch 12/100
161
162    128/60000 [.....] - ETA: 0s -
163      loss: 0.3099 - acc: 0.8984
164    5760/60000 [=>.....] - ETA: 0s -
165      loss: 0.2638 - acc: 0.9267
166    11008/60000 [====>.....] - ETA: 0s -
167      loss: 0.2556 - acc: 0.9273
168    17280/60000 [=====>.....] - ETA: 0s -
169      loss: 0.2698 - acc: 0.9242
170    24064/60000 [=====>.....] - ETA: 0s -
171      loss: 0.2680 - acc: 0.9259
172    30848/60000 [=====>.....] - ETA: 0s -
173      loss: 0.2627 - acc: 0.9272
174    36608/60000 [=====>.....] - ETA: 0s -
175      loss: 0.2620 - acc: 0.9281
176    42624/60000 [=====>.....] - ETA: 0s -
177      loss: 0.2616 - acc: 0.9284
178    48512/60000 [=====>.....] - ETA: 0s -
179      loss: 0.2614 - acc: 0.9283
180    55296/60000 [=====>...] - ETA: 0s -
181      loss: 0.2609 - acc: 0.9285
182    60000/60000 [=====] - 0s 8us/step
183      - loss: 0.2590 - acc: 0.9285
184 Epoch 13/100
185
186    128/60000 [.....] - ETA: 0s -
187      loss: 0.2193 - acc: 0.9375
188    5504/60000 [=>.....] - ETA: 0s -
189      loss: 0.2385 - acc: 0.9299
190    10880/60000 [====>.....] - ETA: 0s -
191      loss: 0.2453 - acc: 0.9320
192    17024/60000 [=====>.....] - ETA: 0s -
193      loss: 0.2478 - acc: 0.9313
194    23936/60000 [=====>.....] - ETA: 0s -
195      loss: 0.2542 - acc: 0.9296
196    30848/60000 [=====>.....] - ETA: 0s -
197      loss: 0.2559 - acc: 0.9291
198    36736/60000 [=====>.....] - ETA: 0s -
199      loss: 0.2561 - acc: 0.9292
200    42752/60000 [=====>.....] - ETA: 0s -
201      loss: 0.2562 - acc: 0.9291
202    49152/60000 [=====>.....] - ETA: 0s -
203      loss: 0.2558 - acc: 0.9295
204    55680/60000 [=====>...] - ETA: 0s -
205      loss: 0.2562 - acc: 0.9295
206    60000/60000 [=====] - 0s 8us/step
207      - loss: 0.2580 - acc: 0.9295
208 Epoch 14/100
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187
188 128/60000 [.....] - ETA: 0s -
    loss: 0.2114 - acc: 0.9609
189 5760/60000 [=>.....] - ETA: 0s -
    loss: 0.2581 - acc: 0.9316
190 11008/60000 [====>.....] - ETA: 0s -
    loss: 0.2546 - acc: 0.9320
191 17024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2555 - acc: 0.9302
192 23936/60000 [=====>.....] - ETA: 0s -
    loss: 0.2581 - acc: 0.9293
193 30720/60000 [=====>.....] - ETA: 0s -
    loss: 0.2571 - acc: 0.9293
194 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2552 - acc: 0.9295
195 42624/60000 [=====>.....] - ETA: 0s -
    loss: 0.2555 - acc: 0.9296
196 48896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2561 - acc: 0.9299
197 55424/60000 [=====>...] - ETA: 0s -
    loss: 0.2561 - acc: 0.9300
198 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2568 - acc: 0.9299
199 Epoch 15/100
200
201 128/60000 [.....] - ETA: 1s -
    loss: 0.3719 - acc: 0.9297
202 5888/60000 [=>.....] - ETA: 0s -
    loss: 0.2610 - acc: 0.9282
203 11008/60000 [====>.....] - ETA: 0s -
    loss: 0.2514 - acc: 0.9332
204 17024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2500 - acc: 0.9332
205 23808/60000 [=====>.....] - ETA: 0s -
    loss: 0.2544 - acc: 0.9330
206 30592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2559 - acc: 0.9318
207 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2573 - acc: 0.9312
208 42368/60000 [=====>.....] - ETA: 0s -
    loss: 0.2561 - acc: 0.9314
209 48640/60000 [=====>.....] - ETA: 0s -
    loss: 0.2564 - acc: 0.9306
210 54912/60000 [=====>...] - ETA: 0s -
    loss: 0.2555 - acc: 0.9304
211 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2557 - acc: 0.9304
212 Epoch 16/100
213
214 128/60000 [.....] - ETA: 0s -
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214 loss: 0.1888 - acc: 0.9297
215 5248/60000 [=>.....] - ETA: 0s -
    loss: 0.2665 - acc: 0.9310
216 10752/60000 [====>.....] - ETA: 0s -
    loss: 0.2662 - acc: 0.9291
217 17152/60000 [=====>.....] - ETA: 0s -
    loss: 0.2549 - acc: 0.9313
218 23936/60000 [=====>.....] - ETA: 0s -
    loss: 0.2586 - acc: 0.9302
219 30592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2612 - acc: 0.9304
220 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2602 - acc: 0.9308
221 42496/60000 [=====>.....] - ETA: 0s -
    loss: 0.2593 - acc: 0.9304
222 49280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2584 - acc: 0.9305
223 54656/60000 [=====>... ] - ETA: 0s -
    loss: 0.2572 - acc: 0.9306
224 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2550 - acc: 0.9310
225 Epoch 17/100
226
227 128/60000 [.....] - ETA: 0s -
    loss: 0.1631 - acc: 0.9453
228 5504/60000 [=>.....] - ETA: 0s -
    loss: 0.2488 - acc: 0.9337
229 10624/60000 [====>.....] - ETA: 0s -
    loss: 0.2512 - acc: 0.9333
230 16896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2520 - acc: 0.9318
231 23680/60000 [=====>.....] - ETA: 0s -
    loss: 0.2522 - acc: 0.9316
232 30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2511 - acc: 0.9321
233 36224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2530 - acc: 0.9320
234 42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2511 - acc: 0.9325
235 48896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2512 - acc: 0.9320
236 55040/60000 [=====>... ] - ETA: 0s -
    loss: 0.2523 - acc: 0.9315
237 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2538 - acc: 0.9314
238 Epoch 18/100
239
240 128/60000 [.....] - ETA: 1s -
    loss: 0.1656 - acc: 0.9297
241 5504/60000 [=>.....] - ETA: 0s -
```

```
241 loss: 0.2365 - acc: 0.9357
242 10880/60000 [====>.....] - ETA: 0s -
loss: 0.2511 - acc: 0.9350
243 16896/60000 [=====>.....] - ETA: 0s -
loss: 0.2453 - acc: 0.9343
244 23680/60000 [=====>.....] - ETA: 0s -
loss: 0.2493 - acc: 0.9319
245 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2551 - acc: 0.9311
246 36352/60000 [=====>.....] - ETA: 0s -
loss: 0.2525 - acc: 0.9318
247 42624/60000 [=====>.....] - ETA: 0s -
loss: 0.2538 - acc: 0.9315
248 49408/60000 [=====>.....] - ETA: 0s -
loss: 0.2536 - acc: 0.9314
249 55296/60000 [=====>...] - ETA: 0s -
loss: 0.2541 - acc: 0.9311
250 60000/60000 [=====] - 0s 8us/step
- loss: 0.2532 - acc: 0.9314
251 Epoch 19/100
252
253 128/60000 [.....] - ETA: 1s -
loss: 0.1300 - acc: 0.9766
254 5376/60000 [>.....] - ETA: 0s -
loss: 0.2546 - acc: 0.9310
255 10496/60000 [==>.....] - ETA: 0s -
loss: 0.2483 - acc: 0.9325
256 16896/60000 [=====>.....] - ETA: 0s -
loss: 0.2566 - acc: 0.9315
257 23552/60000 [=====>.....] - ETA: 0s -
loss: 0.2542 - acc: 0.9332
258 30208/60000 [=====>.....] - ETA: 0s -
loss: 0.2569 - acc: 0.9318
259 35968/60000 [=====>...] - ETA: 0s -
loss: 0.2569 - acc: 0.9311
260 41856/60000 [=====>...] - ETA: 0s -
loss: 0.2557 - acc: 0.9313
261 48640/60000 [=====>...] - ETA: 0s -
loss: 0.2553 - acc: 0.9315
262 54912/60000 [=====>...] - ETA: 0s -
loss: 0.2521 - acc: 0.9320
263 60000/60000 [=====] - 0s 8us/step
- loss: 0.2527 - acc: 0.9317
264 Epoch 20/100
265
266 128/60000 [.....] - ETA: 1s -
loss: 0.3066 - acc: 0.9453
267 5504/60000 [>.....] - ETA: 0s -
loss: 0.2680 - acc: 0.9281
268 10496/60000 [==>.....] - ETA: 0s -
```

```
268 loss: 0.2645 - acc: 0.9293
269 16768/60000 [=====>.....] - ETA: 0s -
loss: 0.2696 - acc: 0.9284
270 23552/60000 [=====>.....] - ETA: 0s -
loss: 0.2629 - acc: 0.9295
271 30336/60000 [=====>.....] - ETA: 0s -
loss: 0.2593 - acc: 0.9304
272 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2575 - acc: 0.9312
273 41856/60000 [=====>.....] - ETA: 0s -
loss: 0.2560 - acc: 0.9321
274 48512/60000 [=====>.....] - ETA: 0s -
loss: 0.2536 - acc: 0.9322
275 54656/60000 [=====>...] - ETA: 0s -
loss: 0.2525 - acc: 0.9323
276 60000/60000 [=====] - 0s 8us/step
- loss: 0.2518 - acc: 0.9321
277 Epoch 21/100
278
279 128/60000 [.....] - ETA: 0s -
loss: 0.2675 - acc: 0.9219
280 5504/60000 [=>.....] - ETA: 0s -
loss: 0.2526 - acc: 0.9344
281 10624/60000 [==>.....] - ETA: 0s -
loss: 0.2603 - acc: 0.9321
282 17024/60000 [=====>.....] - ETA: 0s -
loss: 0.2567 - acc: 0.9299
283 23808/60000 [=====>.....] - ETA: 0s -
loss: 0.2559 - acc: 0.9297
284 30592/60000 [=====>.....] - ETA: 0s -
loss: 0.2549 - acc: 0.9299
285 36608/60000 [=====>.....] - ETA: 0s -
loss: 0.2533 - acc: 0.9307
286 42880/60000 [=====>.....] - ETA: 0s -
loss: 0.2540 - acc: 0.9313
287 49664/60000 [=====>.....] - ETA: 0s -
loss: 0.2541 - acc: 0.9314
288 56192/60000 [=====>...] - ETA: 0s -
loss: 0.2522 - acc: 0.9321
289 60000/60000 [=====] - 0s 8us/step
- loss: 0.2511 - acc: 0.9323
290 Epoch 22/100
291
292 128/60000 [.....] - ETA: 0s -
loss: 0.3959 - acc: 0.8984
293 5888/60000 [=>.....] - ETA: 0s -
loss: 0.2536 - acc: 0.9305
294 12288/60000 [==>.....] - ETA: 0s -
loss: 0.2537 - acc: 0.9326
295 19072/60000 [=====>.....] - ETA: 0s -
```

```
295 loss: 0.2558 - acc: 0.9309
296 25856/60000 [=====>.....] - ETA: 0s -
    loss: 0.2535 - acc: 0.9310
297 31104/60000 [=====>.....] - ETA: 0s -
    loss: 0.2514 - acc: 0.9319
298 36608/60000 [=====>.....] - ETA: 0s -
    loss: 0.2521 - acc: 0.9317
299 43392/60000 [=====>.....] - ETA: 0s -
    loss: 0.2547 - acc: 0.9310
300 50176/60000 [=====>.....] - ETA: 0s -
    loss: 0.2534 - acc: 0.9320
301 55936/60000 [=====>...] - ETA: 0s -
    loss: 0.2513 - acc: 0.9323
302 60000/60000 [=====] - 1s 8us/step
    - loss: 0.2510 - acc: 0.9323
303 Epoch 23/100
304
305 128/60000 [.....] - ETA: 1s -
    loss: 0.3464 - acc: 0.9219
306 6784/60000 [==>.....] - ETA: 0s -
    loss: 0.2700 - acc: 0.9292
307 13312/60000 [====>.....] - ETA: 0s -
    loss: 0.2634 - acc: 0.9321
308 20096/60000 [=====>.....] - ETA: 0s -
    loss: 0.2592 - acc: 0.9322
309 25216/60000 [=====>.....] - ETA: 0s -
    loss: 0.2544 - acc: 0.9319
310 30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2546 - acc: 0.9322
311 36736/60000 [=====>.....] - ETA: 0s -
    loss: 0.2550 - acc: 0.9316
312 43392/60000 [=====>.....] - ETA: 0s -
    loss: 0.2556 - acc: 0.9316
313 50176/60000 [=====>.....] - ETA: 0s -
    loss: 0.2529 - acc: 0.9318
314 56192/60000 [=====>...] - ETA: 0s -
    loss: 0.2513 - acc: 0.9321
315 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2501 - acc: 0.9324
316 Epoch 24/100
317
318 128/60000 [.....] - ETA: 0s -
    loss: 0.2802 - acc: 0.9453
319 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2630 - acc: 0.9345
320 13568/60000 [====>.....] - ETA: 0s -
    loss: 0.2586 - acc: 0.9312
321 19200/60000 [=====>.....] - ETA: 0s -
    loss: 0.2547 - acc: 0.9321
322 24448/60000 [=====>.....] - ETA: 0s -
```

