```
Epoch 1/200
868/868 [==============================] - 71s 81ms/step - loss:
4.9312
Epoch 2/200
868/868 [==============================] - 70s 81ms/step - loss:
4.9092
Epoch 3/200
868/868 [==============================] - 70s 81ms/step - loss:
4.9592
Epoch 4/200
868/868 [==============================] - 70s 80ms/step - loss:
4.9151
Epoch 5/200
868/868 [==============================] - 70s 81ms/step - loss:
4.9452
Epoch 6/200
868/868 [==============================] - 70s 81ms/step - loss:
4.8485
Epoch 7/200
868/868 [==============================] - 70s 81ms/step - loss:
4.8460
Epoch 8/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7704
Epoch 9/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7161
Epoch 10/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6764
Epoch 11/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6140
Epoch 12/200
868/868 [==============================] - 70s 81ms/step - loss:
4.5345
Epoch 13/200
868/868 [==============================] - 70s 81ms/step - loss:
4.4405
Epoch 14/200
868/868 [==============================] - 70s 81ms/step - loss:
4.3230
Epoch 15/200
868/868 [==============================] - 70s 81ms/step - loss:
4.1857
Epoch 16/200
868/868 [==============================] - 70s 81ms/step - loss:
4.0381
Epoch 17/200
868/868 [==============================] - 70s 81ms/step - loss:
3.8761
Epoch 18/200
868/868 [==============================] - 70s 81ms/step - loss:
3.7168
Epoch 19/200
868/868 [==============================] - 70s 81ms/step - loss:
3.5581
Epoch 20/200
868/868 [==============================] - 70s 81ms/step - loss:
3.4096
Epoch 21/200
```

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868/868 [==============================] - 70s 81ms/step - loss:
3.2859
Epoch 22/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1502
Epoch 23/200
868/868 [==============================] - 70s 81ms/step - loss:
3.0127
Epoch 24/200
868/868 [==============================] - 70s 81ms/step - loss:
2.8674
Epoch 25/200
868/868 [==============================] - 70s 81ms/step - loss:
2.7333
Epoch 26/200
868/868 [==============================] - 70s 81ms/step - loss:
2.5959
Epoch 27/200
868/868 [==============================] - 70s 81ms/step - loss:
2.4756
Epoch 28/200
868/868 [==============================] - 70s 81ms/step - loss:
2.3459
Epoch 29/200
868/868 [==============================] - 70s 81ms/step - loss:
2.2333
Epoch 30/200
868/868 [==============================] - 70s 81ms/step - loss:
2.1271
Epoch 31/200
868/868 [==============================] - 70s 81ms/step - loss:
2.0181
Epoch 32/200
868/868 [==============================] - 70s 81ms/step - loss:
1.9254
Epoch 33/200
868/868 [==============================] - 70s 81ms/step - loss:
1.8319
Epoch 34/200
868/868 [==============================] - 70s 81ms/step - loss:
1.7387
Epoch 35/200
868/868 [==============================] - 70s 81ms/step - loss:
1.6559
Epoch 36/200
868/868 [==============================] - 70s 81ms/step - loss:
1.5937
Epoch 37/200
868/868 [==============================] - 70s 81ms/step - loss:
1.5112
Epoch 38/200
868/868 [==============================] - 70s 81ms/step - loss:
1.4473
Epoch 39/200
868/868 [==============================] - 70s 81ms/step - loss:
1.3875
Epoch 40/200
868/868 [==============================] - 70s 81ms/step - loss:
1.3285
Epoch 41/200
```

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868/868 [==============================] - 70s 81ms/step - loss:
1.2711
Epoch 42/200
868/868 [==============================] - 70s 81ms/step - loss:
1.2170
Epoch 43/200
868/868 [==============================] - 70s 81ms/step - loss:
1.1777
Epoch 44/200
868/868 [==============================] - 70s 81ms/step - loss:
1.1378
Epoch 45/200
868/868 [==============================] - 70s 81ms/step - loss:
1.0848
Epoch 46/200
868/868 [==============================] - 70s 81ms/step - loss:
1.0629
Epoch 47/200
868/868 [==============================] - 70s 81ms/step - loss:
1.0205
Epoch 48/200
868/868 [==============================] - 71s 81ms/step - loss:
0.9879
Epoch 49/200
868/868 [==============================] - 70s 81ms/step - loss:
0.9581
Epoch 50/200
868/868 [==============================] - 70s 81ms/step - loss:
0.9352
Epoch 51/200
868/868 [==============================] - 70s 81ms/step - loss:
0.9046
Epoch 52/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8771
Epoch 53/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8533
Epoch 54/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8352
Epoch 55/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8221
Epoch 56/200
868/868 [==============================] - 71s 81ms/step - loss:
0.8048
Epoch 57/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7822
Epoch 58/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7657
Epoch 59/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7508
Epoch 60/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7350
Epoch 61/200
```

