```
Epoch 2/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.4289 - acc: 0.7958
Epoch 3/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.4218 - acc: 0.8027
Epoch 4/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.4169 - acc: 0.8264
Epoch 5/150
6400/6400 [==============================] - 2s 290us/
step - loss: 0.4130 - acc: 0.8300
Epoch 6/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.4092 - acc: 0.8337
Epoch 7/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.4069 - acc: 0.8331
Epoch 8/150
6400/6400 [==============================] - 2s 287us/
step - loss: 0.4043 - acc: 0.8352
Epoch 9/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.4027 - acc: 0.8350
Epoch 10/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.4010 - acc: 0.8350
Epoch 11/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3989 - acc: 0.8369
Epoch 12/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3976 - acc: 0.8369
Epoch 13/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3965 - acc: 0.8387
Epoch 14/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3955 - acc: 0.8361
Epoch 15/150
6400/6400 [==============================] - 2s 277us/
```

```
step - loss: 0.3949 - acc: 0.8370
Epoch 16/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3936 - acc: 0.8378
Epoch 17/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3934 - acc: 0.8392
Epoch 18/150
6400/6400 [==============================] - 2s 273us/
step - loss: 0.3931 - acc: 0.8394
Epoch 19/150
6400/6400 [==============================] - 2s 287us/
step - loss: 0.3916 - acc: 0.8416
Epoch 20/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3917 - acc: 0.8403
Epoch 21/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3909 - acc: 0.8392
Epoch 22/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3902 - acc: 0.8395
Epoch 23/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3901 - acc: 0.8406
Epoch 24/150
6400/6400 [==============================] - 2s 274us/
step - loss: 0.3894 - acc: 0.8405
Epoch 25/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3891 - acc: 0.8397
Epoch 26/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3882 - acc: 0.8406
Epoch 27/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3883 - acc: 0.8409
Epoch 28/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3867 - acc: 0.8413
Epoch 29/150
```

```
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3866 - acc: 0.8406
Epoch 30/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3862 - acc: 0.8419
Epoch 31/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3854 - acc: 0.8419
Epoch 32/150
6400/6400 [==============================] - 2s 269us/
step - loss: 0.3839 - acc: 0.8414
Epoch 33/150
6400/6400 [==============================] - 2s 304us/
step - loss: 0.3832 - acc: 0.8413
Epoch 34/150
6400/6400 [==============================] - 2s 289us/
step - loss: 0.3829 - acc: 0.8442
Epoch 35/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3812 - acc: 0.8447
Epoch 36/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3801 - acc: 0.8466
Epoch 37/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3787 - acc: 0.8461
Epoch 38/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3764 - acc: 0.8436
Epoch 39/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3745 - acc: 0.8439
Epoch 40/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3721 - acc: 0.8453
Epoch 41/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3693 - acc: 0.8455
Epoch 42/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3667 - acc: 0.8450
```

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Epoch 43/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3649 - acc: 0.8428
Epoch 44/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3625 - acc: 0.8462
Epoch 45/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3584 - acc: 0.8475
Epoch 46/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3570 - acc: 0.8477
Epoch 47/150
6400/6400 [==============================] - 2s 274us/
step - loss: 0.3530 - acc: 0.8462
Epoch 48/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3507 - acc: 0.8523
Epoch 49/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3478 - acc: 0.8538
Epoch 50/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3448 - acc: 0.8538
Epoch 51/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3426 - acc: 0.8570
Epoch 52/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3412 - acc: 0.8570
Epoch 53/150
6400/6400 [==============================] - 2s 288us/
step - loss: 0.3381 - acc: 0.8616
Epoch 54/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3365 - acc: 0.8603
Epoch 55/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3335 - acc: 0.8606
Epoch 56/150
6400/6400 [==============================] - 2s 291us/
```

step - loss: 0.3328 - acc: 0.8628
Epoch 57/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3302 - acc: 0.8642
Epoch 58/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3285 - acc: 0.8633
Epoch 59/150
6400/6400 [==============================] - 2s 288us/
step - loss: 0.3270 - acc: 0.8678
Epoch 60/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3274 - acc: 0.8663
Epoch 61/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3256 - acc: 0.8663
Epoch 62/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3246 - acc: 0.8666
Epoch 63/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3241 - acc: 0.8672
Epoch 64/150
6400/6400 [==============================] - 2s 271us/
step - loss: 0.3232 - acc: 0.8659
Epoch 65/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3223 - acc: 0.8680
Epoch 66/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3221 - acc: 0.8672
Epoch 67/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3220 - acc: 0.8677
Epoch 68/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3220 - acc: 0.8666
Epoch 69/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3204 - acc: 0.8694
Epoch 70/150