```
322 loss: 0.2525 - acc: 0.9328
323 30592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2536 - acc: 0.9335
324 37120/60000 [=====>.....] - ETA: 0s -
    loss: 0.2499 - acc: 0.9340
325 43904/60000 [=====>.....] - ETA: 0s -
    loss: 0.2517 - acc: 0.9334
326 49920/60000 [=====>.....] - ETA: 0s -
    loss: 0.2518 - acc: 0.9330
327 56192/60000 [=====>..] - ETA: 0s -
    loss: 0.2513 - acc: 0.9330
328 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2497 - acc: 0.9333
329 Epoch 25/100
330
331 128/60000 [.....] - ETA: 1s -
    loss: 0.3584 - acc: 0.8984
332 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2520 - acc: 0.9345
333 12544/60000 [====>.....] - ETA: 0s -
    loss: 0.2492 - acc: 0.9328
334 18048/60000 [=====>.....] - ETA: 0s -
    loss: 0.2476 - acc: 0.9330
335 23680/60000 [=====>.....] - ETA: 0s -
    loss: 0.2521 - acc: 0.9325
336 30336/60000 [=====>.....] - ETA: 0s -
    loss: 0.2496 - acc: 0.9322
337 36096/60000 [=====>.....] - ETA: 0s -
    loss: 0.2482 - acc: 0.9328
338 41984/60000 [=====>.....] - ETA: 0s -
    loss: 0.2509 - acc: 0.9323
339 48512/60000 [=====>.....] - ETA: 0s -
    loss: 0.2501 - acc: 0.9329
340 55552/60000 [=====>..] - ETA: 0s -
    loss: 0.2492 - acc: 0.9331
341 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2493 - acc: 0.9329
342 Epoch 26/100
343
344 128/60000 [.....] - ETA: 1s -
    loss: 0.1508 - acc: 0.9453
345 5504/60000 [==>.....] - ETA: 0s -
    loss: 0.2423 - acc: 0.9380
346 10880/60000 [====>.....] - ETA: 0s -
    loss: 0.2353 - acc: 0.9389
347 16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2454 - acc: 0.9363
348 23552/60000 [=====>.....] - ETA: 0s -
    loss: 0.2488 - acc: 0.9355
349 30336/60000 [=====>.....] - ETA: 0s -
```

```
349 loss: 0.2509 - acc: 0.9352
350 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2520 - acc: 0.9336
351 42624/60000 [=====>.....] - ETA: 0s -
    loss: 0.2502 - acc: 0.9339
352 49280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2512 - acc: 0.9331
353 56064/60000 [=====>..] - ETA: 0s -
    loss: 0.2505 - acc: 0.9325
354 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2489 - acc: 0.9329
355 Epoch 27/100
356
357 128/60000 [.....] - ETA: 0s -
    loss: 0.1601 - acc: 0.9453
358 5376/60000 [=>.....] - ETA: 0s -
    loss: 0.2316 - acc: 0.9368
359 10880/60000 [==>.....] - ETA: 0s -
    loss: 0.2382 - acc: 0.9356
360 16512/60000 [==>.....] - ETA: 0s -
    loss: 0.2422 - acc: 0.9347
361 23168/60000 [==>.....] - ETA: 0s -
    loss: 0.2451 - acc: 0.9335
362 29952/60000 [==>.....] - ETA: 0s -
    loss: 0.2440 - acc: 0.9339
363 35840/60000 [==>.....] - ETA: 0s -
    loss: 0.2449 - acc: 0.9337
364 41728/60000 [=====>.....] - ETA: 0s -
    loss: 0.2443 - acc: 0.9338
365 48512/60000 [=====>.....] - ETA: 0s -
    loss: 0.2488 - acc: 0.9333
366 55296/60000 [=====>..] - ETA: 0s -
    loss: 0.2482 - acc: 0.9335
367 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2485 - acc: 0.9338
368 Epoch 28/100
369
370 128/60000 [.....] - ETA: 1s -
    loss: 0.3278 - acc: 0.9219
371 5248/60000 [=>.....] - ETA: 0s -
    loss: 0.2403 - acc: 0.9362
372 10368/60000 [==>.....] - ETA: 0s -
    loss: 0.2408 - acc: 0.9372
373 16128/60000 [==>.....] - ETA: 0s -
    loss: 0.2462 - acc: 0.9355
374 22912/60000 [==>.....] - ETA: 0s -
    loss: 0.2475 - acc: 0.9348
375 29824/60000 [==>.....] - ETA: 0s -
    loss: 0.2456 - acc: 0.9348
376 35840/60000 [==>.....] - ETA: 0s -
```

```
376 loss: 0.2455 - acc: 0.9342
377 42112/60000 [=====>.....] - ETA: 0s -
    loss: 0.2458 - acc: 0.9339
378 49024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2461 - acc: 0.9337
379 55808/60000 [=====>...] - ETA: 0s -
    loss: 0.2477 - acc: 0.9334
380 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2482 - acc: 0.9336
381 Epoch 29/100
382
383 128/60000 [.....] - ETA: 1s -
    loss: 0.3334 - acc: 0.8906
384 5248/60000 [=>.....] - ETA: 0s -
    loss: 0.2383 - acc: 0.9371
385 12032/60000 [====>.....] - ETA: 0s -
    loss: 0.2302 - acc: 0.9385
386 18432/60000 [=====>.....] - ETA: 0s -
    loss: 0.2352 - acc: 0.9372
387 25088/60000 [=====>.....] - ETA: 0s -
    loss: 0.2435 - acc: 0.9363
388 30336/60000 [=====>.....] - ETA: 0s -
    loss: 0.2445 - acc: 0.9355
389 35712/60000 [=====>.....] - ETA: 0s -
    loss: 0.2453 - acc: 0.9350
390 42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2487 - acc: 0.9344
391 49024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2492 - acc: 0.9340
392 55808/60000 [=====>...] - ETA: 0s -
    loss: 0.2489 - acc: 0.9344
393 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2480 - acc: 0.9342
394 Epoch 30/100
395
396 128/60000 [.....] - ETA: 1s -
    loss: 0.1679 - acc: 0.9375
397 5888/60000 [=>.....] - ETA: 0s -
    loss: 0.2556 - acc: 0.9338
398 12672/60000 [====>.....] - ETA: 0s -
    loss: 0.2530 - acc: 0.9340
399 19200/60000 [=====>.....] - ETA: 0s -
    loss: 0.2472 - acc: 0.9342
400 24576/60000 [=====>.....] - ETA: 0s -
    loss: 0.2454 - acc: 0.9347
401 29696/60000 [=====>.....] - ETA: 0s -
    loss: 0.2470 - acc: 0.9343
402 35840/60000 [=====>.....] - ETA: 0s -
    loss: 0.2452 - acc: 0.9347
403 42624/60000 [=====>.....] - ETA: 0s -
```

```
403 loss: 0.2461 - acc: 0.9343
404 49280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2475 - acc: 0.9343
405 55168/60000 [=====>...] - ETA: 0s -
    loss: 0.2467 - acc: 0.9342
406 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2474 - acc: 0.9340
407 Epoch 31/100
408
409 128/60000 [.....] - ETA: 1s -
    loss: 0.1356 - acc: 0.9531
410 6272/60000 [==>.....] - ETA: 0s -
    loss: 0.2379 - acc: 0.9359
411 13056/60000 [====>.....] - ETA: 0s -
    loss: 0.2468 - acc: 0.9321
412 19584/60000 [=====>.....] - ETA: 0s -
    loss: 0.2464 - acc: 0.9329
413 24960/60000 [=====>.....] - ETA: 0s -
    loss: 0.2442 - acc: 0.9336
414 30336/60000 [=====>.....] - ETA: 0s -
    loss: 0.2470 - acc: 0.9328
415 36736/60000 [=====>.....] - ETA: 0s -
    loss: 0.2451 - acc: 0.9336
416 43520/60000 [=====>.....] - ETA: 0s -
    loss: 0.2485 - acc: 0.9333
417 50304/60000 [=====>.....] - ETA: 0s -
    loss: 0.2491 - acc: 0.9336
418 56064/60000 [=====>..] - ETA: 0s -
    loss: 0.2490 - acc: 0.9335
419 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2474 - acc: 0.9340
420 Epoch 32/100
421
422 128/60000 [.....] - ETA: 1s -
    loss: 0.1479 - acc: 0.9453
423 6016/60000 [==>.....] - ETA: 0s -
    loss: 0.2461 - acc: 0.9328
424 12800/60000 [====>.....] - ETA: 0s -
    loss: 0.2466 - acc: 0.9324
425 19584/60000 [=====>.....] - ETA: 0s -
    loss: 0.2391 - acc: 0.9338
426 24832/60000 [=====>.....] - ETA: 0s -
    loss: 0.2403 - acc: 0.9341
427 30336/60000 [=====>.....] - ETA: 0s -
    loss: 0.2448 - acc: 0.9347
428 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2471 - acc: 0.9349
429 43136/60000 [=====>.....] - ETA: 0s -
    loss: 0.2456 - acc: 0.9353
430 49920/60000 [=====>.....] - ETA: 0s -
```

```
430 loss: 0.2475 - acc: 0.9350
431 55808/60000 [=====>...] - ETA: 0s -
    loss: 0.2459 - acc: 0.9349
432 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2471 - acc: 0.9346
433 Epoch 33/100
434
435 128/60000 [.....] - ETA: 1s -
    loss: 0.2526 - acc: 0.9375
436 6272/60000 [==>.....] - ETA: 0s -
    loss: 0.2302 - acc: 0.9381
437 13056/60000 [====>.....] - ETA: 0s -
    loss: 0.2523 - acc: 0.9343
438 19840/60000 [=====>.....] - ETA: 0s -
    loss: 0.2512 - acc: 0.9339
439 25088/60000 [=====>.....] - ETA: 0s -
    loss: 0.2486 - acc: 0.9334
440 29952/60000 [=====>.....] - ETA: 0s -
    loss: 0.2511 - acc: 0.9328
441 36224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2507 - acc: 0.9331
442 42624/60000 [=====>.....] - ETA: 0s -
    loss: 0.2491 - acc: 0.9335
443 49408/60000 [=====>.....] - ETA: 0s -
    loss: 0.2477 - acc: 0.9338
444 55296/60000 [=====>...] - ETA: 0s -
    loss: 0.2471 - acc: 0.9334
445 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2464 - acc: 0.9336
446 Epoch 34/100
447
448 128/60000 [.....] - ETA: 1s -
    loss: 0.3446 - acc: 0.9141
449 6400/60000 [==>.....] - ETA: 0s -
    loss: 0.2432 - acc: 0.9373
450 13184/60000 [====>.....] - ETA: 0s -
    loss: 0.2436 - acc: 0.9371
451 18048/60000 [=====>.....] - ETA: 0s -
    loss: 0.2444 - acc: 0.9368
452 23040/60000 [=====>.....] - ETA: 0s -
    loss: 0.2409 - acc: 0.9371
453 29312/60000 [=====>.....] - ETA: 0s -
    loss: 0.2409 - acc: 0.9363
454 36096/60000 [=====>.....] - ETA: 0s -
    loss: 0.2439 - acc: 0.9357
455 42880/60000 [=====>.....] - ETA: 0s -
    loss: 0.2434 - acc: 0.9352
456 48768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2446 - acc: 0.9348
457 54912/60000 [=====>...] - ETA: 0s -
```