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868/868 [==============================] - 70s 81ms/step - loss:
0.7275
Epoch 62/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7144
Epoch 63/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7047
Epoch 64/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6981
Epoch 65/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6844
Epoch 66/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6820
Epoch 67/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6805
Epoch 68/200
868/868 [==============================] - 71s 81ms/step - loss:
0.6705
Epoch 69/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6556
Epoch 70/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6537
Epoch 71/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6503
Epoch 72/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6397
Epoch 73/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6329
Epoch 74/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6317
Epoch 75/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6257
Epoch 76/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6188
Epoch 77/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6161
Epoch 78/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6134
Epoch 79/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6189
Epoch 80/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6179
Epoch 81/200
```

```
868/868 [==============================] - 70s 81ms/step - loss:
0.6048
Epoch 82/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6095
Epoch 83/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6044
Epoch 84/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5996
Epoch 85/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6019
Epoch 86/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5966
Epoch 87/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6006
Epoch 88/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5980
Epoch 89/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6036
Epoch 90/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5931
Epoch 91/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5949
Epoch 92/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6016
Epoch 93/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5949
Epoch 94/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5857
Epoch 95/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5901
Epoch 96/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5942
Epoch 97/200
868/868 [==============================] - 70s 81ms/step - loss:
0.5982
Epoch 98/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6007
Epoch 99/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6006
Epoch 100/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6036
Epoch 101/200
```

```
868/868 [==============================] - 70s 81ms/step - loss:
0.6026
Epoch 102/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6158
Epoch 103/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6113
Epoch 104/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6282
Epoch 105/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6090
Epoch 106/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6198
Epoch 107/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6285
Epoch 108/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6260
Epoch 109/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6168
Epoch 110/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6572
Epoch 111/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6369
Epoch 112/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6476
Epoch 113/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6417
Epoch 114/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6515
Epoch 115/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6628
Epoch 116/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6547
Epoch 117/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6664
Epoch 118/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6817
Epoch 119/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6928
Epoch 120/200
868/868 [==============================] - 70s 81ms/step - loss:
0.6922
Epoch 121/200
```