```
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3197 - acc: 0.8664
Epoch 71/150
6400/6400 [==============================] - 2s 290us/
step - loss: 0.3198 - acc: 0.8706
Epoch 72/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3195 - acc: 0.8706
Epoch 73/150
6400/6400 [==============================] - 2s 287us/
step - loss: 0.3190 - acc: 0.8673
Epoch 74/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3186 - acc: 0.8705
Epoch 75/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3177 - acc: 0.8686
Epoch 76/150
6400/6400 [==============================] - 2s 289us/
step - loss: 0.3184 - acc: 0.8708
Epoch 77/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3170 - acc: 0.8697
Epoch 78/150
6400/6400 [==============================] - 2s 273us/
step - loss: 0.3168 - acc: 0.8714
Epoch 79/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3170 - acc: 0.8695
Epoch 80/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3169 - acc: 0.8694
Epoch 81/150
6400/6400 [==============================] - 2s 273us/
step - loss: 0.3165 - acc: 0.8692
Epoch 82/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3170 - acc: 0.8709
Epoch 83/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3151 - acc: 0.8722
```

Epoch 84/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3155 - acc: 0.8706
Epoch 85/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3154 - acc: 0.8719
Epoch 86/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3150 - acc: 0.8692
Epoch 87/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3144 - acc: 0.8709
Epoch 88/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3153 - acc: 0.8741
Epoch 89/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3143 - acc: 0.8716
Epoch 90/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3141 - acc: 0.8747
Epoch 91/150
6400/6400 [==============================] - 2s 288us/
step - loss: 0.3149 - acc: 0.8739
Epoch 92/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3140 - acc: 0.8728
Epoch 93/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3143 - acc: 0.8709
Epoch 94/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3135 - acc: 0.8738
Epoch 95/150
6400/6400 [==============================] - 2s 280us/
step - loss: 0.3128 - acc: 0.8745
Epoch 96/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3135 - acc: 0.8720
Epoch 97/150
6400/6400 [==============================] - 2s 275us/

step - loss: 0.3130 - acc: 0.8738
Epoch 98/150
6400/6400 [==============================] - 2s 271us/
step - loss: 0.3125 - acc: 0.8739
Epoch 99/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3131 - acc: 0.8747
Epoch 100/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3124 - acc: 0.8725
Epoch 101/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3124 - acc: 0.8719
Epoch 102/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3123 - acc: 0.8722
Epoch 103/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3122 - acc: 0.8716
Epoch 104/150
6400/6400 [==============================] - 2s 274us/
step - loss: 0.3120 - acc: 0.8717
Epoch 105/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3119 - acc: 0.8753
Epoch 106/150
6400/6400 [==============================] - 2s 275us/
step - loss: 0.3108 - acc: 0.8719
Epoch 107/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3118 - acc: 0.8727
Epoch 108/150
6400/6400 [==============================] - 2s 288us/
step - loss: 0.3117 - acc: 0.8723
Epoch 109/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3110 - acc: 0.8755
Epoch 110/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3104 - acc: 0.8709
Epoch 111/150