```
457 loss: 0.2468 - acc: 0.9344
458 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2461 - acc: 0.9347
459 Epoch 35/100
460
461 128/60000 [.....] - ETA: 1s -
    loss: 0.1770 - acc: 0.9375
462 6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2592 - acc: 0.9314
463 11776/60000 [====>.....] - ETA: 0s -
    loss: 0.2478 - acc: 0.9349
464 17024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2469 - acc: 0.9346
465 22912/60000 [======>.....] - ETA: 0s -
    loss: 0.2505 - acc: 0.9340
466 29696/60000 [======>.....] - ETA: 0s -
    loss: 0.2523 - acc: 0.9345
467 36480/60000 [======>.....] - ETA: 0s -
    loss: 0.2526 - acc: 0.9336
468 42112/60000 [======>.....] - ETA: 0s -
    loss: 0.2489 - acc: 0.9344
469 48384/60000 [======>.....] - ETA: 0s -
    loss: 0.2470 - acc: 0.9349
470 55168/60000 [======>...] - ETA: 0s -
    loss: 0.2467 - acc: 0.9344
471 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2462 - acc: 0.9345
472 Epoch 36/100
473
474 128/60000 [.....] - ETA: 1s -
    loss: 0.1744 - acc: 0.9531
475 5632/60000 [>.....] - ETA: 0s -
    loss: 0.2392 - acc: 0.9386
476 10624/60000 [====>.....] - ETA: 0s -
    loss: 0.2483 - acc: 0.9344
477 16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2511 - acc: 0.9335
478 22784/60000 [======>.....] - ETA: 0s -
    loss: 0.2471 - acc: 0.9343
479 29568/60000 [======>.....] - ETA: 0s -
    loss: 0.2484 - acc: 0.9332
480 35328/60000 [======>.....] - ETA: 0s -
    loss: 0.2468 - acc: 0.9340
481 41600/60000 [======>.....] - ETA: 0s -
    loss: 0.2441 - acc: 0.9341
482 48384/60000 [======>.....] - ETA: 0s -
    loss: 0.2480 - acc: 0.9336
483 55168/60000 [======>...] - ETA: 0s -
    loss: 0.2460 - acc: 0.9345
484 60000/60000 [=====] - 0s 8us/step
```

```
484 - loss: 0.2459 - acc: 0.9345
485 Epoch 37/100
486
487 128/60000 [.....] - ETA: 0s -
    loss: 0.4103 - acc: 0.8984
488 5760/60000 [=>.....] - ETA: 0s -
    loss: 0.2352 - acc: 0.9375
489 10624/60000 [====>.....] - ETA: 0s -
    loss: 0.2552 - acc: 0.9327
490 16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2486 - acc: 0.9357
491 23296/60000 [=====>.....] - ETA: 0s -
    loss: 0.2483 - acc: 0.9354
492 30080/60000 [=====>.....] - ETA: 0s -
    loss: 0.2452 - acc: 0.9357
493 35584/60000 [=====>.....] - ETA: 0s -
    loss: 0.2453 - acc: 0.9350
494 41728/60000 [=====>.....] - ETA: 0s -
    loss: 0.2451 - acc: 0.9357
495 48384/60000 [=====>.....] - ETA: 0s -
    loss: 0.2451 - acc: 0.9353
496 55168/60000 [=====>....] - ETA: 0s -
    loss: 0.2457 - acc: 0.9353
497 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2459 - acc: 0.9350
498 Epoch 38/100
499
500 128/60000 [.....] - ETA: 0s -
    loss: 0.2759 - acc: 0.9375
501 5760/60000 [=>.....] - ETA: 0s -
    loss: 0.2235 - acc: 0.9408
502 10752/60000 [====>.....] - ETA: 0s -
    loss: 0.2309 - acc: 0.9367
503 16896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2411 - acc: 0.9338
504 23552/60000 [=====>.....] - ETA: 0s -
    loss: 0.2384 - acc: 0.9352
505 30208/60000 [=====>.....] - ETA: 0s -
    loss: 0.2380 - acc: 0.9355
506 36224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2388 - acc: 0.9359
507 42496/60000 [=====>.....] - ETA: 0s -
    loss: 0.2423 - acc: 0.9351
508 49152/60000 [=====>.....] - ETA: 0s -
    loss: 0.2441 - acc: 0.9348
509 55936/60000 [=====>....] - ETA: 0s -
    loss: 0.2443 - acc: 0.9349
510 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2456 - acc: 0.9346
511 Epoch 39/100
```

```
512
513   128/60000 [.....] - ETA: 0s -
      loss: 0.2949 - acc: 0.9297
514   6016/60000 [==>.....] - ETA: 0s -
      loss: 0.2525 - acc: 0.9328
515   11008/60000 [====>.....] - ETA: 0s -
      loss: 0.2562 - acc: 0.9321
516   16768/60000 [=====>.....] - ETA: 0s -
      loss: 0.2449 - acc: 0.9361
517   23680/60000 [======>.....] - ETA: 0s -
      loss: 0.2455 - acc: 0.9345
518   30208/60000 [======>.....] - ETA: 0s -
      loss: 0.2453 - acc: 0.9344
519   35968/60000 [======>.....] - ETA: 0s -
      loss: 0.2445 - acc: 0.9350
520   41984/60000 [======>.....] - ETA: 0s -
      loss: 0.2474 - acc: 0.9339
521   48768/60000 [======>.....] - ETA: 0s -
      loss: 0.2455 - acc: 0.9343
522   55680/60000 [======>....] - ETA: 0s -
      loss: 0.2461 - acc: 0.9341
523   60000/60000 [=====] - 0s 8us/step
      - loss: 0.2452 - acc: 0.9344
524 Epoch 40/100
525
526   128/60000 [.....] - ETA: 1s -
      loss: 0.2214 - acc: 0.9453
527   5888/60000 [=>.....] - ETA: 0s -
      loss: 0.2248 - acc: 0.9377
528   11008/60000 [====>.....] - ETA: 0s -
      loss: 0.2354 - acc: 0.9369
529   16768/60000 [=====>.....] - ETA: 0s -
      loss: 0.2388 - acc: 0.9366
530   23552/60000 [======>.....] - ETA: 0s -
      loss: 0.2443 - acc: 0.9347
531   30080/60000 [======>.....] - ETA: 0s -
      loss: 0.2440 - acc: 0.9356
532   36096/60000 [======>.....] - ETA: 0s -
      loss: 0.2432 - acc: 0.9361
533   42240/60000 [======>.....] - ETA: 0s -
      loss: 0.2450 - acc: 0.9356
534   49024/60000 [======>.....] - ETA: 0s -
      loss: 0.2459 - acc: 0.9355
535   55936/60000 [======>....] - ETA: 0s -
      loss: 0.2459 - acc: 0.9349
536   60000/60000 [=====] - 0s 8us/step
      - loss: 0.2451 - acc: 0.9352
537 Epoch 41/100
538
539   128/60000 [.....] - ETA: 1s -
```

```
539 loss: 0.3001 - acc: 0.9375
540 5888/60000 [=>.....] - ETA: 0s -
loss: 0.2234 - acc: 0.9375
541 12672/60000 [=====>.....] - ETA: 0s -
loss: 0.2317 - acc: 0.9379
542 18816/60000 [=====>.....] - ETA: 0s -
loss: 0.2354 - acc: 0.9374
543 25600/60000 [=====>.....] - ETA: 0s -
loss: 0.2397 - acc: 0.9365
544 30720/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9369
545 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2405 - acc: 0.9362
546 42752/60000 [=====>.....] - ETA: 0s -
loss: 0.2407 - acc: 0.9360
547 49536/60000 [=====>.....] - ETA: 0s -
loss: 0.2428 - acc: 0.9355
548 55552/60000 [=====>...] - ETA: 0s -
loss: 0.2449 - acc: 0.9353
549 60000/60000 [=====] - 0s 8us/step
- loss: 0.2450 - acc: 0.9353
550 Epoch 42/100
551
552 128/60000 [.....] - ETA: 0s -
loss: 0.2782 - acc: 0.9297
553 6912/60000 [=>.....] - ETA: 0s -
loss: 0.2608 - acc: 0.9353
554 13696/60000 [=====>.....] - ETA: 0s -
loss: 0.2509 - acc: 0.9344
555 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2458 - acc: 0.9338
556 24448/60000 [=====>.....] - ETA: 0s -
loss: 0.2482 - acc: 0.9334
557 30208/60000 [=====>.....] - ETA: 0s -
loss: 0.2455 - acc: 0.9349
558 36992/60000 [=====>.....] - ETA: 0s -
loss: 0.2476 - acc: 0.9346
559 43904/60000 [=====>.....] - ETA: 0s -
loss: 0.2463 - acc: 0.9347
560 49664/60000 [=====>.....] - ETA: 0s -
loss: 0.2421 - acc: 0.9360
561 55680/60000 [=====>...] - ETA: 0s -
loss: 0.2450 - acc: 0.9354
562 60000/60000 [=====] - 0s 8us/step
- loss: 0.2445 - acc: 0.9355
563 Epoch 43/100
564
565 128/60000 [.....] - ETA: 1s -
loss: 0.1543 - acc: 0.9453
566 6144/60000 [=>.....] - ETA: 0s -
```

```
566 loss: 0.2551 - acc: 0.9346
567 12928/60000 [=====>.....] - ETA: 0s -
loss: 0.2433 - acc: 0.9340
568 18304/60000 [=====>.....] - ETA: 0s -
loss: 0.2475 - acc: 0.9331
569 23680/60000 [=====>.....] - ETA: 0s -
loss: 0.2482 - acc: 0.9333
570 29184/60000 [=====>.....] - ETA: 0s -
loss: 0.2488 - acc: 0.9337
571 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2465 - acc: 0.9348
572 42752/60000 [=====>.....] - ETA: 0s -
loss: 0.2446 - acc: 0.9348
573 48512/60000 [=====>.....] - ETA: 0s -
loss: 0.2447 - acc: 0.9351
574 54528/60000 [=====>....] - ETA: 0s -
loss: 0.2441 - acc: 0.9353
575 60000/60000 [=====] - 0s 8us/step
- loss: 0.2446 - acc: 0.9353
576 Epoch 44/100
577
578 128/60000 [.....] - ETA: 0s -
loss: 0.1738 - acc: 0.9453
579 6912/60000 [=>.....] - ETA: 0s -
loss: 0.2345 - acc: 0.9376
580 13824/60000 [=====>.....] - ETA: 0s -
loss: 0.2372 - acc: 0.9379
581 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2396 - acc: 0.9369
582 24320/60000 [=====>.....] - ETA: 0s -
loss: 0.2360 - acc: 0.9377
583 30080/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9370
584 36864/60000 [=====>.....] - ETA: 0s -
loss: 0.2373 - acc: 0.9366
585 43776/60000 [=====>.....] - ETA: 0s -
loss: 0.2422 - acc: 0.9351
586 49792/60000 [=====>....] - ETA: 0s -
loss: 0.2417 - acc: 0.9355
587 56064/60000 [=====>...] - ETA: 0s -
loss: 0.2419 - acc: 0.9359
588 60000/60000 [=====] - 0s 8us/step
- loss: 0.2445 - acc: 0.9356
589 Epoch 45/100
590
591 128/60000 [.....] - ETA: 1s -
loss: 0.2196 - acc: 0.9297
592 6656/60000 [=>.....] - ETA: 0s -
loss: 0.2570 - acc: 0.9330
593 12160/60000 [=====>.....] - ETA: 0s -
```

```
593 loss: 0.2513 - acc: 0.9344
594 17152/60000 [=====>.....] - ETA: 0s -
loss: 0.2442 - acc: 0.9362
595 23040/60000 [=====>.....] - ETA: 0s -
loss: 0.2456 - acc: 0.9359
596 29824/60000 [=====>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9369
597 36480/60000 [=====>.....] - ETA: 0s -
loss: 0.2444 - acc: 0.9366
598 42496/60000 [=====>.....] - ETA: 0s -
loss: 0.2445 - acc: 0.9359
599 48768/60000 [=====>.....] - ETA: 0s -
loss: 0.2452 - acc: 0.9353
600 55552/60000 [=====>...] - ETA: 0s -
loss: 0.2445 - acc: 0.9353
601 60000/60000 [=====] - 0s 8us/step
- loss: 0.2443 - acc: 0.9352
602 Epoch 46/100
603
604 128/60000 [.....] - ETA: 0s -
loss: 0.1665 - acc: 0.9688
605 5760/60000 [=>.....] - ETA: 0s -
loss: 0.2490 - acc: 0.9335
606 11008/60000 [==>.....] - ETA: 0s -
loss: 0.2449 - acc: 0.9351
607 16896/60000 [==>.....] - ETA: 0s -
loss: 0.2482 - acc: 0.9354
608 23680/60000 [=====>.....] - ETA: 0s -
loss: 0.2473 - acc: 0.9361
609 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2460 - acc: 0.9356
610 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2459 - acc: 0.9359
611 42240/60000 [=====>.....] - ETA: 0s -
loss: 0.2450 - acc: 0.9357
612 49024/60000 [=====>.....] - ETA: 0s -
loss: 0.2447 - acc: 0.9358
613 55808/60000 [=====>...] - ETA: 0s -
loss: 0.2423 - acc: 0.9362
614 60000/60000 [=====] - 0s 8us/step
- loss: 0.2440 - acc: 0.9357
615 Epoch 47/100
616
617 128/60000 [.....] - ETA: 0s -
loss: 0.3680 - acc: 0.9297
618 5888/60000 [=>.....] - ETA: 0s -
loss: 0.2573 - acc: 0.9351
619 11136/60000 [==>.....] - ETA: 0s -
loss: 0.2427 - acc: 0.9365
620 17152/60000 [==>.....] - ETA: 0s -
```