```
868/868 [==============================] - 70s 81ms/step - loss:
0.7069
Epoch 122/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7223
Epoch 123/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7398
Epoch 124/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7434
Epoch 125/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7611
Epoch 126/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7531
Epoch 127/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7559
Epoch 128/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7734
Epoch 129/200
868/868 [==============================] - 70s 81ms/step - loss:
0.7898
Epoch 130/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8060
Epoch 131/200
868/868 [==============================] - 70s 81ms/step - loss:
0.8593
Epoch 132/200
868/868 [==============================] - 70s 81ms/step - loss:
0.9257
Epoch 133/200
868/868 [==============================] - 70s 81ms/step - loss:
0.9595
Epoch 134/200
868/868 [==============================] - 70s 81ms/step - loss:
1.8958
Epoch 135/200
868/868 [==============================] - 70s 81ms/step - loss:
2.8194
Epoch 136/200
868/868 [==============================] - 70s 81ms/step - loss:
3.6772
Epoch 137/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1087
Epoch 138/200
868/868 [==============================] - 70s 81ms/step - loss:
3.5380
Epoch 139/200
868/868 [==============================] - 70s 81ms/step - loss:
3.7800
Epoch 140/200
868/868 [==============================] - 70s 81ms/step - loss:
3.5397
Epoch 141/200
```

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868/868 [==============================] - 70s 81ms/step - loss:
3.9440
Epoch 142/200
868/868 [==============================] - 70s 81ms/step - loss:
4.0487
Epoch 143/200
868/868 [==============================] - 70s 81ms/step - loss:
4.1078
Epoch 144/200
868/868 [==============================] - 70s 81ms/step - loss:
3.5578
Epoch 145/200
868/868 [==============================] - 70s 81ms/step - loss:
3.0893
Epoch 146/200
868/868 [==============================] - 70s 81ms/step - loss:
3.4764
Epoch 147/200
868/868 [==============================] - 70s 81ms/step - loss:
3.7806
Epoch 148/200
868/868 [==============================] - 70s 81ms/step - loss:
4.4039
Epoch 149/200
868/868 [==============================] - 70s 81ms/step - loss:
3.6807
Epoch 150/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2929
Epoch 151/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2490
Epoch 152/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2083
Epoch 153/200
868/868 [==============================] - 70s 81ms/step - loss:
3.0879
Epoch 154/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1322
Epoch 155/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2163
Epoch 156/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1082
Epoch 157/200
868/868 [==============================] - 70s 81ms/step - loss:
3.3436
Epoch 158/200
868/868 [==============================] - 70s 81ms/step - loss:
3.3100
Epoch 159/200
868/868 [==============================] - 70s 81ms/step - loss:
3.0905
Epoch 160/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1084
Epoch 161/200
```

```
868/868 [==============================] - 70s 81ms/step - loss:
3.0124
Epoch 162/200
868/868 [==============================] - 70s 81ms/step - loss:
2.9714
Epoch 163/200
868/868 [==============================] - 70s 81ms/step - loss:
2.9438
Epoch 164/200
868/868 [==============================] - 70s 81ms/step - loss:
2.9502
Epoch 165/200
868/868 [==============================] - 70s 81ms/step - loss:
3.1661
Epoch 166/200
868/868 [==============================] - 70s 81ms/step - loss:
3.6978
Epoch 167/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6594
Epoch 168/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7714
Epoch 169/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7662
Epoch 170/200
868/868 [==============================] - 70s 81ms/step - loss:
4.8408
Epoch 171/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7755
Epoch 172/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6111
Epoch 173/200
868/868 [==============================] - 70s 81ms/step - loss:
3.9099
Epoch 174/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2919
Epoch 175/200
868/868 [==============================] - 70s 81ms/step - loss:
3.0193
Epoch 176/200
868/868 [==============================] - 70s 81ms/step - loss:
2.8422
Epoch 177/200
868/868 [==============================] - 70s 81ms/step - loss:
2.7364
Epoch 178/200
868/868 [==============================] - 70s 81ms/step - loss:
2.6933
Epoch 179/200
868/868 [==============================] - 70s 81ms/step - loss:
2.6888
Epoch 180/200
868/868 [==============================] - 70s 81ms/step - loss:
2.6296
Epoch 181/200
```

```
868/868 [==============================] - 70s 81ms/step - loss:
2.5825
Epoch 182/200
868/868 [==============================] - 70s 81ms/step - loss:
2.6190
Epoch 183/200
868/868 [==============================] - 70s 81ms/step - loss:
2.5287
Epoch 184/200
868/868 [==============================] - 70s 81ms/step - loss:
2.5700
Epoch 185/200
868/868 [==============================] - 70s 81ms/step - loss:
3.3252
Epoch 186/200
868/868 [==============================] - 70s 81ms/step - loss:
3.3016
Epoch 187/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2840
Epoch 188/200
868/868 [==============================] - 70s 81ms/step - loss:
4.0761
Epoch 189/200
868/868 [==============================] - 70s 81ms/step - loss:
4.2405
Epoch 190/200
868/868 [==============================] - 70s 81ms/step - loss:
4.7526
Epoch 191/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6708
Epoch 192/200
868/868 [==============================] - 70s 81ms/step - loss:
4.8711
Epoch 193/200
868/868 [==============================] - 70s 81ms/step - loss:
4.9417
Epoch 194/200
868/868 [==============================] - 70s 81ms/step - loss:
4.8601
Epoch 195/200
868/868 [==============================] - 70s 81ms/step - loss:
4.6700
Epoch 196/200
868/868 [==============================] - 70s 81ms/step - loss:
4.5249
Epoch 197/200
868/868 [==============================] - 70s 81ms/step - loss:
4.1688
Epoch 198/200
868/868 [==============================] - 70s 81ms/step - loss:
3.8107
Epoch 199/200
868/868 [==============================] - 70s 81ms/step - loss:
3.4353
Epoch 200/200
868/868 [==============================] - 70s 81ms/step - loss:
3.2744
<tensorflow.python.keras.callbacks.History at 0x7f6e8fc65630>
```