```
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3107 - acc: 0.8728
Epoch 112/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3101 - acc: 0.8745
Epoch 113/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3107 - acc: 0.8747
Epoch 114/150
6400/6400 [==============================] - 2s 290us/
step - loss: 0.3101 - acc: 0.8739
Epoch 115/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3112 - acc: 0.8728
Epoch 116/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3109 - acc: 0.8739
Epoch 117/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3095 - acc: 0.8745
Epoch 118/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3108 - acc: 0.8723
Epoch 119/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3112 - acc: 0.8745
Epoch 120/150
6400/6400 [==============================] - 2s 281us/
step - loss: 0.3098 - acc: 0.8730
Epoch 121/150
6400/6400 [==============================] - 2s 267us/
step - loss: 0.3107 - acc: 0.8731
Epoch 122/150
6400/6400 [==============================] - 2s 282us/
step - loss: 0.3095 - acc: 0.8717
Epoch 123/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3090 - acc: 0.8720
Epoch 124/150
6400/6400 [==============================] - 2s 277us/
step - loss: 0.3096 - acc: 0.8739
```

Epoch 125/150
6400/6400 [==============================] - 2s 285us/step - loss: 0.3106 - acc: 0.8723
Epoch 126/150
6400/6400 [==============================] - 2s 282us/step - loss: 0.3088 - acc: 0.8742
Epoch 127/150
6400/6400 [==============================] - 2s 282us/step - loss: 0.3085 - acc: 0.8752
Epoch 128/150
6400/6400 [==============================] - 2s 285us/step - loss: 0.3090 - acc: 0.8730
Epoch 129/150
6400/6400 [==============================] - 2s 279us/step - loss: 0.3084 - acc: 0.8748
Epoch 130/150
6400/6400 [==============================] - 2s 278us/step - loss: 0.3080 - acc: 0.8756
Epoch 131/150
6400/6400 [==============================] - 2s 286us/step - loss: 0.3086 - acc: 0.8742
Epoch 132/150
6400/6400 [==============================] - 2s 268us/step - loss: 0.3094 - acc: 0.8714
Epoch 133/150
6400/6400 [==============================] - 2s 277us/step - loss: 0.3089 - acc: 0.8730
Epoch 134/150
6400/6400 [==============================] - 2s 280us/step - loss: 0.3084 - acc: 0.8730
Epoch 135/150
6400/6400 [==============================] - 2s 275us/step - loss: 0.3078 - acc: 0.8733
Epoch 136/150
6400/6400 [==============================] - 2s 275us/step - loss: 0.3085 - acc: 0.8742
Epoch 137/150
6400/6400 [==============================] - 2s 285us/step - loss: 0.3077 - acc: 0.8714
Epoch 138/150
6400/6400 [==============================] - 2s 278us/

```
step - loss: 0.3088 - acc: 0.8730
Epoch 139/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3075 - acc: 0.8759
Epoch 140/150
6400/6400 [==============================] - 2s 284us/
step - loss: 0.3076 - acc: 0.8734
Epoch 141/150
6400/6400 [==============================] - 2s 283us/
step - loss: 0.3082 - acc: 0.8728
Epoch 142/150
6400/6400 [==============================] - 2s 289us/
step - loss: 0.3076 - acc: 0.8752
Epoch 143/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3068 - acc: 0.8731
Epoch 144/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3075 - acc: 0.8722
Epoch 145/150
6400/6400 [==============================] - 2s 285us/
step - loss: 0.3072 - acc: 0.8747
Epoch 146/150
6400/6400 [==============================] - 2s 278us/
step - loss: 0.3063 - acc: 0.8752
Epoch 147/150
6400/6400 [==============================] - 2s 276us/
step - loss: 0.3071 - acc: 0.8734
Epoch 148/150
6400/6400 [==============================] - 2s 286us/
step - loss: 0.3072 - acc: 0.8747
Epoch 149/150
6400/6400 [==============================] - 2s 279us/
step - loss: 0.3075 - acc: 0.8733
Epoch 150/150
6400/6400 [==============================] - 2s 272us/
step - loss: 0.3067 - acc: 0.8758
Epoch 1/100
8000/8000 [==============================] - 17s 2ms/step
- loss: 0.4937 - acc: 0.7953
Epoch 2/100
```