```
620 loss: 0.2392 - acc: 0.9358
621 23296/60000 [=====>.....] - ETA: 0s -
loss: 0.2359 - acc: 0.9365
622 30080/60000 [=====>.....] - ETA: 0s -
loss: 0.2388 - acc: 0.9368
623 35840/60000 [=====>.....] - ETA: 0s -
loss: 0.2368 - acc: 0.9366
624 41984/60000 [=====>.....] - ETA: 0s -
loss: 0.2405 - acc: 0.9364
625 48768/60000 [=====>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9358
626 55552/60000 [=====>...] - ETA: 0s -
loss: 0.2436 - acc: 0.9357
627 60000/60000 [=====] - 0s 8us/step
- loss: 0.2440 - acc: 0.9357
628 Epoch 48/100
629
630 128/60000 [.....] - ETA: 1s -
loss: 0.4496 - acc: 0.9375
631 6016/60000 [==>.....] - ETA: 0s -
loss: 0.2349 - acc: 0.9380
632 12672/60000 [====>.....] - ETA: 0s -
loss: 0.2396 - acc: 0.9375
633 19456/60000 [=====>.....] - ETA: 0s -
loss: 0.2370 - acc: 0.9390
634 25728/60000 [=====>.....] - ETA: 0s -
loss: 0.2358 - acc: 0.9386
635 30976/60000 [=====>.....] - ETA: 0s -
loss: 0.2350 - acc: 0.9382
636 36224/60000 [=====>.....] - ETA: 0s -
loss: 0.2388 - acc: 0.9373
637 43008/60000 [=====>.....] - ETA: 0s -
loss: 0.2376 - acc: 0.9378
638 49792/60000 [=====>.....] - ETA: 0s -
loss: 0.2406 - acc: 0.9365
639 55680/60000 [=====>...] - ETA: 0s -
loss: 0.2426 - acc: 0.9360
640 60000/60000 [=====] - 0s 8us/step
- loss: 0.2441 - acc: 0.9357
641 Epoch 49/100
642
643 128/60000 [.....] - ETA: 1s -
loss: 0.1133 - acc: 0.9766
644 6912/60000 [==>.....] - ETA: 0s -
loss: 0.2339 - acc: 0.9382
645 13696/60000 [====>.....] - ETA: 0s -
loss: 0.2404 - acc: 0.9366
646 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2391 - acc: 0.9366
647 23424/60000 [=====>.....] - ETA: 0s -
```

```
647 loss: 0.2422 - acc: 0.9365
648 28800/60000 [=====>.....] - ETA: 0s -
loss: 0.2439 - acc: 0.9365
649 35328/60000 [=====>.....] - ETA: 0s -
loss: 0.2447 - acc: 0.9359
650 42112/60000 [=====>.....] - ETA: 0s -
loss: 0.2442 - acc: 0.9356
651 48128/60000 [=====>.....] - ETA: 0s -
loss: 0.2431 - acc: 0.9359
652 54272/60000 [=====>...] - ETA: 0s -
loss: 0.2434 - acc: 0.9360
653 60000/60000 [=====] - 1s 8us/step
- loss: 0.2439 - acc: 0.9358
654 Epoch 50/100
655
656 128/60000 [.....] - ETA: 1s -
loss: 0.2090 - acc: 0.9219
657 6912/60000 [==>.....] - ETA: 0s -
loss: 0.2651 - acc: 0.9304
658 12160/60000 [====>.....] - ETA: 0s -
loss: 0.2624 - acc: 0.9326
659 17536/60000 [=====>.....] - ETA: 0s -
loss: 0.2529 - acc: 0.9341
660 23552/60000 [=====>.....] - ETA: 0s -
loss: 0.2498 - acc: 0.9354
661 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2479 - acc: 0.9363
662 36992/60000 [=====>.....] - ETA: 0s -
loss: 0.2460 - acc: 0.9366
663 42880/60000 [=====>.....] - ETA: 0s -
loss: 0.2453 - acc: 0.9364
664 49152/60000 [=====>.....] - ETA: 0s -
loss: 0.2456 - acc: 0.9363
665 55936/60000 [=====>...] - ETA: 0s -
loss: 0.2435 - acc: 0.9361
666 60000/60000 [=====] - 0s 8us/step
- loss: 0.2436 - acc: 0.9358
667 Epoch 51/100
668
669 128/60000 [.....] - ETA: 1s -
loss: 0.2176 - acc: 0.9141
670 6016/60000 [==>.....] - ETA: 0s -
loss: 0.2403 - acc: 0.9338
671 11136/60000 [====>.....] - ETA: 0s -
loss: 0.2376 - acc: 0.9351
672 16768/60000 [=====>.....] - ETA: 0s -
loss: 0.2427 - acc: 0.9349
673 23040/60000 [=====>.....] - ETA: 0s -
loss: 0.2451 - acc: 0.9356
674 29824/60000 [=====>.....] - ETA: 0s -
```

```
674 loss: 0.2435 - acc: 0.9350
675 35456/60000 [=====>.....] - ETA: 0s -
loss: 0.2432 - acc: 0.9358
676 41216/60000 [=====>.....] - ETA: 0s -
loss: 0.2440 - acc: 0.9359
677 47616/60000 [=====>.....] - ETA: 0s -
loss: 0.2446 - acc: 0.9355
678 54016/60000 [=====>...] - ETA: 0s -
loss: 0.2437 - acc: 0.9356
679 60000/60000 [=====] - 1s 8us/step
- loss: 0.2436 - acc: 0.9357
680 Epoch 52/100
681
682 128/60000 [.....] - ETA: 1s -
loss: 0.2196 - acc: 0.9297
683 5504/60000 [=>.....] - ETA: 0s -
loss: 0.2337 - acc: 0.9390
684 10752/60000 [==>.....] - ETA: 0s -
loss: 0.2317 - acc: 0.9387
685 16896/60000 [==>.....] - ETA: 0s -
loss: 0.2298 - acc: 0.9384
686 23168/60000 [==>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9361
687 29952/60000 [==>.....] - ETA: 0s -
loss: 0.2424 - acc: 0.9356
688 35456/60000 [=====>.....] - ETA: 0s -
loss: 0.2384 - acc: 0.9364
689 41216/60000 [=====>.....] - ETA: 0s -
loss: 0.2391 - acc: 0.9365
690 48000/60000 [=====>...] - ETA: 0s -
loss: 0.2399 - acc: 0.9365
691 54784/60000 [=====>...] - ETA: 0s -
loss: 0.2423 - acc: 0.9358
692 60000/60000 [=====] - 0s 8us/step
- loss: 0.2435 - acc: 0.9358
693 Epoch 53/100
694
695 128/60000 [.....] - ETA: 0s -
loss: 0.3324 - acc: 0.9141
696 5376/60000 [=>.....] - ETA: 0s -
loss: 0.2300 - acc: 0.9395
697 10112/60000 [==>.....] - ETA: 0s -
loss: 0.2408 - acc: 0.9360
698 16000/60000 [==>.....] - ETA: 0s -
loss: 0.2415 - acc: 0.9359
699 21120/60000 [==>.....] - ETA: 0s -
loss: 0.2410 - acc: 0.9363
700 27136/60000 [==>.....] - ETA: 0s -
loss: 0.2423 - acc: 0.9358
701 32512/60000 [==>.....] - ETA: 0s -
```

```
701 loss: 0.2420 - acc: 0.9357
702 38784/60000 [=====>.....] - ETA: 0s -
    loss: 0.2431 - acc: 0.9354
703 45568/60000 [=====>.....] - ETA: 0s -
    loss: 0.2418 - acc: 0.9357
704 52096/60000 [=====>....] - ETA: 0s -
    loss: 0.2435 - acc: 0.9355
705 57216/60000 [=====>...] - ETA: 0s -
    loss: 0.2432 - acc: 0.9355
706 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2435 - acc: 0.9357
707 Epoch 54/100
708
709 128/60000 [.....] - ETA: 1s -
    loss: 0.2300 - acc: 0.9297
710 6016/60000 [==>.....] - ETA: 0s -
    loss: 0.2190 - acc: 0.9388
711 12672/60000 [====>.....] - ETA: 0s -
    loss: 0.2387 - acc: 0.9365
712 19200/60000 [=====>.....] - ETA: 0s -
    loss: 0.2321 - acc: 0.9385
713 24704/60000 [=====>.....] - ETA: 0s -
    loss: 0.2337 - acc: 0.9382
714 29824/60000 [=====>.....] - ETA: 0s -
    loss: 0.2338 - acc: 0.9381
715 35072/60000 [=====>.....] - ETA: 0s -
    loss: 0.2375 - acc: 0.9382
716 41344/60000 [=====>.....] - ETA: 0s -
    loss: 0.2415 - acc: 0.9370
717 47744/60000 [=====>.....] - ETA: 0s -
    loss: 0.2405 - acc: 0.9374
718 53248/60000 [=====>....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9370
719 58624/60000 [=====>..] - ETA: 0s -
    loss: 0.2433 - acc: 0.9367
720 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2429 - acc: 0.9367
721 Epoch 55/100
722
723 128/60000 [.....] - ETA: 1s -
    loss: 0.1548 - acc: 0.9609
724 6400/60000 [==>.....] - ETA: 0s -
    loss: 0.2417 - acc: 0.9367
725 12288/60000 [====>.....] - ETA: 0s -
    loss: 0.2335 - acc: 0.9377
726 16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2425 - acc: 0.9362
727 21760/60000 [=====>.....] - ETA: 0s -
    loss: 0.2386 - acc: 0.9364
728 28288/60000 [=====>.....] - ETA: 0s -
```

```
728 loss: 0.2340 - acc: 0.9374
729 34816/60000 [=====>.....] - ETA: 0s -
loss: 0.2365 - acc: 0.9372
730 40832/60000 [=====>.....] - ETA: 0s -
loss: 0.2405 - acc: 0.9364
731 46976/60000 [=====>.....] - ETA: 0s -
loss: 0.2404 - acc: 0.9366
732 53888/60000 [=====>....] - ETA: 0s -
loss: 0.2407 - acc: 0.9363
733 60000/60000 [=====] - 1s 8us/step
- loss: 0.2430 - acc: 0.9361
734 Epoch 56/100
735
736 128/60000 [.....] - ETA: 1s -
loss: 0.2723 - acc: 0.9297
737 5120/60000 [=>.....] - ETA: 0s -
loss: 0.2373 - acc: 0.9434
738 9472/60000 [==>.....] - ETA: 0s -
loss: 0.2365 - acc: 0.9416
739 14208/60000 [====>.....] - ETA: 0s -
loss: 0.2354 - acc: 0.9393
740 20608/60000 [=====>.....] - ETA: 0s -
loss: 0.2323 - acc: 0.9394
741 26496/60000 [=====>.....] - ETA: 0s -
loss: 0.2346 - acc: 0.9386
742 30336/60000 [=====>.....] - ETA: 0s -
loss: 0.2408 - acc: 0.9376
743 34560/60000 [=====>.....] - ETA: 0s -
loss: 0.2435 - acc: 0.9365
744 39936/60000 [=====>.....] - ETA: 0s -
loss: 0.2412 - acc: 0.9363
745 46592/60000 [=====>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9359
746 53120/60000 [=====>....] - ETA: 0s -
loss: 0.2433 - acc: 0.9362
747 57856/60000 [=====>...] - ETA: 0s -
loss: 0.2427 - acc: 0.9363
748 60000/60000 [=====] - 1s 10us/
step - loss: 0.2431 - acc: 0.9365
749 Epoch 57/100
750
751 128/60000 [.....] - ETA: 2s -
loss: 0.1986 - acc: 0.9531
752 3200/60000 [>.....] - ETA: 0s -
loss: 0.2247 - acc: 0.9403
753 4736/60000 [=>.....] - ETA: 1s -
loss: 0.2403 - acc: 0.9369
754 8192/60000 [==>.....] - ETA: 0s -
loss: 0.2465 - acc: 0.9357
755 12544/60000 [====>.....] - ETA: 0s -
```

```
755 loss: 0.2462 - acc: 0.9375
756 18048/60000 [=====>.....] - ETA: 0s -
    loss: 0.2509 - acc: 0.9356
757 24704/60000 [=====>.....] - ETA: 0s -
    loss: 0.2496 - acc: 0.9360
758 30336/60000 [=====>.....] - ETA: 0s -
    loss: 0.2495 - acc: 0.9358
759 33536/60000 [=====>.....] - ETA: 0s -
    loss: 0.2476 - acc: 0.9358
760 36736/60000 [=====>.....] - ETA: 0s -
    loss: 0.2475 - acc: 0.9355
761 40576/60000 [=====>.....] - ETA: 0s -
    loss: 0.2447 - acc: 0.9359
762 44416/60000 [=====>.....] - ETA: 0s -
    loss: 0.2432 - acc: 0.9361
763 48896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2449 - acc: 0.9357
764 54144/60000 [=====>... ] - ETA: 0s -
    loss: 0.2412 - acc: 0.9362
765 60000/60000 [=====] - 1s 12us/
    step - loss: 0.2426 - acc: 0.9360
766 Epoch 58/100
767
768 128/60000 [.....] - ETA: 1s -
    loss: 0.2122 - acc: 0.9375
769 6656/60000 [==>.....] - ETA: 0s -
    loss: 0.2367 - acc: 0.9389
770 11392/60000 [==>.....] - ETA: 0s -
    loss: 0.2526 - acc: 0.9351
771 16256/60000 [==>.....] - ETA: 0s -
    loss: 0.2444 - acc: 0.9369
772 22528/60000 [==>.....] - ETA: 0s -
    loss: 0.2395 - acc: 0.9363
773 29056/60000 [==>.....] - ETA: 0s -
    loss: 0.2379 - acc: 0.9370
774 34560/60000 [==>.....] - ETA: 0s -
    loss: 0.2385 - acc: 0.9366
775 39808/60000 [=====>.....] - ETA: 0s -
    loss: 0.2414 - acc: 0.9368
776 46592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2418 - acc: 0.9368
777 53120/60000 [=====>... ] - ETA: 0s -
    loss: 0.2429 - acc: 0.9363
778 59392/60000 [=====>..] - ETA: 0s -
    loss: 0.2425 - acc: 0.9362
779 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2426 - acc: 0.9361
780 Epoch 59/100
781
782 128/60000 [.....] - ETA: 1s -
```

```
782 loss: 0.2092 - acc: 0.9375
783 5632/60000 [=>.....] - ETA: 0s -
loss: 0.2423 - acc: 0.9354
784 11648/60000 [====>.....] - ETA: 0s -
loss: 0.2473 - acc: 0.9365
785 17920/60000 [=====>.....] - ETA: 0s -
loss: 0.2505 - acc: 0.9357
786 24064/60000 [=====>.....] - ETA: 0s -
loss: 0.2412 - acc: 0.9377
787 29184/60000 [=====>.....] - ETA: 0s -
loss: 0.2470 - acc: 0.9366
788 34176/60000 [=====>.....] - ETA: 0s -
loss: 0.2455 - acc: 0.9367
789 40576/60000 [=====>.....] - ETA: 0s -
loss: 0.2419 - acc: 0.9368
790 47232/60000 [=====>.....] - ETA: 0s -
loss: 0.2409 - acc: 0.9367
791 52736/60000 [=====>.....] - ETA: 0s -
loss: 0.2415 - acc: 0.9367
792 58752/60000 [=====>..] - ETA: 0s -
loss: 0.2426 - acc: 0.9367
793 60000/60000 [=====] - 1s 9us/step
- loss: 0.2427 - acc: 0.9366
794 Epoch 60/100
795
796 128/60000 [.....] - ETA: 1s -
loss: 0.1609 - acc: 0.9531
797 6784/60000 [=>.....] - ETA: 0s -
loss: 0.2403 - acc: 0.9347
798 13312/60000 [====>.....] - ETA: 0s -
loss: 0.2395 - acc: 0.9350
799 18432/60000 [=====>.....] - ETA: 0s -
loss: 0.2364 - acc: 0.9350
800 23808/60000 [=====>.....] - ETA: 0s -
loss: 0.2363 - acc: 0.9351
801 30592/60000 [=====>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9350
802 36736/60000 [=====>.....] - ETA: 0s -
loss: 0.2397 - acc: 0.9355
803 42496/60000 [=====>.....] - ETA: 0s -
loss: 0.2401 - acc: 0.9360
804 48640/60000 [=====>.....] - ETA: 0s -
loss: 0.2400 - acc: 0.9368
805 54656/60000 [=====>..] - ETA: 0s -
loss: 0.2420 - acc: 0.9364
806 60000/60000 [=====] - 1s 8us/step
- loss: 0.2424 - acc: 0.9363
807 Epoch 61/100
808
809 128/60000 [.....] - ETA: 1s -
```

```
809 loss: 0.3562 - acc: 0.9219
810 3840/60000 [>.....] - ETA: 0s -
    loss: 0.2322 - acc: 0.9357
811 8704/60000 [==>.....] - ETA: 0s -
    loss: 0.2371 - acc: 0.9369
812 15104/60000 [=====>.....] - ETA: 0s -
    loss: 0.2345 - acc: 0.9370
813 21888/60000 [======>.....] - ETA: 0s -
    loss: 0.2335 - acc: 0.9376
814 28800/60000 [======>.....] - ETA: 0s -
    loss: 0.2390 - acc: 0.9365
815 34176/60000 [======>.....] - ETA: 0s -
    loss: 0.2384 - acc: 0.9364
816 40448/60000 [======>.....] - ETA: 0s -
    loss: 0.2411 - acc: 0.9364
817 47232/60000 [======>.....] - ETA: 0s -
    loss: 0.2388 - acc: 0.9375
818 53760/60000 [======>.....] - ETA: 0s -
    loss: 0.2407 - acc: 0.9372
819 59776/60000 [======>..] - ETA: 0s -
    loss: 0.2423 - acc: 0.9364
820 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2423 - acc: 0.9364
821 Epoch 62/100
822
823 128/60000 [.....] - ETA: 1s -
    loss: 0.1011 - acc: 0.9688
824 6400/60000 [==>.....] - ETA: 0s -
    loss: 0.2385 - acc: 0.9398
825 13184/60000 [=====>.....] - ETA: 0s -
    loss: 0.2302 - acc: 0.9404
826 19840/60000 [======>.....] - ETA: 0s -
    loss: 0.2419 - acc: 0.9384
827 24832/60000 [======>.....] - ETA: 0s -
    loss: 0.2397 - acc: 0.9382
828 30208/60000 [======>.....] - ETA: 0s -
    loss: 0.2363 - acc: 0.9390
829 36224/60000 [======>.....] - ETA: 0s -
    loss: 0.2402 - acc: 0.9384
830 43008/60000 [======>.....] - ETA: 0s -
    loss: 0.2424 - acc: 0.9375
831 48896/60000 [======>.....] - ETA: 0s -
    loss: 0.2418 - acc: 0.9375
832 54784/60000 [======>..] - ETA: 0s -
    loss: 0.2412 - acc: 0.9371
833 60000/60000 [=====] - 0s 8us/step
    - loss: 0.2422 - acc: 0.9367
834 Epoch 63/100
835
836 128/60000 [.....] - ETA: 0s -
```

```
836 loss: 0.1696 - acc: 0.9453
837 6784/60000 [==>.....] - ETA: 0s -
loss: 0.2307 - acc: 0.9368
838 11904/60000 [====>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9362
839 16768/60000 [=====>.....] - ETA: 0s -
loss: 0.2378 - acc: 0.9370
840 22656/60000 [======>.....] - ETA: 0s -
loss: 0.2333 - acc: 0.9379
841 28800/60000 [======>.....] - ETA: 0s -
loss: 0.2367 - acc: 0.9368
842 34688/60000 [======>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9363
843 40448/60000 [======>.....] - ETA: 0s -
loss: 0.2389 - acc: 0.9368
844 46720/60000 [======>.....] - ETA: 0s -
loss: 0.2401 - acc: 0.9369
845 53120/60000 [======>.....] - ETA: 0s -
loss: 0.2403 - acc: 0.9373
846 59776/60000 [======>..] - ETA: 0s -
loss: 0.2417 - acc: 0.9372
847 60000/60000 [=====] - 1s 9us/step
- loss: 0.2420 - acc: 0.9371
848 Epoch 64/100
849
850 128/60000 [.....] - ETA: 1s -
loss: 0.1728 - acc: 0.9531
851 5632/60000 [=>.....] - ETA: 0s -
loss: 0.2271 - acc: 0.9364
852 11392/60000 [====>.....] - ETA: 0s -
loss: 0.2343 - acc: 0.9348
853 17664/60000 [=====>.....] - ETA: 0s -
loss: 0.2378 - acc: 0.9354
854 23936/60000 [======>.....] - ETA: 0s -
loss: 0.2380 - acc: 0.9357
855 28800/60000 [======>.....] - ETA: 0s -
loss: 0.2436 - acc: 0.9346
856 33152/60000 [======>.....] - ETA: 0s -
loss: 0.2451 - acc: 0.9342
857 39424/60000 [======>.....] - ETA: 0s -
loss: 0.2466 - acc: 0.9347
858 45568/60000 [======>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9360
859 51072/60000 [======>.....] - ETA: 0s -
loss: 0.2432 - acc: 0.9363
860 56832/60000 [======>..] - ETA: 0s -
loss: 0.2435 - acc: 0.9361
861 60000/60000 [=====] - 1s 9us/step
- loss: 0.2423 - acc: 0.9362
862 Epoch 65/100
```

```
863
864 128/60000 [.....] - ETA: 1s -
loss: 0.2236 - acc: 0.9297
865 6528/60000 [==>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9384
866 12160/60000 [=====>.....] - ETA: 0s -
loss: 0.2461 - acc: 0.9368
867 17280/60000 [=====>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9379
868 22016/60000 [=====>.....] - ETA: 0s -
loss: 0.2371 - acc: 0.9385
869 27008/60000 [=====>.....] - ETA: 0s -
loss: 0.2363 - acc: 0.9385
870 32512/60000 [=====>.....] - ETA: 0s -
loss: 0.2373 - acc: 0.9384
871 38528/60000 [=====>.....] - ETA: 0s -
loss: 0.2395 - acc: 0.9372
872 44288/60000 [=====>.....] - ETA: 0s -
loss: 0.2398 - acc: 0.9373
873 50560/60000 [=====>.....] - ETA: 0s -
loss: 0.2410 - acc: 0.9369
874 57216/60000 [=====>..] - ETA: 0s -
loss: 0.2421 - acc: 0.9368
875 60000/60000 [=====] - 1s 9us/step
- loss: 0.2418 - acc: 0.9368
876 Epoch 66/100
877
878 128/60000 [.....] - ETA: 1s -
loss: 0.3122 - acc: 0.8984
879 6272/60000 [==>.....] - ETA: 0s -
loss: 0.2510 - acc: 0.9327
880 12288/60000 [=====>.....] - ETA: 0s -
loss: 0.2533 - acc: 0.9343
881 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2410 - acc: 0.9366
882 24320/60000 [=====>.....] - ETA: 0s -
loss: 0.2358 - acc: 0.9375
883 29568/60000 [=====>.....] - ETA: 0s -
loss: 0.2357 - acc: 0.9383
884 35456/60000 [=====>.....] - ETA: 0s -
loss: 0.2423 - acc: 0.9374
885 41088/60000 [=====>.....] - ETA: 0s -
loss: 0.2420 - acc: 0.9375
886 46336/60000 [=====>.....] - ETA: 0s -
loss: 0.2444 - acc: 0.9368
887 51200/60000 [=====>.....] - ETA: 0s -
loss: 0.2437 - acc: 0.9368
888 56448/60000 [=====>..] - ETA: 0s -
loss: 0.2434 - acc: 0.9368
889 60000/60000 [=====] - 1s 9us/step
```

```
889 - loss: 0.2420 - acc: 0.9368
890 Epoch 67/100
891
892 128/60000 [.....] - ETA: 1s -
loss: 0.2720 - acc: 0.9219
893 5504/60000 [=>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9368
894 10368/60000 [====>.....] - ETA: 0s -
loss: 0.2354 - acc: 0.9373
895 15232/60000 [=====>.....] - ETA: 0s -
loss: 0.2356 - acc: 0.9371
896 20864/60000 [=====>.....] - ETA: 0s -
loss: 0.2402 - acc: 0.9375
897 27136/60000 [=====>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9383
898 32896/60000 [=====>.....] - ETA: 0s -
loss: 0.2391 - acc: 0.9378
899 38400/60000 [=====>.....] - ETA: 0s -
loss: 0.2414 - acc: 0.9373
900 43904/60000 [=====>.....] - ETA: 0s -
loss: 0.2419 - acc: 0.9369
901 49920/60000 [=====>.....] - ETA: 0s -
loss: 0.2426 - acc: 0.9369
902 56192/60000 [=====>...] - ETA: 0s -
loss: 0.2444 - acc: 0.9366
903 60000/60000 [=====] - 1s 9us/step
- loss: 0.2419 - acc: 0.9370
904 Epoch 68/100
905
906 128/60000 [.....] - ETA: 1s -
loss: 0.3283 - acc: 0.9297
907 6016/60000 [=>.....] - ETA: 0s -
loss: 0.2250 - acc: 0.9398
908 12032/60000 [====>.....] - ETA: 0s -
loss: 0.2316 - acc: 0.9379
909 17792/60000 [=====>.....] - ETA: 0s -
loss: 0.2340 - acc: 0.9371
910 21760/60000 [=====>.....] - ETA: 0s -
loss: 0.2373 - acc: 0.9376
911 25728/60000 [=====>.....] - ETA: 0s -
loss: 0.2350 - acc: 0.9380
912 29952/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9382
913 36480/60000 [=====>.....] - ETA: 0s -
loss: 0.2385 - acc: 0.9382
914 42880/60000 [=====>.....] - ETA: 0s -
loss: 0.2384 - acc: 0.9376
915 48512/60000 [=====>...] - ETA: 0s -
loss: 0.2397 - acc: 0.9374
916 54144/60000 [=====>...] - ETA: 0s -
```

```
916 loss: 0.2413 - acc: 0.9368
917 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2420 - acc: 0.9366
918 Epoch 69/100
919
920 128/60000 [.....] - ETA: 0s -
    loss: 0.2117 - acc: 0.9453
921 6528/60000 [==>.....] - ETA: 0s -
    loss: 0.2298 - acc: 0.9387
922 12672/60000 [====>.....] - ETA: 0s -
    loss: 0.2329 - acc: 0.9386
923 17920/60000 [=====>.....] - ETA: 0s -
    loss: 0.2371 - acc: 0.9381
924 22528/60000 [======>.....] - ETA: 0s -
    loss: 0.2393 - acc: 0.9376
925 28416/60000 [======>.....] - ETA: 0s -
    loss: 0.2368 - acc: 0.9388
926 34560/60000 [======>.....] - ETA: 0s -
    loss: 0.2395 - acc: 0.9382
927 39680/60000 [======>.....] - ETA: 0s -
    loss: 0.2405 - acc: 0.9381
928 44160/60000 [======>.....] - ETA: 0s -
    loss: 0.2396 - acc: 0.9380
929 48896/60000 [======>.....] - ETA: 0s -
    loss: 0.2391 - acc: 0.9375
930 54016/60000 [======>...] - ETA: 0s -
    loss: 0.2411 - acc: 0.9367
931 58496/60000 [======>...] - ETA: 0s -
    loss: 0.2410 - acc: 0.9368
932 60000/60000 [=====] - 1s 10us/
    step - loss: 0.2417 - acc: 0.9367
933 Epoch 70/100
934
935 128/60000 [.....] - ETA: 2s -
    loss: 0.1301 - acc: 0.9609
936 5120/60000 [>.....] - ETA: 0s -
    loss: 0.2305 - acc: 0.9396
937 12032/60000 [====>.....] - ETA: 0s -
    loss: 0.2417 - acc: 0.9386
938 17792/60000 [=====>.....] - ETA: 0s -
    loss: 0.2355 - acc: 0.9392
939 22144/60000 [======>.....] - ETA: 0s -
    loss: 0.2352 - acc: 0.9392
940 26240/60000 [======>.....] - ETA: 0s -
    loss: 0.2398 - acc: 0.9388
941 31616/60000 [======>.....] - ETA: 0s -
    loss: 0.2383 - acc: 0.9389
942 38016/60000 [======>.....] - ETA: 0s -
    loss: 0.2381 - acc: 0.9382
943 44544/60000 [======>.....] - ETA: 0s -
```

```
943 loss: 0.2388 - acc: 0.9383
944 50176/60000 [=====>.....] - ETA: 0s -
    loss: 0.2374 - acc: 0.9387
945 55680/60000 [=====>...] - ETA: 0s -
    loss: 0.2393 - acc: 0.9380
946 60000/60000 [=====] - 1s 9us/step
    - loss: 0.2415 - acc: 0.9373
947 Epoch 71/100
948
949    128/60000 [.....] - ETA: 1s -
    loss: 0.1101 - acc: 0.9609
950    6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2347 - acc: 0.9356
951    13696/60000 [====>.....] - ETA: 0s -
    loss: 0.2375 - acc: 0.9358
952    18944/60000 [=====>.....] - ETA: 0s -
    loss: 0.2403 - acc: 0.9365
953    24192/60000 [=====>.....] - ETA: 0s -
    loss: 0.2394 - acc: 0.9370
954    30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2358 - acc: 0.9376
955    37248/60000 [=====>.....] - ETA: 0s -
    loss: 0.2390 - acc: 0.9365
956    44032/60000 [=====>.....] - ETA: 0s -
    loss: 0.2405 - acc: 0.9364
957    49664/60000 [=====>.....] - ETA: 0s -
    loss: 0.2416 - acc: 0.9366
958    55296/60000 [=====>...] - ETA: 0s -
    loss: 0.2416 - acc: 0.9367
959    60000/60000 [=====] - 0s 8us/step
    - loss: 0.2415 - acc: 0.9366
960 Epoch 72/100
961
962    128/60000 [.....] - ETA: 1s -
    loss: 0.1133 - acc: 0.9766
963    6912/60000 [==>.....] - ETA: 0s -
    loss: 0.2279 - acc: 0.9430
964    12800/60000 [====>.....] - ETA: 0s -
    loss: 0.2417 - acc: 0.9400
965    18304/60000 [=====>.....] - ETA: 0s -
    loss: 0.2429 - acc: 0.9383
966    24448/60000 [=====>.....] - ETA: 0s -
    loss: 0.2443 - acc: 0.9381
967    31232/60000 [=====>.....] - ETA: 0s -
    loss: 0.2437 - acc: 0.9378
968    37888/60000 [=====>.....] - ETA: 0s -
    loss: 0.2426 - acc: 0.9377
969    43520/60000 [=====>.....] - ETA: 0s -
    loss: 0.2402 - acc: 0.9374
970    49152/60000 [=====>.....] - ETA: 0s -
```

```
970 loss: 0.2420 - acc: 0.9373
971 55296/60000 [=====>...] - ETA: 0s -
loss: 0.2412 - acc: 0.9370
972 60000/60000 [=====] - 0s 8us/
step - loss: 0.2414 - acc: 0.9368
973 Epoch 73/100
974
975 128/60000 [.....] - ETA: 1s -
loss: 0.1842 - acc: 0.9375
976 6528/60000 [=>.....] - ETA: 0s -
loss: 0.2367 - acc: 0.9389
977 11904/60000 [==>.....] - ETA: 0s -
loss: 0.2386 - acc: 0.9367
978 17152/60000 [=====>.....] - ETA: 0s -
loss: 0.2401 - acc: 0.9358
979 23424/60000 [=====>.....] - ETA: 0s -
loss: 0.2440 - acc: 0.9355
980 30208/60000 [=====>.....] - ETA: 0s -
loss: 0.2435 - acc: 0.9354
981 36992/60000 [=====>.....] - ETA: 0s -
loss: 0.2430 - acc: 0.9353
982 42752/60000 [=====>.....] - ETA: 0s -
loss: 0.2431 - acc: 0.9358
983 48640/60000 [=====>.....] - ETA: 0s -
loss: 0.2423 - acc: 0.9364
984 54656/60000 [=====>...] - ETA: 0s -
loss: 0.2418 - acc: 0.9367
985 60000/60000 [=====] - 0s 8us/
step - loss: 0.2414 - acc: 0.9369
986 Epoch 74/100
987
988 128/60000 [.....] - ETA: 1s -
loss: 0.1782 - acc: 0.9531
989 6400/60000 [=>.....] - ETA: 0s -
loss: 0.2412 - acc: 0.9387
990 11264/60000 [==>.....] - ETA: 0s -
loss: 0.2468 - acc: 0.9379
991 16000/60000 [=====>.....] - ETA: 0s -
loss: 0.2448 - acc: 0.9379
992 21760/60000 [=====>.....] - ETA: 0s -
loss: 0.2420 - acc: 0.9376
993 28288/60000 [=====>.....] - ETA: 0s -
loss: 0.2431 - acc: 0.9376
994 35072/60000 [=====>.....] - ETA: 0s -
loss: 0.2427 - acc: 0.9381
995 40960/60000 [=====>.....] - ETA: 0s -
loss: 0.2420 - acc: 0.9381
996 47104/60000 [=====>.....] - ETA: 0s -
loss: 0.2418 - acc: 0.9374
997 53632/60000 [=====>...] - ETA: 0s -
```

```
997 loss: 0.2409 - acc: 0.9375
998 60000/60000 [=====] - 1s 8us/
    step - loss: 0.2412 - acc: 0.9375
999 Epoch 75/100
1000
1001 128/60000 [.....] - ETA: 1s -
    loss: 0.3983 - acc: 0.9297
1002 4864/60000 [=>.....] - ETA: 0s -
    loss: 0.2488 - acc: 0.9359
1003 9856/60000 [==>.....] - ETA: 0s -
    loss: 0.2457 - acc: 0.9361
1004 16128/60000 [=====>.....] - ETA: 0s -
    loss: 0.2460 - acc: 0.9368
1005 22400/60000 [=====>.....] - ETA: 0s -
    loss: 0.2439 - acc: 0.9364
1006 27904/60000 [=====>.....] - ETA: 0s -
    loss: 0.2472 - acc: 0.9364
1007 34048/60000 [=====>.....] - ETA: 0s -
    loss: 0.2458 - acc: 0.9366
1008 40832/60000 [=====>.....] - ETA: 0s -
    loss: 0.2419 - acc: 0.9371
1009 47616/60000 [=====>.....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9373
1010 52992/60000 [=====>.....] - ETA: 0s -
    loss: 0.2412 - acc: 0.9372
1011 58496/60000 [=====>..] - ETA: 0s -
    loss: 0.2401 - acc: 0.9373
1012 60000/60000 [=====] - 1s 9us/
    step - loss: 0.2414 - acc: 0.9371
1013 Epoch 76/100
1014
1015 128/60000 [.....] - ETA: 1s -
    loss: 0.3040 - acc: 0.9297
1016 6656/60000 [=>.....] - ETA: 0s -
    loss: 0.2182 - acc: 0.9410
1017 13312/60000 [==>.....] - ETA: 0s -
    loss: 0.2224 - acc: 0.9406
1018 19712/60000 [=====>.....] - ETA: 0s -
    loss: 0.2318 - acc: 0.9377
1019 24704/60000 [=====>.....] - ETA: 0s -
    loss: 0.2395 - acc: 0.9366
1020 29952/60000 [=====>.....] - ETA: 0s -
    loss: 0.2388 - acc: 0.9369
1021 36224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2413 - acc: 0.9366
1022 42496/60000 [=====>.....] - ETA: 0s -
    loss: 0.2431 - acc: 0.9364
1023 47744/60000 [=====>.....] - ETA: 0s -
    loss: 0.2432 - acc: 0.9368
1024 53120/60000 [=====>..] - ETA: 0s -
```

```
1024 loss: 0.2414 - acc: 0.9366
1025 59008/60000 [=====>.] - ETA: 0s -
loss: 0.2415 - acc: 0.9365
1026 60000/60000 [=====] - 1s 9us/
step - loss: 0.2413 - acc: 0.9365
1027 Epoch 77/100
1028
1029 128/60000 [.....] - ETA: 1s -
loss: 0.2814 - acc: 0.9062
1030 6400/60000 [=>.....] - ETA: 0s -
loss: 0.2525 - acc: 0.9398
1031 12160/60000 [====>.....] - ETA: 0s -
loss: 0.2499 - acc: 0.9385
1032 16896/60000 [=====>.....] - ETA: 0s -
loss: 0.2445 - acc: 0.9389
1033 22272/60000 [=====>.....] - ETA: 0s -
loss: 0.2498 - acc: 0.9371
1034 28928/60000 [=====>.....] - ETA: 0s -
loss: 0.2457 - acc: 0.9369
1035 35712/60000 [=====>.....] - ETA: 0s -
loss: 0.2432 - acc: 0.9378
1036 41728/60000 [=====>.....] - ETA: 0s -
loss: 0.2451 - acc: 0.9369
1037 48000/60000 [=====>.....] - ETA: 0s -
loss: 0.2416 - acc: 0.9378
1038 53888/60000 [=====>....] - ETA: 0s -
loss: 0.2441 - acc: 0.9370
1039 60000/60000 [=====] - 1s 8us/
step - loss: 0.2409 - acc: 0.9376
1040 Epoch 78/100
1041
1042 128/60000 [.....] - ETA: 1s -
loss: 0.1399 - acc: 0.9531
1043 4864/60000 [>.....] - ETA: 0s -
loss: 0.2213 - acc: 0.9492
1044 10112/60000 [====>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9403
1045 16896/60000 [=====>.....] - ETA: 0s -
loss: 0.2406 - acc: 0.9377
1046 23680/60000 [=====>.....] - ETA: 0s -
loss: 0.2377 - acc: 0.9381
1047 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2392 - acc: 0.9378
1048 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2379 - acc: 0.9380
1049 41984/60000 [=====>.....] - ETA: 0s -
loss: 0.2378 - acc: 0.9380
1050 48384/60000 [=====>.....] - ETA: 0s -
loss: 0.2383 - acc: 0.9377
1051 54528/60000 [=====>...] - ETA: 0s -
```

```
1051 loss: 0.2397 - acc: 0.9373
1052 60000/60000 [=====] - 1s 8us/
    step - loss: 0.2411 - acc: 0.9371
1053 Epoch 79/100
1054
1055 128/60000 [.....] - ETA: 0s -
    loss: 0.3411 - acc: 0.9141
1056 5248/60000 [=>.....] - ETA: 0s -
    loss: 0.2211 - acc: 0.9398
1057 10624/60000 [====>.....] - ETA: 0s -
    loss: 0.2275 - acc: 0.9376
1058 17280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2335 - acc: 0.9366
1059 24192/60000 [======>.....] - ETA: 0s -
    loss: 0.2383 - acc: 0.9364
1060 31104/60000 [======>.....] - ETA: 0s -
    loss: 0.2401 - acc: 0.9367
1061 36864/60000 [======>.....] - ETA: 0s -
    loss: 0.2383 - acc: 0.9369
1062 42752/60000 [======>.....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9364
1063 48896/60000 [======>.....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9366
1064 55168/60000 [======>....] - ETA: 0s -
    loss: 0.2405 - acc: 0.9367
1065 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2412 - acc: 0.9367
1066 Epoch 80/100
1067
1068 128/60000 [.....] - ETA: 1s -
    loss: 0.2408 - acc: 0.9062
1069 5504/60000 [=>.....] - ETA: 0s -
    loss: 0.2422 - acc: 0.9390
1070 10752/60000 [====>.....] - ETA: 0s -
    loss: 0.2492 - acc: 0.9377
1071 16896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2458 - acc: 0.9379
1072 23680/60000 [======>.....] - ETA: 0s -
    loss: 0.2458 - acc: 0.9375
1073 30464/60000 [======>.....] - ETA: 0s -
    loss: 0.2433 - acc: 0.9374
1074 36096/60000 [======>.....] - ETA: 0s -
    loss: 0.2423 - acc: 0.9371
1075 41856/60000 [======>.....] - ETA: 0s -
    loss: 0.2441 - acc: 0.9364
1076 48640/60000 [======>.....] - ETA: 0s -
    loss: 0.2444 - acc: 0.9364
1077 54784/60000 [======>....] - ETA: 0s -
    loss: 0.2422 - acc: 0.9370
1078 60000/60000 [=====] - 0s 8us/
```

```
1078 step - loss: 0.2409 - acc: 0.9370
1079 Epoch 81/100
1080
1081    128/60000 [.....] - ETA: 1s -
    loss: 0.1471 - acc: 0.9531
1082    5504/60000 [=>.....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9399
1083    10880/60000 [====>.....] - ETA: 0s -
    loss: 0.2312 - acc: 0.9430
1084    17280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2399 - acc: 0.9391
1085    24192/60000 [=====>.....] - ETA: 0s -
    loss: 0.2352 - acc: 0.9382
1086    31104/60000 [=====>.....] - ETA: 0s -
    loss: 0.2381 - acc: 0.9377
1087    36992/60000 [=====>.....] - ETA: 0s -
    loss: 0.2371 - acc: 0.9379
1088    42752/60000 [=====>.....] - ETA: 0s -
    loss: 0.2406 - acc: 0.9377
1089    49536/60000 [=====>.....] - ETA: 0s -
    loss: 0.2424 - acc: 0.9370
1090    55680/60000 [=====>...] - ETA: 0s -
    loss: 0.2414 - acc: 0.9374
1091    60000/60000 [=====] - 0s 8us/
step - loss: 0.2407 - acc: 0.9374
1092 Epoch 82/100
1093
1094    128/60000 [.....] - ETA: 1s -
    loss: 0.3208 - acc: 0.9297
1095    5248/60000 [=>.....] - ETA: 0s -
    loss: 0.2431 - acc: 0.9385
1096    10496/60000 [====>.....] - ETA: 0s -
    loss: 0.2310 - acc: 0.9392
1097    16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2406 - acc: 0.9377
1098    23552/60000 [=====>.....] - ETA: 0s -
    loss: 0.2390 - acc: 0.9373
1099    30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2373 - acc: 0.9381
1100    36096/60000 [=====>.....] - ETA: 0s -
    loss: 0.2398 - acc: 0.9378
1101    42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2428 - acc: 0.9375
1102    48896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2424 - acc: 0.9373
1103    55168/60000 [=====>...] - ETA: 0s -
    loss: 0.2419 - acc: 0.9370
1104    60000/60000 [=====] - 0s 8us/
step - loss: 0.2407 - acc: 0.9373
1105 Epoch 83/100
```

```
1106
1107 128/60000 [.....] - ETA: 1s -
    loss: 0.1932 - acc: 0.9453
1108 5376/60000 [=>.....] - ETA: 0s -
    loss: 0.2449 - acc: 0.9390
1109 10880/60000 [====>.....] - ETA: 0s -
    loss: 0.2422 - acc: 0.9371
1110 17152/60000 [=====>.....] - ETA: 0s -
    loss: 0.2446 - acc: 0.9374
1111 23936/60000 [=====>.....] - ETA: 0s -
    loss: 0.2388 - acc: 0.9378
1112 30720/60000 [=====>.....] - ETA: 0s -
    loss: 0.2417 - acc: 0.9372
1113 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2432 - acc: 0.9371
1114 42368/60000 [=====>.....] - ETA: 0s -
    loss: 0.2408 - acc: 0.9370
1115 49152/60000 [=====>.....] - ETA: 0s -
    loss: 0.2379 - acc: 0.9376
1116 55296/60000 [=====>....] - ETA: 0s -
    loss: 0.2388 - acc: 0.9372
1117 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2408 - acc: 0.9368
1118 Epoch 84/100
1119
1120 128/60000 [.....] - ETA: 1s -
    loss: 0.2645 - acc: 0.9219
1121 5504/60000 [=>.....] - ETA: 0s -
    loss: 0.2481 - acc: 0.9359
1122 10624/60000 [====>.....] - ETA: 0s -
    loss: 0.2324 - acc: 0.9376
1123 16896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2334 - acc: 0.9370
1124 23680/60000 [=====>.....] - ETA: 0s -
    loss: 0.2334 - acc: 0.9375
1125 30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2377 - acc: 0.9372
1126 36224/60000 [=====>.....] - ETA: 0s -
    loss: 0.2412 - acc: 0.9369
1127 42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2412 - acc: 0.9365
1128 49024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2410 - acc: 0.9368
1129 55296/60000 [=====>....] - ETA: 0s -
    loss: 0.2412 - acc: 0.9367
1130 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2407 - acc: 0.9370
1131 Epoch 85/100
1132
1133 128/60000 [.....] - ETA: 1s -
```

```
1133 loss: 0.2254 - acc: 0.9219
1134 5504/60000 [=>.....] - ETA: 0s -
    loss: 0.2502 - acc: 0.9379
1135 10752/60000 [====>.....] - ETA: 0s -
    loss: 0.2447 - acc: 0.9368
1136 17024/60000 [=====>.....] - ETA: 0s -
    loss: 0.2406 - acc: 0.9377
1137 23808/60000 [=====>.....] - ETA: 0s -
    loss: 0.2466 - acc: 0.9372
1138 30592/60000 [=====>.....] - ETA: 0s -
    loss: 0.2439 - acc: 0.9378
1139 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2445 - acc: 0.9371
1140 42240/60000 [=====>.....] - ETA: 0s -
    loss: 0.2432 - acc: 0.9373
1141 48896/60000 [=====>.....] - ETA: 0s -
    loss: 0.2447 - acc: 0.9372
1142 55168/60000 [=====>....] - ETA: 0s -
    loss: 0.2424 - acc: 0.9375
1143 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2407 - acc: 0.9379
1144 Epoch 86/100
1145
1146 128/60000 [.....] - ETA: 0s -
    loss: 0.3386 - acc: 0.9141
1147 5632/60000 [=>.....] - ETA: 0s -
    loss: 0.2493 - acc: 0.9384
1148 10752/60000 [====>.....] - ETA: 0s -
    loss: 0.2501 - acc: 0.9378
1149 16768/60000 [=====>.....] - ETA: 0s -
    loss: 0.2414 - acc: 0.9377
1150 23552/60000 [=====>.....] - ETA: 0s -
    loss: 0.2445 - acc: 0.9368
1151 30464/60000 [=====>.....] - ETA: 0s -
    loss: 0.2415 - acc: 0.9370
1152 36352/60000 [=====>.....] - ETA: 0s -
    loss: 0.2409 - acc: 0.9370
1153 42496/60000 [=====>.....] - ETA: 0s -
    loss: 0.2368 - acc: 0.9382
1154 49280/60000 [=====>.....] - ETA: 0s -
    loss: 0.2399 - acc: 0.9373
1155 55680/60000 [=====>....] - ETA: 0s -
    loss: 0.2411 - acc: 0.9375
1156 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2405 - acc: 0.9375
1157 Epoch 87/100
1158
1159 128/60000 [.....] - ETA: 1s -
    loss: 0.4151 - acc: 0.9141
1160 5888/60000 [=>.....] - ETA: 0s -
```

```
1160 loss: 0.2423 - acc: 0.9407
1161 12672/60000 [=====>.....] - ETA: 0s -
loss: 0.2394 - acc: 0.9381
1162 19456/60000 [=====>.....] - ETA: 0s -
loss: 0.2419 - acc: 0.9380
1163 26112/60000 [=====>.....] - ETA: 0s -
loss: 0.2404 - acc: 0.9378
1164 31232/60000 [=====>.....] - ETA: 0s -
loss: 0.2418 - acc: 0.9382
1165 36864/60000 [=====>.....] - ETA: 0s -
loss: 0.2434 - acc: 0.9381
1166 43648/60000 [=====>.....] - ETA: 0s -
loss: 0.2422 - acc: 0.9377
1167 50432/60000 [=====>.....] - ETA: 0s -
loss: 0.2411 - acc: 0.9377
1168 56064/60000 [=====>..] - ETA: 0s -
loss: 0.2425 - acc: 0.9373
1169 60000/60000 [=====] - 0s 8us/
step - loss: 0.2404 - acc: 0.9374
1170 Epoch 88/100
1171
1172 128/60000 [.....] - ETA: 1s -
loss: 0.3018 - acc: 0.9609
1173 6656/60000 [==>.....] - ETA: 0s -
loss: 0.2219 - acc: 0.9419
1174 13440/60000 [=====>.....] - ETA: 0s -
loss: 0.2211 - acc: 0.9411
1175 18816/60000 [=====>.....] - ETA: 0s -
loss: 0.2241 - acc: 0.9404
1176 24192/60000 [=====>.....] - ETA: 0s -
loss: 0.2222 - acc: 0.9411
1177 30592/60000 [=====>.....] - ETA: 0s -
loss: 0.2279 - acc: 0.9399
1178 37504/60000 [=====>.....] - ETA: 0s -
loss: 0.2315 - acc: 0.9393
1179 44288/60000 [=====>.....] - ETA: 0s -
loss: 0.2359 - acc: 0.9380
1180 50048/60000 [=====>.....] - ETA: 0s -
loss: 0.2387 - acc: 0.9374
1181 55808/60000 [=====>..] - ETA: 0s -
loss: 0.2393 - acc: 0.9373
1182 60000/60000 [=====] - 0s 8us/
step - loss: 0.2405 - acc: 0.9371
1183 Epoch 89/100
1184
1185 128/60000 [.....] - ETA: 1s -
loss: 0.2636 - acc: 0.9141
1186 6528/60000 [==>.....] - ETA: 0s -
loss: 0.2367 - acc: 0.9380
1187 13312/60000 [=====>.....] - ETA: 0s -
```

```
1187 loss: 0.2406 - acc: 0.9368
1188 19072/60000 [=====>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9383
1189 24192/60000 [=====>.....] - ETA: 0s -
loss: 0.2423 - acc: 0.9386
1190 30208/60000 [=====>.....] - ETA: 0s -
loss: 0.2394 - acc: 0.9389
1191 36992/60000 [=====>.....] - ETA: 0s -
loss: 0.2387 - acc: 0.9383
1192 43776/60000 [=====>.....] - ETA: 0s -
loss: 0.2402 - acc: 0.9382
1193 49408/60000 [=====>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9379
1194 55296/60000 [=====>....] - ETA: 0s -
loss: 0.2389 - acc: 0.9378
1195 60000/60000 [=====] - 0s 8us/
step - loss: 0.2405 - acc: 0.9373
1196 Epoch 90/100
1197
1198 128/60000 [.....] - ETA: 1s -
loss: 0.2670 - acc: 0.9375
1199 6528/60000 [==>.....] - ETA: 0s -
loss: 0.2466 - acc: 0.9403
1200 13312/60000 [====>.....] - ETA: 0s -
loss: 0.2384 - acc: 0.9367
1201 18688/60000 [=====>.....] - ETA: 0s -
loss: 0.2416 - acc: 0.9371
1202 24064/60000 [=====>.....] - ETA: 0s -
loss: 0.2406 - acc: 0.9368
1203 30336/60000 [=====>.....] - ETA: 0s -
loss: 0.2385 - acc: 0.9377
1204 37120/60000 [=====>.....] - ETA: 0s -
loss: 0.2371 - acc: 0.9380
1205 43904/60000 [=====>.....] - ETA: 0s -
loss: 0.2382 - acc: 0.9373
1206 49664/60000 [=====>.....] - ETA: 0s -
loss: 0.2398 - acc: 0.9369
1207 55680/60000 [=====>....] - ETA: 0s -
loss: 0.2407 - acc: 0.9368
1208 60000/60000 [=====] - 0s 8us/
step - loss: 0.2402 - acc: 0.9372
1209 Epoch 91/100
1210
1211 128/60000 [.....] - ETA: 0s -
loss: 0.3079 - acc: 0.8906
1212 6528/60000 [==>.....] - ETA: 0s -
loss: 0.2503 - acc: 0.9315
1213 13312/60000 [====>.....] - ETA: 0s -
loss: 0.2411 - acc: 0.9347
1214 18816/60000 [=====>.....] - ETA: 0s -
```

```
1214 loss: 0.2408 - acc: 0.9356
1215 24064/60000 [=====>.....] - ETA: 0s -
loss: 0.2433 - acc: 0.9353
1216 30336/60000 [=====>.....] - ETA: 0s -
loss: 0.2399 - acc: 0.9375
1217 37120/60000 [=====>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9380
1218 43904/60000 [=====>.....] - ETA: 0s -
loss: 0.2382 - acc: 0.9381
1219 49792/60000 [=====>.....] - ETA: 0s -
loss: 0.2400 - acc: 0.9374
1220 55936/60000 [=====>...] - ETA: 0s -
loss: 0.2393 - acc: 0.9378
1221 60000/60000 [=====] - 0s 8us/
step - loss: 0.2403 - acc: 0.9374
1222 Epoch 92/100
1223
1224 128/60000 [.....] - ETA: 0s -
loss: 0.1979 - acc: 0.9609
1225 6528/60000 [==>.....] - ETA: 0s -
loss: 0.2592 - acc: 0.9363
1226 12288/60000 [==>.....] - ETA: 0s -
loss: 0.2415 - acc: 0.9373
1227 17536/60000 [==>.....] - ETA: 0s -
loss: 0.2474 - acc: 0.9358
1228 23808/60000 [==>.....] - ETA: 0s -
loss: 0.2419 - acc: 0.9368
1229 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2379 - acc: 0.9374
1230 37376/60000 [=====>.....] - ETA: 0s -
loss: 0.2361 - acc: 0.9374
1231 43392/60000 [=====>.....] - ETA: 0s -
loss: 0.2390 - acc: 0.9368
1232 49536/60000 [=====>.....] - ETA: 0s -
loss: 0.2418 - acc: 0.9369
1233 56320/60000 [=====>...] - ETA: 0s -
loss: 0.2410 - acc: 0.9370
1234 60000/60000 [=====] - 0s 8us/
step - loss: 0.2402 - acc: 0.9372
1235 Epoch 93/100
1236
1237 128/60000 [.....] - ETA: 1s -
loss: 0.3373 - acc: 0.9297
1238 5632/60000 [=>.....] - ETA: 0s -
loss: 0.2296 - acc: 0.9373
1239 11136/60000 [==>.....] - ETA: 0s -
loss: 0.2322 - acc: 0.9370
1240 16896/60000 [==>.....] - ETA: 0s -
loss: 0.2350 - acc: 0.9376
1241 23680/60000 [==>.....] - ETA: 0s -
```

```
1241 loss: 0.2346 - acc: 0.9370
1242 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2360 - acc: 0.9375
1243 36480/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9383
1244 42752/60000 [=====>.....] - ETA: 0s -
loss: 0.2354 - acc: 0.9388
1245 49664/60000 [=====>.....] - ETA: 0s -
loss: 0.2384 - acc: 0.9381
1246 56448/60000 [=====>..] - ETA: 0s -
loss: 0.2378 - acc: 0.9384
1247 60000/60000 [=====] - 0s 8us/
step - loss: 0.2402 - acc: 0.9379
1248 Epoch 94/100
1249
1250    128/60000 [.....] - ETA: 1s -
loss: 0.1886 - acc: 0.9688
1251 6016/60000 [==>.....] - ETA: 0s -
loss: 0.2301 - acc: 0.9387
1252 12800/60000 [====>.....] - ETA: 0s -
loss: 0.2318 - acc: 0.9377
1253 19584/60000 [=====>.....] - ETA: 0s -
loss: 0.2348 - acc: 0.9382
1254 24960/60000 [=====>.....] - ETA: 0s -
loss: 0.2344 - acc: 0.9397
1255 30336/60000 [=====>.....] - ETA: 0s -
loss: 0.2382 - acc: 0.9386
1256 36608/60000 [=====>.....] - ETA: 0s -
loss: 0.2377 - acc: 0.9384
1257 43392/60000 [=====>.....] - ETA: 0s -
loss: 0.2359 - acc: 0.9388
1258 50176/60000 [=====>.....] - ETA: 0s -
loss: 0.2393 - acc: 0.9379
1259 55808/60000 [=====>..] - ETA: 0s -
loss: 0.2407 - acc: 0.9374
1260 60000/60000 [=====] - 0s 8us/
step - loss: 0.2403 - acc: 0.9375
1261 Epoch 95/100
1262
1263    128/60000 [.....] - ETA: 1s -
loss: 0.3101 - acc: 0.9453
1264 6400/60000 [==>.....] - ETA: 0s -
loss: 0.2552 - acc: 0.9347
1265 12928/60000 [====>.....] - ETA: 0s -
loss: 0.2433 - acc: 0.9341
1266 19712/60000 [=====>.....] - ETA: 0s -
loss: 0.2446 - acc: 0.9364
1267 24960/60000 [=====>.....] - ETA: 0s -
loss: 0.2459 - acc: 0.9361
1268 30464/60000 [=====>.....] - ETA: 0s -
```

```
1268 loss: 0.2426 - acc: 0.9366
1269 36736/60000 [=====>.....] - ETA: 0s -
loss: 0.2436 - acc: 0.9370
1270 43648/60000 [=====>.....] - ETA: 0s -
loss: 0.2403 - acc: 0.9376
1271 50432/60000 [=====>.....] - ETA: 0s -
loss: 0.2417 - acc: 0.9374
1272 56448/60000 [=====>..] - ETA: 0s -
loss: 0.2407 - acc: 0.9377
1273 60000/60000 [=====] - 0s 8us/
step - loss: 0.2402 - acc: 0.9377
1274 Epoch 96/100
1275
1276    128/60000 [.....] - ETA: 0s -
loss: 0.1332 - acc: 0.9531
1277 6144/60000 [==>.....] - ETA: 0s -
loss: 0.2146 - acc: 0.9422
1278 12416/60000 [====>.....] - ETA: 0s -
loss: 0.2209 - acc: 0.9426
1279 18176/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9384
1280 23424/60000 [=====>.....] - ETA: 0s -
loss: 0.2416 - acc: 0.9381
1281 29440/60000 [=====>.....] - ETA: 0s -
loss: 0.2468 - acc: 0.9367
1282 36224/60000 [=====>.....] - ETA: 0s -
loss: 0.2481 - acc: 0.9362
1283 43008/60000 [=====>.....] - ETA: 0s -
loss: 0.2447 - acc: 0.9370
1284 49024/60000 [=====>.....] - ETA: 0s -
loss: 0.2427 - acc: 0.9378
1285 54400/60000 [=====>..] - ETA: 0s -
loss: 0.2417 - acc: 0.9374
1286 60000/60000 [=====] - 0s 8us/
step - loss: 0.2404 - acc: 0.9375
1287 Epoch 97/100
1288
1289    128/60000 [.....] - ETA: 1s -
loss: 0.1454 - acc: 0.9453
1290 6272/60000 [==>.....] - ETA: 0s -
loss: 0.2411 - acc: 0.9416
1291 11520/60000 [====>.....] - ETA: 0s -
loss: 0.2462 - acc: 0.9386
1292 16768/60000 [=====>.....] - ETA: 0s -
loss: 0.2464 - acc: 0.9377
1293 23040/60000 [=====>.....] - ETA: 0s -
loss: 0.2380 - acc: 0.9389
1294 29824/60000 [=====>.....] - ETA: 0s -
loss: 0.2366 - acc: 0.9394
1295 36608/60000 [=====>.....] - ETA: 0s -
```

```
1295 loss: 0.2375 - acc: 0.9391
1296 42496/60000 [=====>.....] - ETA: 0s -
loss: 0.2386 - acc: 0.9383
1297 48768/60000 [=====>.....] - ETA: 0s -
loss: 0.2390 - acc: 0.9382
1298 55424/60000 [=====>...] - ETA: 0s -
loss: 0.2407 - acc: 0.9381
1299 60000/60000 [=====] - 0s 8us/
step - loss: 0.2399 - acc: 0.9381
1300 Epoch 98/100
1301
1302 128/60000 [.....] - ETA: 1s -
loss: 0.4953 - acc: 0.8984
1303 5632/60000 [=>.....] - ETA: 0s -
loss: 0.2272 - acc: 0.9400
1304 10624/60000 [==>.....] - ETA: 0s -
loss: 0.2360 - acc: 0.9378
1305 16640/60000 [=====>.....] - ETA: 0s -
loss: 0.2374 - acc: 0.9382
1306 23424/60000 [=====>.....] - ETA: 0s -
loss: 0.2408 - acc: 0.9379
1307 30208/60000 [=====>.....] - ETA: 0s -
loss: 0.2439 - acc: 0.9373
1308 35968/60000 [=====>.....] - ETA: 0s -
loss: 0.2438 - acc: 0.9376
1309 42112/60000 [=====>.....] - ETA: 0s -
loss: 0.2428 - acc: 0.9384
1310 48896/60000 [=====>.....] - ETA: 0s -
loss: 0.2406 - acc: 0.9384
1311 55680/60000 [=====>...] - ETA: 0s -
loss: 0.2398 - acc: 0.9381
1312 60000/60000 [=====] - 0s 8us/
step - loss: 0.2399 - acc: 0.9380
1313 Epoch 99/100
1314
1315 128/60000 [.....] - ETA: 1s -
loss: 0.5155 - acc: 0.9375
1316 5376/60000 [=>.....] - ETA: 0s -
loss: 0.2308 - acc: 0.9390
1317 11648/60000 [==>.....] - ETA: 0s -
loss: 0.2281 - acc: 0.9401
1318 18432/60000 [=====>.....] - ETA: 0s -
loss: 0.2292 - acc: 0.9403
1319 25216/60000 [=====>.....] - ETA: 0s -
loss: 0.2396 - acc: 0.9376
1320 30464/60000 [=====>.....] - ETA: 0s -
loss: 0.2404 - acc: 0.9379
1321 35840/60000 [=====>.....] - ETA: 0s -
loss: 0.2376 - acc: 0.9387
1322 42624/60000 [=====>.....] - ETA: 0s -
```

```
1322 loss: 0.2389 - acc: 0.9378
1323 49408/60000 [=====>.....] - ETA: 0s -
    loss: 0.2384 - acc: 0.9379
1324 55040/60000 [=====>...] - ETA: 0s -
    loss: 0.2383 - acc: 0.9382
1325 60000/60000 [=====] - 0s 8us/
    step - loss: 0.2400 - acc: 0.9378
1326 Epoch 100/100
1327
1328    128/60000 [.....] - ETA: 1s -
    loss: 0.1094 - acc: 0.9688
1329    6272/60000 [==>.....] - ETA: 0s -
    loss: 0.2225 - acc: 0.9402
1330    12672/60000 [====>.....] - ETA: 0s -
    loss: 0.2351 - acc: 0.9397
1331    19456/60000 [=====>.....] - ETA: 0s -
    loss: 0.2352 - acc: 0.9382
1332    24448/60000 [=====>.....] - ETA: 0s -
    loss: 0.2444 - acc: 0.9361
1333    30080/60000 [=====>.....] - ETA: 0s -
    loss: 0.2423 - acc: 0.9363
1334    36608/60000 [=====>.....] - ETA: 0s -
    loss: 0.2426 - acc: 0.9370
1335    43392/60000 [=====>.....] - ETA: 0s -
    loss: 0.2411 - acc: 0.9375
1336    50048/60000 [=====>.....] - ETA: 0s -
    loss: 0.2415 - acc: 0.9370
1337    56064/60000 [=====>..] - ETA: 0s -
    loss: 0.2413 - acc: 0.9373
1338    60000/60000 [=====] - 0s 8us/
    step - loss: 0.2400 - acc: 0.9378
1339
1340    32/10000 [.....] - ETA: 6s
1341    4704/10000 [=====>.....] - ETA: 0s
1342    9888/10000 [=====>..] - ETA: 0s
1343    10000/10000 [=====] - 0s 12us/
    step
1344 Summary: Loss over the test dataset: 0.30, Accuracy: 0.93
1345
1346 Process finished with exit code 0
1347
```