```
8000/8000 [==============================] - 3s 370us/
step - loss: 0.4257 - acc: 0.7960
Epoch 3/100
8000/8000 [==============================] - 3s 361us/
step - loss: 0.4177 - acc: 0.8225
Epoch 4/100
8000/8000 [==============================] - 3s 376us/
step - loss: 0.4113 - acc: 0.8299
Epoch 5/100
8000/8000 [==============================] - 3s 376us/
step - loss: 0.4061 - acc: 0.8347
Epoch 6/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.4035 - acc: 0.8339
Epoch 7/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.4004 - acc: 0.8365
Epoch 8/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3983 - acc: 0.8364
Epoch 9/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3970 - acc: 0.8370
Epoch 10/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3962 - acc: 0.8379
Epoch 11/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3943 - acc: 0.8377
Epoch 12/100
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3930 - acc: 0.8392
Epoch 13/100
8000/8000 [==============================] - 3s 366us/
step - loss: 0.3909 - acc: 0.8401
Epoch 14/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3876 - acc: 0.8406
Epoch 15/100
8000/8000 [==============================] - 3s 365us/
step - loss: 0.3829 - acc: 0.8406
```

```
Epoch 16/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3741 - acc: 0.8442
Epoch 17/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3649 - acc: 0.8486
Epoch 18/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3586 - acc: 0.8512
Epoch 19/100
8000/8000 [==============================] - 3s 399us/
step - loss: 0.3534 - acc: 0.8536
Epoch 20/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3531 - acc: 0.8532
Epoch 21/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3488 - acc: 0.8556
Epoch 22/100
8000/8000 [==============================] - 3s 364us/
step - loss: 0.3469 - acc: 0.8566
Epoch 23/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3450 - acc: 0.8575
Epoch 24/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3431 - acc: 0.8595
Epoch 25/100
8000/8000 [==============================] - 3s 364us/
step - loss: 0.3408 - acc: 0.8584
Epoch 26/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3406 - acc: 0.8602
Epoch 27/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3401 - acc: 0.8592
Epoch 28/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3384 - acc: 0.8615
Epoch 29/100
8000/8000 [==============================] - 3s 364us/
```

step - loss: 0.3395 - acc: 0.8607
Epoch 30/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3374 - acc: 0.8592
Epoch 31/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3363 - acc: 0.8621
Epoch 32/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3375 - acc: 0.8619
Epoch 33/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3357 - acc: 0.8607
Epoch 34/100
8000/8000 [==============================] - 3s 366us/
step - loss: 0.3354 - acc: 0.8624
Epoch 35/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3351 - acc: 0.8620
Epoch 36/100
8000/8000 [==============================] - 3s 364us/
step - loss: 0.3350 - acc: 0.8617
Epoch 37/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3347 - acc: 0.8610
Epoch 38/100
8000/8000 [==============================] - 3s 366us/
step - loss: 0.3339 - acc: 0.8630
Epoch 39/100
8000/8000 [==============================] - 3s 365us/
step - loss: 0.3334 - acc: 0.8616
Epoch 40/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3321 - acc: 0.8634
Epoch 41/100
8000/8000 [==============================] - 3s 365us/
step - loss: 0.3327 - acc: 0.8630
Epoch 42/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3317 - acc: 0.8640
Epoch 43/100

```
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3316 - acc: 0.8627
Epoch 44/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3322 - acc: 0.8622
Epoch 45/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3304 - acc: 0.8629
Epoch 46/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3306 - acc: 0.8639
Epoch 47/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3307 - acc: 0.8627
Epoch 48/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3286 - acc: 0.8625
Epoch 49/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3291 - acc: 0.8640
Epoch 50/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3301 - acc: 0.8622
Epoch 51/100
8000/8000 [==============================] - 3s 372us/
step - loss: 0.3289 - acc: 0.8631
Epoch 52/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3275 - acc: 0.8651
Epoch 53/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3277 - acc: 0.8619
Epoch 54/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3277 - acc: 0.8631
Epoch 55/100
8000/8000 [==============================] - 3s 365us/
step - loss: 0.3272 - acc: 0.8665
Epoch 56/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3263 - acc: 0.8664
```

```
Epoch 57/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3261 - acc: 0.8626
Epoch 58/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3260 - acc: 0.8644
Epoch 59/100
8000/8000 [==============================] - 3s 376us/
step - loss: 0.3254 - acc: 0.8652
Epoch 60/100
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3248 - acc: 0.8651
Epoch 61/100
8000/8000 [==============================] - 3s 378us/
step - loss: 0.3249 - acc: 0.8659
Epoch 62/100
8000/8000 [==============================] - 3s 366us/
step - loss: 0.3246 - acc: 0.8661
Epoch 63/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3245 - acc: 0.8659
Epoch 64/100
8000/8000 [==============================] - 3s 363us/
step - loss: 0.3245 - acc: 0.8651
Epoch 65/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3240 - acc: 0.8670
Epoch 66/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3239 - acc: 0.8655
Epoch 67/100
8000/8000 [==============================] - 3s 361us/
step - loss: 0.3236 - acc: 0.8660
Epoch 68/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3222 - acc: 0.8675
Epoch 69/100
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3227 - acc: 0.8669
Epoch 70/100
8000/8000 [==============================] - 3s 373us/
```

step - loss: 0.3213 - acc: 0.8662
Epoch 71/100
8000/8000 [==============================] - 3s 379us/
step - loss: 0.3236 - acc: 0.8664
Epoch 72/100
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3219 - acc: 0.8661
Epoch 73/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3222 - acc: 0.8670
Epoch 74/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3218 - acc: 0.8662
Epoch 75/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3212 - acc: 0.8682
Epoch 76/100
8000/8000 [==============================] - 3s 367us/
step - loss: 0.3202 - acc: 0.8670
Epoch 77/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3207 - acc: 0.8666
Epoch 78/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3199 - acc: 0.8689
Epoch 79/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3202 - acc: 0.8677
Epoch 80/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3200 - acc: 0.8690
Epoch 81/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3202 - acc: 0.8685
Epoch 82/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3193 - acc: 0.8659
Epoch 83/100
8000/8000 [==============================] - 3s 371us/
step - loss: 0.3191 - acc: 0.8686
Epoch 84/100

```
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3169 - acc: 0.8690
Epoch 85/100
8000/8000 [==============================] - 3s 377us/
step - loss: 0.3182 - acc: 0.8671
Epoch 86/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3193 - acc: 0.8685
Epoch 87/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3195 - acc: 0.8676
Epoch 88/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3180 - acc: 0.8685
Epoch 89/100
8000/8000 [==============================] - 3s 374us/
step - loss: 0.3174 - acc: 0.8671
Epoch 90/100
8000/8000 [==============================] - 3s 366us/
step - loss: 0.3180 - acc: 0.8676
Epoch 91/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3167 - acc: 0.8696
Epoch 92/100
8000/8000 [==============================] - 3s 375us/
step - loss: 0.3187 - acc: 0.8680
Epoch 93/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3182 - acc: 0.8694
Epoch 94/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3173 - acc: 0.8697
Epoch 95/100
8000/8000 [==============================] - 3s 368us/
step - loss: 0.3183 - acc: 0.8677
Epoch 96/100
8000/8000 [==============================] - 3s 373us/
step - loss: 0.3168 - acc: 0.8667
Epoch 97/100
8000/8000 [==============================] - 3s 369us/
step - loss: 0.3167 - acc: 0.8674
```

```
Epoch 98/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3156 - acc: 0.8690
Epoch 99/100
8000/8000 [==============================] - 3s 376us/
step - loss: 0.3158 - acc: 0.8714
Epoch 100/100
8000/8000 [==============================] - 3s 370us/
step - loss: 0.3155 - acc: 0.8701
```

In [**23**]: