**512-4\_4096-2.png**

Epoch 1/75

9/9 [==============================] - 45s 5s/step - loss: 2.4078 - acc: 0.6835 - val\_loss: 3.3933 - val\_acc: 0.7807

Epoch 2/75

9/9 [==============================] - 49s 5s/step - loss: 0.9396 - acc: 0.8753 - val\_loss: 2.6779 - val\_acc: 0.7895

Epoch 3/75

9/9 [==============================] - 59s 7s/step - loss: 0.9609 - acc: 0.8876 - val\_loss: 2.6419 - val\_acc: 0.7895

Epoch 4/75

9/9 [==============================] - 39s 4s/step - loss: 0.5295 - acc: 0.8968 - val\_loss: 3.7896 - val\_acc: 0.7632

Epoch 5/75

9/9 [==============================] - 48s 5s/step - loss: 0.2558 - acc: 0.9537 - val\_loss: 4.7394 - val\_acc: 0.6447

Epoch 6/75

9/9 [==============================] - 65s 7s/step - loss: 0.1970 - acc: 0.9516 - val\_loss: 2.9093 - val\_acc: 0.8158

Epoch 7/75

9/9 [==============================] - 39s 4s/step - loss: 0.1836 - acc: 0.9458 - val\_loss: 3.1153 - val\_acc: 0.7105

Epoch 8/75

9/9 [==============================] - 42s 5s/step - loss: 0.1795 - acc: 0.9581 - val\_loss: 3.5652 - val\_acc: 0.6842

Epoch 9/75

9/9 [==============================] - 50s 6s/step - loss: 0.0801 - acc: 0.9633 - val\_loss: 1.7469 - val\_acc: 0.8158

Epoch 10/75

9/9 [==============================] - 36s 4s/step - loss: 0.0808 - acc: 0.9697 - val\_loss: 1.9377 - val\_acc: 0.8202

Epoch 11/75

9/9 [==============================] - 32s 4s/step - loss: 0.1059 - acc: 0.9697 - val\_loss: 1.8967 - val\_acc: 0.8509

Epoch 12/75

9/9 [==============================] - 30s 3s/step - loss: 0.0610 - acc: 0.9703 - val\_loss: 3.5867 - val\_acc: 0.7105

Epoch 13/75

9/9 [==============================] - 32s 4s/step - loss: 0.0846 - acc: 0.9674 - val\_loss: 3.4186 - val\_acc: 0.6491

Epoch 14/75

9/9 [==============================] - 33s 4s/step - loss: 0.1437 - acc: 0.9697 - val\_loss: 2.9824 - val\_acc: 0.6316

Epoch 15/75

9/9 [==============================] - 37s 4s/step - loss: 0.1227 - acc: 0.9537 - val\_loss: 0.3925 - val\_acc: 0.9474

Epoch 16/75

9/9 [==============================] - 29s 3s/step - loss: 0.0701 - acc: 0.9754 - val\_loss: 0.0901 - val\_acc: 0.9561

Epoch 17/75

9/9 [==============================] - 33s 4s/step - loss: 0.0563 - acc: 0.9745 - val\_loss: 0.0513 - val\_acc: 0.9649

Epoch 18/75

9/9 [==============================] - 29s 3s/step - loss: 0.0612 - acc: 0.9783 - val\_loss: 0.9122 - val\_acc: 0.9123

Epoch 19/75

9/9 [==============================] - 33s 4s/step - loss: 0.1173 - acc: 0.9711 - val\_loss: 1.0379 - val\_acc: 0.8596

Epoch 20/75

9/9 [==============================] - 31s 3s/step - loss: 0.3209 - acc: 0.9313 - val\_loss: 1.1764 - val\_acc: 0.8509

Epoch 21/75

9/9 [==============================] - 31s 3s/step - loss: 0.3604 - acc: 0.8958 - val\_loss: 4.4187 - val\_acc: 0.6009

Epoch 22/75

9/9 [==============================] - 35s 4s/step - loss: 0.3786 - acc: 0.9021 - val\_loss: 2.5361 - val\_acc: 0.7281

Epoch 23/75

9/9 [==============================] - 33s 4s/step - loss: 0.1775 - acc: 0.9470 - val\_loss: 1.7873 - val\_acc: 0.8246

Epoch 24/75

9/9 [==============================] - 33s 4s/step - loss: 0.1052 - acc: 0.9720 - val\_loss: 0.7559 - val\_acc: 0.8596

Epoch 25/75

9/9 [==============================] - 32s 4s/step - loss: 0.0473 - acc: 0.9860 - val\_loss: 0.1706 - val\_acc: 0.9474

Epoch 26/75

9/9 [==============================] - 33s 4s/step - loss: 0.0919 - acc: 0.9560 - val\_loss: 0.8916 - val\_acc: 0.7368

Epoch 27/75

9/9 [==============================] - 32s 4s/step - loss: 0.1588 - acc: 0.9394 - val\_loss: 0.0891 - val\_acc: 0.9649

Epoch 28/75

9/9 [==============================] - 50s 6s/step - loss: 0.1192 - acc: 0.9633 - val\_loss: 1.3562 - val\_acc: 0.7500

Epoch 29/75

9/9 [==============================] - 51s 6s/step - loss: 0.0874 - acc: 0.9714 - val\_loss: 0.0359 - val\_acc: 0.9737

Epoch 30/75

9/9 [==============================] - 53s 6s/step - loss: 0.1369 - acc: 0.9604 - val\_loss: 1.6159 - val\_acc: 0.7763

Epoch 31/75

9/9 [==============================] - 47s 5s/step - loss: 0.0720 - acc: 0.9674 - val\_loss: 1.4368 - val\_acc: 0.7895

Epoch 32/75

9/9 [==============================] - 41s 5s/step - loss: 0.2256 - acc: 0.9441 - val\_loss: 0.4288 - val\_acc: 0.8553

Epoch 33/75

9/9 [==============================] - 41s 5s/step - loss: 0.1279 - acc: 0.9511 - val\_loss: 0.3643 - val\_acc: 0.9386

Epoch 34/75

9/9 [==============================] - 41s 5s/step - loss: 0.1814 - acc: 0.9482 - val\_loss: 0.4366 - val\_acc: 0.8596

Epoch 35/75

9/9 [==============================] - 40s 4s/step - loss: 0.1509 - acc: 0.9572 - val\_loss: 0.6301 - val\_acc: 0.8728

Epoch 36/75

9/9 [==============================] - 39s 4s/step - loss: 0.4287 - acc: 0.8952 - val\_loss: 3.5436 - val\_acc: 0.6886

Epoch 37/75

9/9 [==============================] - 43s 5s/step - loss: 0.4128 - acc: 0.8426 - val\_loss: 4.4210 - val\_acc: 0.4693

Epoch 38/75

9/9 [==============================] - 37s 4s/step - loss: 0.1819 - acc: 0.9149 - val\_loss: 4.0353 - val\_acc: 0.6272

Epoch 39/75

9/9 [==============================] - 41s 5s/step - loss: 0.1151 - acc: 0.9534 - val\_loss: 3.9157 - val\_acc: 0.6228

Epoch 40/75

9/9 [==============================] - 40s 4s/step - loss: 0.0573 - acc: 0.9796 - val\_loss: 3.3742 - val\_acc: 0.7105

Epoch 41/75

9/9 [==============================] - 40s 4s/step - loss: 0.3085 - acc: 0.9238 - val\_loss: 1.7396 - val\_acc: 0.7982

Epoch 42/75

9/9 [==============================] - 32s 4s/step - loss: 0.1061 - acc: 0.9499 - val\_loss: 0.6530 - val\_acc: 0.8333

Epoch 43/75

9/9 [==============================] - 53s 6s/step - loss: 0.1404 - acc: 0.9479 - val\_loss: 0.4446 - val\_acc: 0.8772

Epoch 44/75

9/9 [==============================] - 56s 6s/step - loss: 0.2567 - acc: 0.9362 - val\_loss: 2.2193 - val\_acc: 0.7061

Epoch 45/75

9/9 [==============================] - 40s 4s/step - loss: 0.1393 - acc: 0.9444 - val\_loss: 0.3262 - val\_acc: 0.9123

Epoch 46/75

9/9 [==============================] - 31s 3s/step - loss: 0.2059 - acc: 0.9442 - val\_loss: 1.4161 - val\_acc: 0.8333

Epoch 47/75

9/9 [==============================] - 65s 7s/step - loss: 0.0875 - acc: 0.9755 - val\_loss: 3.4717 - val\_acc: 0.6974

Epoch 48/75

9/9 [==============================] - 42s 5s/step - loss: 0.0590 - acc: 0.9743 - val\_loss: 3.8388 - val\_acc: 0.6491

Epoch 49/75

9/9 [==============================] - 40s 4s/step - loss: 0.1201 - acc: 0.9502 - val\_loss: 0.8103 - val\_acc: 0.9123

Epoch 50/75

9/9 [==============================] - 35s 4s/step - loss: 0.0214 - acc: 0.9977 - val\_loss: 1.6278 - val\_acc: 0.7632

Epoch 51/75

9/9 [==============================] - 36s 4s/step - loss: 0.0813 - acc: 0.9633 - val\_loss: 0.9856 - val\_acc: 0.7719

Epoch 52/75

9/9 [==============================] - 34s 4s/step - loss: 0.1663 - acc: 0.9487 - val\_loss: 1.1731 - val\_acc: 0.8596

Epoch 53/75

9/9 [==============================] - 30s 3s/step - loss: 0.0777 - acc: 0.9720 - val\_loss: 2.7826 - val\_acc: 0.7632

Epoch 54/75

9/9 [==============================] - 30s 3s/step - loss: 0.0641 - acc: 0.9755 - val\_loss: 2.9572 - val\_acc: 0.7237

Epoch 55/75

9/9 [==============================] - 31s 3s/step - loss: 0.1190 - acc: 0.9709 - val\_loss: 1.9568 - val\_acc: 0.8202

Epoch 56/75

9/9 [==============================] - 43s 5s/step - loss: 0.0685 - acc: 0.9803 - val\_loss: 3.4328 - val\_acc: 0.5921

Epoch 57/75

9/9 [==============================] - 35s 4s/step - loss: 0.0341 - acc: 0.9878 - val\_loss: 4.5416 - val\_acc: 0.5614

Epoch 58/75

9/9 [==============================] - 31s 3s/step - loss: 0.0633 - acc: 0.9860 - val\_loss: 2.8218 - val\_acc: 0.7281

Epoch 59/75

9/9 [==============================] - 34s 4s/step - loss: 0.0321 - acc: 0.9872 - val\_loss: 0.3879 - val\_acc: 0.8947

Epoch 60/75

9/9 [==============================] - 39s 4s/step - loss: 0.0175 - acc: 0.9907 - val\_loss: 0.4627 - val\_acc: 0.8860

Epoch 61/75

9/9 [==============================] - 34s 4s/step - loss: 0.0470 - acc: 0.9883 - val\_loss: 2.3209 - val\_acc: 0.7281

Epoch 62/75

9/9 [==============================] - 37s 4s/step - loss: 0.1437 - acc: 0.9569 - val\_loss: 1.3742 - val\_acc: 0.7719

Epoch 63/75

9/9 [==============================] - 37s 4s/step - loss: 0.1689 - acc: 0.9569 - val\_loss: 0.8629 - val\_acc: 0.7719

Epoch 64/75

9/9 [==============================] - 33s 4s/step - loss: 0.1075 - acc: 0.9657 - val\_loss: 1.1001 - val\_acc: 0.7982

Epoch 65/75

9/9 [==============================] - 36s 4s/step - loss: 0.0420 - acc: 0.9873 - val\_loss: 2.1869 - val\_acc: 0.6930

Epoch 66/75

9/9 [==============================] - 34s 4s/step - loss: 0.0700 - acc: 0.9801 - val\_loss: 0.1038 - val\_acc: 0.9649

Epoch 67/75

9/9 [==============================] - 36s 4s/step - loss: 0.1491 - acc: 0.9549 - val\_loss: 1.5619 - val\_acc: 0.7982

Epoch 68/75

9/9 [==============================] - 32s 4s/step - loss: 0.0422 - acc: 0.9835 - val\_loss: 1.1040 - val\_acc: 0.7281

Epoch 69/75

9/9 [==============================] - 35s 4s/step - loss: 0.0527 - acc: 0.9861 - val\_loss: 1.9383 - val\_acc: 0.6272

Epoch 70/75

9/9 [==============================] - 33s 4s/step - loss: 0.0147 - acc: 0.9977 - val\_loss: 1.4613 - val\_acc: 0.6930

Epoch 71/75

9/9 [==============================] - 35s 4s/step - loss: 0.0041 - acc: 1.0000 - val\_loss: 0.1824 - val\_acc: 0.9474

Epoch 72/75

9/9 [==============================] - 35s 4s/step - loss: 0.0573 - acc: 0.9883 - val\_loss: 3.0545 - val\_acc: 0.5614

Epoch 73/75

9/9 [==============================] - 35s 4s/step - loss: 0.0293 - acc: 0.9895 - val\_loss: 2.4662 - val\_acc: 0.6228

Epoch 74/75

9/9 [==============================] - 36s 4s/step - loss: 0.0333 - acc: 0.9907 - val\_loss: 0.0374 - val\_acc: 0.9649

Epoch 75/75

9/9 [==============================] - 35s 4s/step - loss: 0.0458 - acc: 0.9796 - val\_loss: 1.8142 - val\_acc: 0.7281

**128-2\_1024-1.png**

Epoch 1/75

9/9 [==============================] - 24s 3s/step - loss: 0.7540 - acc: 0.7680 - val\_loss: 0.5361 - val\_acc: 0.8991

Epoch 2/75

9/9 [==============================] - 19s 2s/step - loss: 0.2186 - acc: 0.8986 - val\_loss: 2.0793 - val\_acc: 0.7412

Epoch 3/75

9/9 [==============================] - 19s 2s/step - loss: 0.1906 - acc: 0.9406 - val\_loss: 0.9469 - val\_acc: 0.8377

Epoch 4/75

9/9 [==============================] - 19s 2s/step - loss: 0.1593 - acc: 0.9459 - val\_loss: 1.1493 - val\_acc: 0.8114

Epoch 5/75

9/9 [==============================] - 20s 2s/step - loss: 0.1691 - acc: 0.9306 - val\_loss: 1.6962 - val\_acc: 0.7281

Epoch 6/75

9/9 [==============================] - 24s 3s/step - loss: 0.0909 - acc: 0.9604 - val\_loss: 0.7777 - val\_acc: 0.8596

Epoch 7/75

9/9 [==============================] - 24s 3s/step - loss: 0.0637 - acc: 0.9744 - val\_loss: 1.2790 - val\_acc: 0.8333

Epoch 8/75

9/9 [==============================] - 20s 2s/step - loss: 0.0769 - acc: 0.9697 - val\_loss: 1.1348 - val\_acc: 0.8553

Epoch 9/75

9/9 [==============================] - 20s 2s/step - loss: 0.0586 - acc: 0.9837 - val\_loss: 0.3845 - val\_acc: 0.8421

Epoch 10/75

9/9 [==============================] - 21s 2s/step - loss: 0.0750 - acc: 0.9732 - val\_loss: 0.1524 - val\_acc: 0.9518

Epoch 11/75

9/9 [==============================] - 20s 2s/step - loss: 0.0411 - acc: 0.9848 - val\_loss: 0.4143 - val\_acc: 0.9123

Epoch 12/75

9/9 [==============================] - 19s 2s/step - loss: 0.0253 - acc: 0.9930 - val\_loss: 1.3618 - val\_acc: 0.6623

Epoch 13/75

9/9 [==============================] - 18s 2s/step - loss: 0.0355 - acc: 0.9837 - val\_loss: 0.8317 - val\_acc: 0.9167

Epoch 14/75

9/9 [==============================] - 21s 2s/step - loss: 0.0545 - acc: 0.9773 - val\_loss: 0.1919 - val\_acc: 0.9298

Epoch 15/75

9/9 [==============================] - 19s 2s/step - loss: 0.0517 - acc: 0.9884 - val\_loss: 0.1723 - val\_acc: 0.9342

Epoch 16/75

9/9 [==============================] - 17s 2s/step - loss: 0.0272 - acc: 0.9877 - val\_loss: 0.5907 - val\_acc: 0.8333

Epoch 17/75

9/9 [==============================] - 19s 2s/step - loss: 0.0678 - acc: 0.9769 - val\_loss: 3.2022 - val\_acc: 0.5526

Epoch 18/75

9/9 [==============================] - 17s 2s/step - loss: 0.0364 - acc: 0.9882 - val\_loss: 1.8494 - val\_acc: 0.6842

Epoch 19/75

9/9 [==============================] - 20s 2s/step - loss: 0.0484 - acc: 0.9850 - val\_loss: 1.3899 - val\_acc: 0.7544

Epoch 20/75

9/9 [==============================] - 19s 2s/step - loss: 0.0361 - acc: 0.9848 - val\_loss: 3.1340 - val\_acc: 0.6798

Epoch 21/75

9/9 [==============================] - 18s 2s/step - loss: 0.0786 - acc: 0.9743 - val\_loss: 4.4278 - val\_acc: 0.6228

Epoch 22/75

9/9 [==============================] - 18s 2s/step - loss: 0.0160 - acc: 0.9953 - val\_loss: 2.0352 - val\_acc: 0.7807

Epoch 23/75

9/9 [==============================] - 18s 2s/step - loss: 0.0113 - acc: 0.9977 - val\_loss: 1.6813 - val\_acc: 0.8596

Epoch 24/75

9/9 [==============================] - 18s 2s/step - loss: 0.0110 - acc: 1.0000 - val\_loss: 3.6511 - val\_acc: 0.6491

Epoch 25/75

9/9 [==============================] - 18s 2s/step - loss: 0.0118 - acc: 0.9988 - val\_loss: 4.3902 - val\_acc: 0.5702

Epoch 26/75

9/9 [==============================] - 19s 2s/step - loss: 0.0062 - acc: 0.9977 - val\_loss: 5.9642 - val\_acc: 0.5263

Epoch 27/75

9/9 [==============================] - 18s 2s/step - loss: 0.0112 - acc: 0.9948 - val\_loss: 2.9016 - val\_acc: 0.7368

Epoch 28/75

9/9 [==============================] - 18s 2s/step - loss: 0.0232 - acc: 0.9907 - val\_loss: 1.3451 - val\_acc: 0.8246

Epoch 29/75

9/9 [==============================] - 18s 2s/step - loss: 0.0153 - acc: 0.9942 - val\_loss: 0.0965 - val\_acc: 0.9649

Epoch 30/75

9/9 [==============================] - 18s 2s/step - loss: 0.0086 - acc: 1.0000 - val\_loss: 0.5188 - val\_acc: 0.9211

Epoch 31/75

9/9 [==============================] - 17s 2s/step - loss: 0.0060 - acc: 1.0000 - val\_loss: 0.6080 - val\_acc: 0.9386

Epoch 32/75

9/9 [==============================] - 18s 2s/step - loss: 0.0072 - acc: 0.9988 - val\_loss: 0.5958 - val\_acc: 0.8860

Epoch 33/75

9/9 [==============================] - 18s 2s/step - loss: 0.0040 - acc: 0.9988 - val\_loss: 2.1047e-04 - val\_acc: 1.0000

Epoch 34/75

9/9 [==============================] - 18s 2s/step - loss: 0.0040 - acc: 1.0000 - val\_loss: 2.8397 - val\_acc: 0.6930

Epoch 35/75

9/9 [==============================] - 19s 2s/step - loss: 0.0047 - acc: 0.9977 - val\_loss: 0.0761 - val\_acc: 0.9386

Epoch 36/75

9/9 [==============================] - 17s 2s/step - loss: 0.0027 - acc: 1.0000 - val\_loss: 2.4809 - val\_acc: 0.7456

Epoch 37/75

9/9 [==============================] - 21s 2s/step - loss: 0.0035 - acc: 1.0000 - val\_loss: 2.6211 - val\_acc: 0.7500

Epoch 38/75

9/9 [==============================] - 21s 2s/step - loss: 0.0034 - acc: 0.9988 - val\_loss: 0.5148 - val\_acc: 0.9211

Epoch 39/75

9/9 [==============================] - 20s 2s/step - loss: 0.0144 - acc: 0.9953 - val\_loss: 3.0096 - val\_acc: 0.7456

Epoch 40/75

9/9 [==============================] - 19s 2s/step - loss: 0.0462 - acc: 0.9814 - val\_loss: 2.1249 - val\_acc: 0.7456

Epoch 41/75

9/9 [==============================] - 25s 3s/step - loss: 0.0108 - acc: 0.9965 - val\_loss: 3.3385 - val\_acc: 0.7456

Epoch 42/75

9/9 [==============================] - 20s 2s/step - loss: 0.0706 - acc: 0.9767 - val\_loss: 3.2515 - val\_acc: 0.6140

Epoch 43/75

9/9 [==============================] - 22s 2s/step - loss: 0.0773 - acc: 0.9722 - val\_loss: 3.8473 - val\_acc: 0.6140

Epoch 44/75

9/9 [==============================] - 20s 2s/step - loss: 0.0992 - acc: 0.9643 - val\_loss: 4.2159 - val\_acc: 0.6930

Epoch 45/75

9/9 [==============================] - 22s 2s/step - loss: 0.0326 - acc: 0.9884 - val\_loss: 3.0326 - val\_acc: 0.7719

Epoch 46/75

9/9 [==============================] - 17s 2s/step - loss: 0.1325 - acc: 0.9696 - val\_loss: 5.3079 - val\_acc: 0.6140

Epoch 47/75

9/9 [==============================] - 19s 2s/step - loss: 0.0332 - acc: 0.9907 - val\_loss: 3.2676 - val\_acc: 0.6930

Epoch 48/75

9/9 [==============================] - 19s 2s/step - loss: 0.0647 - acc: 0.9755 - val\_loss: 2.3186 - val\_acc: 0.7588

Epoch 49/75

9/9 [==============================] - 19s 2s/step - loss: 0.0296 - acc: 0.9861 - val\_loss: 1.7127 - val\_acc: 0.7895

Epoch 50/75

9/9 [==============================] - 19s 2s/step - loss: 0.0383 - acc: 0.9907 - val\_loss: 1.8546 - val\_acc: 0.7500

Epoch 51/75

9/9 [==============================] - 23s 3s/step - loss: 0.0350 - acc: 0.9866 - val\_loss: 1.9815 - val\_acc: 0.7588

Epoch 52/75

9/9 [==============================] - 18s 2s/step - loss: 0.0659 - acc: 0.9773 - val\_loss: 1.4555 - val\_acc: 0.7237

Epoch 53/75

9/9 [==============================] - 18s 2s/step - loss: 0.0312 - acc: 0.9872 - val\_loss: 1.7802 - val\_acc: 0.7281

Epoch 54/75

9/9 [==============================] - 18s 2s/step - loss: 0.0691 - acc: 0.9790 - val\_loss: 0.8444 - val\_acc: 0.8772

Epoch 55/75

9/9 [==============================] - 18s 2s/step - loss: 0.0321 - acc: 0.9866 - val\_loss: 2.2367 - val\_acc: 0.7895

Epoch 56/75

9/9 [==============================] - 19s 2s/step - loss: 0.0218 - acc: 0.9907 - val\_loss: 3.6481 - val\_acc: 0.6930

Epoch 57/75

9/9 [==============================] - 18s 2s/step - loss: 0.1147 - acc: 0.9697 - val\_loss: 4.2976 - val\_acc: 0.5702

Epoch 58/75

9/9 [==============================] - 19s 2s/step - loss: 0.1607 - acc: 0.9452 - val\_loss: 4.8856 - val\_acc: 0.5877

Epoch 59/75

9/9 [==============================] - 18s 2s/step - loss: 0.0519 - acc: 0.9825 - val\_loss: 2.2255 - val\_acc: 0.5921

Epoch 60/75

9/9 [==============================] - 17s 2s/step - loss: 0.0587 - acc: 0.9790 - val\_loss: 0.8975 - val\_acc: 0.7675

Epoch 61/75

9/9 [==============================] - 17s 2s/step - loss: 0.0279 - acc: 0.9883 - val\_loss: 2.0596 - val\_acc: 0.6491

Epoch 62/75

9/9 [==============================] - 17s 2s/step - loss: 0.0326 - acc: 0.9895 - val\_loss: 2.7034 - val\_acc: 0.6754

Epoch 63/75

9/9 [==============================] - 17s 2s/step - loss: 0.0139 - acc: 0.9965 - val\_loss: 2.4271 - val\_acc: 0.6754

Epoch 64/75

9/9 [==============================] - 18s 2s/step - loss: 0.0286 - acc: 0.9890 - val\_loss: 1.7051 - val\_acc: 0.6535

Epoch 65/75

9/9 [==============================] - 20s 2s/step - loss: 0.0389 - acc: 0.9850 - val\_loss: 1.1271 - val\_acc: 0.8509

Epoch 66/75

9/9 [==============================] - 17s 2s/step - loss: 0.0423 - acc: 0.9871 - val\_loss: 1.4738 - val\_acc: 0.7895

Epoch 67/75

9/9 [==============================] - 20s 2s/step - loss: 0.0209 - acc: 0.9942 - val\_loss: 3.5053 - val\_acc: 0.6404

Epoch 68/75

9/9 [==============================] - 20s 2s/step - loss: 0.0228 - acc: 0.9936 - val\_loss: 5.9943 - val\_acc: 0.5351

Epoch 69/75

9/9 [==============================] - 19s 2s/step - loss: 0.0186 - acc: 0.9919 - val\_loss: 5.1744 - val\_acc: 0.5351

Epoch 70/75

9/9 [==============================] - 20s 2s/step - loss: 0.0100 - acc: 0.9977 - val\_loss: 0.5235 - val\_acc: 0.9123

Epoch 71/75

9/9 [==============================] - 18s 2s/step - loss: 0.1509 - acc: 0.9651 - val\_loss: 1.2960 - val\_acc: 0.7895

Epoch 72/75

9/9 [==============================] - 17s 2s/step - loss: 0.0891 - acc: 0.9634 - val\_loss: 2.0689 - val\_acc: 0.6930

Epoch 73/75

9/9 [==============================] - 18s 2s/step - loss: 0.0761 - acc: 0.9791 - val\_loss: 2.8584 - val\_acc: 0.6842

Epoch 74/75

9/9 [==============================] - 19s 2s/step - loss: 0.0300 - acc: 0.9884 - val\_loss: 2.7371 - val\_acc: 0.7719

Epoch 75/75

9/9 [==============================] - 18s 2s/step - loss: 0.0246 - acc: 0.9889 - val\_loss: 2.3908 - val\_acc: 0.7895

**256-4\_512-8\_4096-2\_1000-1.png**

Epoch 1/75

9/9 [==============================] - 82s 9s/step - loss: 1.8363 - acc: 0.6188 - val\_loss: 5.9044 - val\_acc: 0.5307

Epoch 2/75

9/9 [==============================] - 60s 7s/step - loss: 0.6752 - acc: 0.7833 - val\_loss: 5.9992 - val\_acc: 0.6140

Epoch 3/75

9/9 [==============================] - 50s 6s/step - loss: 0.3656 - acc: 0.8479 - val\_loss: 3.3885 - val\_acc: 0.6842

Epoch 4/75

9/9 [==============================] - 58s 6s/step - loss: 0.3429 - acc: 0.8881 - val\_loss: 2.8811 - val\_acc: 0.7018

Epoch 5/75

9/9 [==============================] - 63s 7s/step - loss: 0.3449 - acc: 0.8981 - val\_loss: 2.8448 - val\_acc: 0.7018

Epoch 6/75

9/9 [==============================] - 72s 8s/step - loss: 0.3713 - acc: 0.8730 - val\_loss: 1.1987 - val\_acc: 0.8684

Epoch 7/75

9/9 [==============================] - 74s 8s/step - loss: 0.3927 - acc: 0.8701 - val\_loss: 2.0397 - val\_acc: 0.7368

Epoch 8/75

9/9 [==============================] - 56s 6s/step - loss: 0.2454 - acc: 0.9074 - val\_loss: 1.7061 - val\_acc: 0.7281

Epoch 9/75

9/9 [==============================] - 59s 7s/step - loss: 0.2130 - acc: 0.9330 - val\_loss: 1.1706 - val\_acc: 0.8026

Epoch 10/75

9/9 [==============================] - 60s 7s/step - loss: 0.3267 - acc: 0.8986 - val\_loss: 1.4643 - val\_acc: 0.7939

Epoch 11/75

9/9 [==============================] - 63s 7s/step - loss: 0.2715 - acc: 0.9295 - val\_loss: 0.6993 - val\_acc: 0.8596

Epoch 12/75

9/9 [==============================] - 58s 6s/step - loss: 0.4665 - acc: 0.8713 - val\_loss: 0.7344 - val\_acc: 0.8816

Epoch 13/75

9/9 [==============================] - 55s 6s/step - loss: 0.4010 - acc: 0.8310 - val\_loss: 0.6556 - val\_acc: 0.8333

Epoch 14/75

9/9 [==============================] - 55s 6s/step - loss: 0.2134 - acc: 0.9208 - val\_loss: 0.4898 - val\_acc: 0.8904

Epoch 15/75

9/9 [==============================] - 61s 7s/step - loss: 0.2543 - acc: 0.9155 - val\_loss: 1.3426 - val\_acc: 0.8333

Epoch 16/75

9/9 [==============================] - 53s 6s/step - loss: 0.1363 - acc: 0.9401 - val\_loss: 0.9715 - val\_acc: 0.8772

Epoch 17/75

9/9 [==============================] - 56s 6s/step - loss: 0.1728 - acc: 0.9491 - val\_loss: 1.0866 - val\_acc: 0.8772

Epoch 18/75

9/9 [==============================] - 60s 7s/step - loss: 0.2109 - acc: 0.9332 - val\_loss: 1.0884 - val\_acc: 0.8114

Epoch 19/75

9/9 [==============================] - 60s 7s/step - loss: 0.2728 - acc: 0.9190 - val\_loss: 1.1735 - val\_acc: 0.7719

Epoch 20/75

9/9 [==============================] - 57s 6s/step - loss: 0.1968 - acc: 0.9255 - val\_loss: 1.4965 - val\_acc: 0.7719

Epoch 21/75

9/9 [==============================] - 56s 6s/step - loss: 0.1640 - acc: 0.9376 - val\_loss: 0.1749 - val\_acc: 0.9386

Epoch 22/75

9/9 [==============================] - 56s 6s/step - loss: 0.1756 - acc: 0.9295 - val\_loss: 0.3453 - val\_acc: 0.8728

Epoch 23/75

9/9 [==============================] - 56s 6s/step - loss: 0.1389 - acc: 0.9406 - val\_loss: 0.1890 - val\_acc: 0.9035

Epoch 24/75

9/9 [==============================] - 58s 6s/step - loss: 0.1348 - acc: 0.9517 - val\_loss: 0.2118 - val\_acc: 0.9035

Epoch 25/75

9/9 [==============================] - 58s 6s/step - loss: 0.2039 - acc: 0.9383 - val\_loss: 0.4431 - val\_acc: 0.8596

Epoch 26/75

9/9 [==============================] - 64s 7s/step - loss: 0.2687 - acc: 0.9132 - val\_loss: 0.5409 - val\_acc: 0.7544

Epoch 27/75

9/9 [==============================] - 57s 6s/step - loss: 0.3586 - acc: 0.8912 - val\_loss: 0.6497 - val\_acc: 0.7982

Epoch 28/75

9/9 [==============================] - 57s 6s/step - loss: 0.1364 - acc: 0.9551 - val\_loss: 0.2696 - val\_acc: 0.8202

Epoch 29/75

9/9 [==============================] - 56s 6s/step - loss: 0.2311 - acc: 0.9208 - val\_loss: 0.7612 - val\_acc: 0.7368

Epoch 30/75

9/9 [==============================] - 56s 6s/step - loss: 0.1670 - acc: 0.9441 - val\_loss: 0.7264 - val\_acc: 0.8421

Epoch 31/75

9/9 [==============================] - 54s 6s/step - loss: 0.3090 - acc: 0.9178 - val\_loss: 0.5890 - val\_acc: 0.8421

Epoch 32/75

9/9 [==============================] - 61s 7s/step - loss: 0.2147 - acc: 0.9254 - val\_loss: 0.3090 - val\_acc: 0.9474

Epoch 33/75

9/9 [==============================] - 58s 6s/step - loss: 0.2123 - acc: 0.9424 - val\_loss: 0.0706 - val\_acc: 0.9825

Epoch 34/75

9/9 [==============================] - 56s 6s/step - loss: 0.1145 - acc: 0.9557 - val\_loss: 0.3724 - val\_acc: 0.8772

Epoch 35/75

9/9 [==============================] - 58s 6s/step - loss: 0.1547 - acc: 0.9433 - val\_loss: 0.4488 - val\_acc: 0.8421

Epoch 36/75

9/9 [==============================] - 47s 5s/step - loss: 0.0865 - acc: 0.9671 - val\_loss: 0.6105 - val\_acc: 0.8421

Epoch 37/75

9/9 [==============================] - 61s 7s/step - loss: 0.1548 - acc: 0.9514 - val\_loss: 0.4153 - val\_acc: 0.8421

Epoch 38/75

9/9 [==============================] - 51s 6s/step - loss: 0.1916 - acc: 0.9494 - val\_loss: 0.5990 - val\_acc: 0.9211

Epoch 39/75

9/9 [==============================] - 53s 6s/step - loss: 0.1796 - acc: 0.9406 - val\_loss: 0.2962 - val\_acc: 0.9474

Epoch 40/75

9/9 [==============================] - 53s 6s/step - loss: 0.1366 - acc: 0.9470 - val\_loss: 0.2971 - val\_acc: 0.8596

Epoch 41/75

9/9 [==============================] - 67s 7s/step - loss: 0.2128 - acc: 0.9260 - val\_loss: 0.7689 - val\_acc: 0.8772

Epoch 42/75

9/9 [==============================] - 60s 7s/step - loss: 0.0928 - acc: 0.9767 - val\_loss: 0.5397 - val\_acc: 0.8421

Epoch 43/75

9/9 [==============================] - 66s 7s/step - loss: 0.0925 - acc: 0.9676 - val\_loss: 0.6692 - val\_acc: 0.8421

Epoch 44/75

9/9 [==============================] - 53s 6s/step - loss: 0.0646 - acc: 0.9835 - val\_loss: 0.4937 - val\_acc: 0.8772

Epoch 45/75

9/9 [==============================] - 70s 8s/step - loss: 0.1632 - acc: 0.9641 - val\_loss: 0.6981 - val\_acc: 0.8158

Epoch 46/75

9/9 [==============================] - 54s 6s/step - loss: 0.2904 - acc: 0.9307 - val\_loss: 0.9933 - val\_acc: 0.8421

Epoch 47/75

9/9 [==============================] - 56s 6s/step - loss: 0.1780 - acc: 0.9557 - val\_loss: 0.2591 - val\_acc: 0.8509

Epoch 48/75

9/9 [==============================] - 53s 6s/step - loss: 0.2198 - acc: 0.9185 - val\_loss: 0.1695 - val\_acc: 0.8947

Epoch 49/75

9/9 [==============================] - 65s 7s/step - loss: 0.0879 - acc: 0.9722 - val\_loss: 0.1620 - val\_acc: 0.9035

Epoch 50/75

9/9 [==============================] - 51s 6s/step - loss: 0.1568 - acc: 0.9307 - val\_loss: 0.1932 - val\_acc: 0.9123

Epoch 51/75

9/9 [==============================] - 53s 6s/step - loss: 0.1611 - acc: 0.9429 - val\_loss: 0.4662 - val\_acc: 0.8684

Epoch 52/75

9/9 [==============================] - 60s 7s/step - loss: 0.3006 - acc: 0.9360 - val\_loss: 0.5403 - val\_acc: 0.8509

Epoch 53/75

9/9 [==============================] - 53s 6s/step - loss: 0.2100 - acc: 0.9324 - val\_loss: 0.5166 - val\_acc: 0.8246

Epoch 54/75

9/9 [==============================] - 49s 5s/step - loss: 0.1021 - acc: 0.9615 - val\_loss: 0.3418 - val\_acc: 0.9474

Epoch 55/75

9/9 [==============================] - 47s 5s/step - loss: 0.1478 - acc: 0.9662 - val\_loss: 0.2749 - val\_acc: 0.8991

Epoch 56/75

9/9 [==============================] - 49s 5s/step - loss: 0.1181 - acc: 0.9491 - val\_loss: 0.0530 - val\_acc: 0.9825

Epoch 57/75

9/9 [==============================] - 47s 5s/step - loss: 0.1744 - acc: 0.9552 - val\_loss: 0.0424 - val\_acc: 0.9825

Epoch 58/75

9/9 [==============================] - 47s 5s/step - loss: 0.1044 - acc: 0.9499 - val\_loss: 0.0607 - val\_acc: 0.9825

Epoch 59/75

9/9 [==============================] - 51s 6s/step - loss: 0.1360 - acc: 0.9551 - val\_loss: 0.3463 - val\_acc: 0.8772

Epoch 60/75

9/9 [==============================] - 54s 6s/step - loss: 0.1263 - acc: 0.9580 - val\_loss: 0.3910 - val\_acc: 0.9035

Epoch 61/75

9/9 [==============================] - 53s 6s/step - loss: 0.1904 - acc: 0.9505 - val\_loss: 0.4388 - val\_acc: 0.9298

Epoch 62/75

9/9 [==============================] - 54s 6s/step - loss: 0.1120 - acc: 0.9604 - val\_loss: 0.3211 - val\_acc: 0.9474

Epoch 63/75

9/9 [==============================] - 55s 6s/step - loss: 0.0896 - acc: 0.9575 - val\_loss: 0.3446 - val\_acc: 0.9474

Epoch 64/75

9/9 [==============================] - 56s 6s/step - loss: 0.1323 - acc: 0.9627 - val\_loss: 0.0903 - val\_acc: 0.9825

Epoch 65/75

9/9 [==============================] - 55s 6s/step - loss: 0.1010 - acc: 0.9664 - val\_loss: 0.7242 - val\_acc: 0.7982

Epoch 66/75

9/9 [==============================] - 52s 6s/step - loss: 0.0663 - acc: 0.9824 - val\_loss: 0.6645 - val\_acc: 0.7895

Epoch 67/75

9/9 [==============================] - 55s 6s/step - loss: 0.1323 - acc: 0.9664 - val\_loss: 0.3434 - val\_acc: 0.8158

Epoch 68/75

9/9 [==============================] - 49s 5s/step - loss: 0.1798 - acc: 0.9519 - val\_loss: 0.1455 - val\_acc: 0.9474

Epoch 69/75

9/9 [==============================] - 51s 6s/step - loss: 0.1194 - acc: 0.9688 - val\_loss: 0.2267 - val\_acc: 0.9474

Epoch 70/75

9/9 [==============================] - 47s 5s/step - loss: 0.0937 - acc: 0.9639 - val\_loss: 0.1873 - val\_acc: 0.9474

Epoch 71/75

9/9 [==============================] - 47s 5s/step - loss: 0.0876 - acc: 0.9703 - val\_loss: 0.3359 - val\_acc: 0.9649

Epoch 72/75

9/9 [==============================] - 47s 5s/step - loss: 0.0894 - acc: 0.9738 - val\_loss: 0.0735 - val\_acc: 0.9737

Epoch 73/75

9/9 [==============================] - 47s 5s/step - loss: 0.0560 - acc: 0.9825 - val\_loss: 0.0643 - val\_acc: 0.9737

Epoch 74/75

9/9 [==============================] - 48s 5s/step - loss: 0.0402 - acc: 0.9872 - val\_loss: 0.0385 - val\_acc: 0.9693

Epoch 75/75

9/9 [==============================] - 48s 5s/step - loss: 0.1408 - acc: 0.9639 - val\_loss: 0.3067 - val\_acc: 0.8684

----------------------------------------------------------------------

**256-4\_512-8\_1024-8\_4096-2\_1000-1.png**

Epoch 1/75

9/9 [==============================] - 166s 18s/step - loss: 1.7340 - acc: 0.6479 - val\_loss: 8.9701 - val\_acc: 0.4386

Epoch 2/75

9/9 [==============================] - 145s 16s/step - loss: 0.6583 - acc: 0.7821 - val\_loss: 8.9701 - val\_acc: 0.4386

Epoch 3/75

9/9 [==============================] - 135s 15s/step - loss: 0.5413 - acc: 0.8019 - val\_loss: 6.1448 - val\_acc: 0.5088

Epoch 4/75

9/9 [==============================] - 148s 16s/step - loss: 0.3015 - acc: 0.8870 - val\_loss: 3.3949 - val\_acc: 0.7061

Epoch 5/75

9/9 [==============================] - 175s 19s/step - loss: 0.2100 - acc: 0.9271 - val\_loss: 2.4301 - val\_acc: 0.8246

Epoch 6/75

9/9 [==============================] - 162s 18s/step - loss: 0.1862 - acc: 0.9272 - val\_loss: 2.2516 - val\_acc: 0.7675

Epoch 7/75

9/9 [==============================] - 160s 18s/step - loss: 0.1831 - acc: 0.9214 - val\_loss: 1.8674 - val\_acc: 0.7412

Epoch 8/75

9/9 [==============================] - 159s 18s/step - loss: 0.2740 - acc: 0.9022 - val\_loss: 1.5766 - val\_acc: 0.8070

Epoch 9/75

9/9 [==============================] - 144s 16s/step - loss: 0.2646 - acc: 0.9174 - val\_loss: 1.2133 - val\_acc: 0.8640

Epoch 10/75

9/9 [==============================] - 171s 19s/step - loss: 0.2968 - acc: 0.9156 - val\_loss: 1.7919 - val\_acc: 0.7105

Epoch 11/75

9/9 [==============================] - 150s 17s/step - loss: 0.1795 - acc: 0.9272 - val\_loss: 1.4383 - val\_acc: 0.7763

Epoch 12/75

9/9 [==============================] - 121s 13s/step - loss: 0.1177 - acc: 0.9464 - val\_loss: 1.1922 - val\_acc: 0.8509

Epoch 13/75

9/9 [==============================] - 131s 15s/step - loss: 0.1841 - acc: 0.9359 - val\_loss: 0.6749 - val\_acc: 0.9298

Epoch 14/75

9/9 [==============================] - 129s 14s/step - loss: 0.2002 - acc: 0.9400 - val\_loss: 0.5325 - val\_acc: 0.8947

Epoch 15/75

9/9 [==============================] - 138s 15s/step - loss: 0.1245 - acc: 0.9514 - val\_loss: 0.7386 - val\_acc: 0.8596

Epoch 16/75

9/9 [==============================] - 113s 13s/step - loss: 0.1293 - acc: 0.9490 - val\_loss: 0.7844 - val\_acc: 0.8596

Epoch 17/75

9/9 [==============================] - 136s 15s/step - loss: 0.1771 - acc: 0.9294 - val\_loss: 0.5170 - val\_acc: 0.8596

Epoch 18/75

9/9 [==============================] - 123s 14s/step - loss: 0.1987 - acc: 0.9384 - val\_loss: 1.5275 - val\_acc: 0.7851

Epoch 19/75

9/9 [==============================] - 160s 18s/step - loss: 0.1407 - acc: 0.9456 - val\_loss: 0.7827 - val\_acc: 0.8333

Epoch 20/75

9/9 [==============================] - 140s 16s/step - loss: 0.1390 - acc: 0.9511 - val\_loss: 1.0303 - val\_acc: 0.8684

Epoch 21/75

9/9 [==============================] - 138s 15s/step - loss: 0.0455 - acc: 0.9883 - val\_loss: 0.5912 - val\_acc: 0.8158

Epoch 22/75

9/9 [==============================] - 147s 16s/step - loss: 0.1607 - acc: 0.9551 - val\_loss: 0.9158 - val\_acc: 0.8509

Epoch 23/75

9/9 [==============================] - 141s 16s/step - loss: 0.1456 - acc: 0.9429 - val\_loss: 0.5346 - val\_acc: 0.8246

Epoch 24/75

9/9 [==============================] - 126s 14s/step - loss: 0.0911 - acc: 0.9697 - val\_loss: 0.6567 - val\_acc: 0.8158

Epoch 25/75

9/9 [==============================] - 128s 14s/step - loss: 0.0509 - acc: 0.9831 - val\_loss: 0.8253 - val\_acc: 0.8772

Epoch 26/75

9/9 [==============================] - 147s 16s/step - loss: 0.1520 - acc: 0.9583 - val\_loss: 1.4538 - val\_acc: 0.7895

Epoch 27/75

9/9 [==============================] - 125s 14s/step - loss: 0.1052 - acc: 0.9709 - val\_loss: 0.6167 - val\_acc: 0.8596

Epoch 28/75

9/9 [==============================] - 123s 14s/step - loss: 0.1532 - acc: 0.9476 - val\_loss: 1.1323 - val\_acc: 0.6930

Epoch 29/75

9/9 [==============================] - 127s 14s/step - loss: 0.1694 - acc: 0.9354 - val\_loss: 2.7562 - val\_acc: 0.7105

Epoch 30/75

9/9 [==============================] - 128s 14s/step - loss: 0.1281 - acc: 0.9482 - val\_loss: 1.5909 - val\_acc: 0.6316

Epoch 31/75

9/9 [==============================] - 126s 14s/step - loss: 0.2212 - acc: 0.9406 - val\_loss: 0.8086 - val\_acc: 0.8947

Epoch 32/75

9/9 [==============================] - 125s 14s/step - loss: 0.0956 - acc: 0.9697 - val\_loss: 0.9424 - val\_acc: 0.9035

Epoch 33/75

9/9 [==============================] - 124s 14s/step - loss: 0.1071 - acc: 0.9790 - val\_loss: 0.5923 - val\_acc: 0.9167

Epoch 34/75

9/9 [==============================] - 123s 14s/step - loss: 0.0592 - acc: 0.9825 - val\_loss: 0.3329 - val\_acc: 0.8333

Epoch 35/75

9/9 [==============================] - 130s 14s/step - loss: 0.1210 - acc: 0.9491 - val\_loss: 0.7571 - val\_acc: 0.8158

Epoch 36/75

9/9 [==============================] - 121s 13s/step - loss: 0.1845 - acc: 0.9485 - val\_loss: 0.5161 - val\_acc: 0.8860

Epoch 37/75

9/9 [==============================] - 131s 15s/step - loss: 0.1420 - acc: 0.9479 - val\_loss: 0.1906 - val\_acc: 0.9474

Epoch 38/75

9/9 [==============================] - 130s 14s/step - loss: 0.0957 - acc: 0.9692 - val\_loss: 0.6619 - val\_acc: 0.8421

Epoch 39/75

9/9 [==============================] - 123s 14s/step - loss: 0.1957 - acc: 0.9505 - val\_loss: 0.4905 - val\_acc: 0.8333

Epoch 40/75

9/9 [==============================] - 126s 14s/step - loss: 0.2219 - acc: 0.9231 - val\_loss: 1.0141 - val\_acc: 0.7982

Epoch 41/75

9/9 [==============================] - 122s 14s/step - loss: 0.2837 - acc: 0.8695 - val\_loss: 0.9096 - val\_acc: 0.8202

Epoch 42/75

9/9 [==============================] - 122s 14s/step - loss: 0.1878 - acc: 0.9213 - val\_loss: 0.5927 - val\_acc: 0.9298

Epoch 43/75

9/9 [==============================] - 130s 14s/step - loss: 0.1291 - acc: 0.9433 - val\_loss: 0.4897 - val\_acc: 0.9298

Epoch 44/75

9/9 [==============================] - 117s 13s/step - loss: 0.1517 - acc: 0.9414 - val\_loss: 0.4300 - val\_acc: 0.9649

Epoch 45/75

9/9 [==============================] - 133s 15s/step - loss: 0.1305 - acc: 0.9722 - val\_loss: 0.4725 - val\_acc: 0.9561

Epoch 46/75

9/9 [==============================] - 113s 13s/step - loss: 0.1241 - acc: 0.9760 - val\_loss: 0.4233 - val\_acc: 0.8772

Epoch 47/75

9/9 [==============================] - 122s 14s/step - loss: 0.1216 - acc: 0.9627 - val\_loss: 0.4516 - val\_acc: 0.8772

Epoch 48/75

9/9 [==============================] - 125s 14s/step - loss: 0.1329 - acc: 0.9662 - val\_loss: 0.3571 - val\_acc: 0.9474

Epoch 49/75

9/9 [==============================] - 127s 14s/step - loss: 0.2684 - acc: 0.9155 - val\_loss: 0.8156 - val\_acc: 0.9035

Epoch 50/75

9/9 [==============================] - 124s 14s/step - loss: 0.2206 - acc: 0.9266 - val\_loss: 1.8093 - val\_acc: 0.7719

Epoch 51/75

9/9 [==============================] - 119s 13s/step - loss: 0.1761 - acc: 0.9464 - val\_loss: 1.3815 - val\_acc: 0.8860

Epoch 52/75

9/9 [==============================] - 125s 14s/step - loss: 0.1918 - acc: 0.9453 - val\_loss: 0.6725 - val\_acc: 0.8947

Epoch 53/75

9/9 [==============================] - 120s 13s/step - loss: 0.0982 - acc: 0.9708 - val\_loss: 0.5087 - val\_acc: 0.9298

Epoch 54/75

9/9 [==============================] - 119s 13s/step - loss: 0.1164 - acc: 0.9575 - val\_loss: 0.6293 - val\_acc: 0.9298

Epoch 55/75

9/9 [==============================] - 121s 13s/step - loss: 0.2389 - acc: 0.9348 - val\_loss: 0.8405 - val\_acc: 0.9035

Epoch 56/75

9/9 [==============================] - 139s 15s/step - loss: 0.1838 - acc: 0.9259 - val\_loss: 0.5232 - val\_acc: 0.9035

Epoch 57/75

9/9 [==============================] - 130s 14s/step - loss: 0.1262 - acc: 0.9592 - val\_loss: 0.5220 - val\_acc: 0.9035

Epoch 58/75

9/9 [==============================] - 139s 15s/step - loss: 0.1201 - acc: 0.9569 - val\_loss: 0.8323 - val\_acc: 0.8509

Epoch 59/75

9/9 [==============================] - 158s 18s/step - loss: 0.1202 - acc: 0.9569 - val\_loss: 0.6356 - val\_acc: 0.8772

Epoch 60/75

9/9 [==============================] - 135s 15s/step - loss: 0.1446 - acc: 0.9482 - val\_loss: 0.2203 - val\_acc: 0.9298

Epoch 61/75

9/9 [==============================] - 123s 14s/step - loss: 0.1872 - acc: 0.9435 - val\_loss: 0.2170 - val\_acc: 0.9298

Epoch 62/75

9/9 [==============================] - 136s 15s/step - loss: 0.0839 - acc: 0.9708 - val\_loss: 0.2715 - val\_acc: 0.9298

Epoch 63/75

9/9 [==============================] - 127s 14s/step - loss: 0.1173 - acc: 0.9615 - val\_loss: 0.3052 - val\_acc: 0.9474

Epoch 64/75

9/9 [==============================] - 137s 15s/step - loss: 0.2470 - acc: 0.9523 - val\_loss: 0.2163 - val\_acc: 0.9298

Epoch 65/75

9/9 [==============================] - 143s 16s/step - loss: 0.1255 - acc: 0.9502 - val\_loss: 0.3519 - val\_acc: 0.8947

Epoch 66/75

9/9 [==============================] - 123s 14s/step - loss: 0.1479 - acc: 0.9496 - val\_loss: 0.2575 - val\_acc: 0.9211

Epoch 67/75

9/9 [==============================] - 126s 14s/step - loss: 0.0943 - acc: 0.9745 - val\_loss: 0.3046 - val\_acc: 0.8158

Epoch 68/75

9/9 [==============================] - 112s 12s/step - loss: 0.0603 - acc: 0.9836 - val\_loss: 0.2192 - val\_acc: 0.9386

Epoch 69/75

9/9 [==============================] - 129s 14s/step - loss: 0.0730 - acc: 0.9815 - val\_loss: 0.0433 - val\_acc: 0.9649

Epoch 70/75

9/9 [==============================] - 134s 15s/step - loss: 0.0863 - acc: 0.9813 - val\_loss: 0.5836 - val\_acc: 0.8596

Epoch 71/75

9/9 [==============================] - 120s 13s/step - loss: 0.0859 - acc: 0.9767 - val\_loss: 0.8922 - val\_acc: 0.7281

Epoch 72/75

9/9 [==============================] - 118s 13s/step - loss: 0.1496 - acc: 0.9494 - val\_loss: 0.4557 - val\_acc: 0.8465

Epoch 73/75

9/9 [==============================] - 119s 13s/step - loss: 0.1270 - acc: 0.9499 - val\_loss: 0.4885 - val\_acc: 0.8333

Epoch 74/75

9/9 [==============================] - 125s 14s/step - loss: 0.0989 - acc: 0.9662 - val\_loss: 0.8364 - val\_acc: 0.7368

Epoch 75/75

9/9 [==============================] - 118s 13s/step - loss: 0.0929 - acc: 0.9569 - val\_loss: 0.4160 - val\_acc: 0.8772

------------------------------------------------------------------------------------

**256-4\_512-8\_1024\_16\_4096-2\_1000-1.png**

Error: Negative dimension size caused by subtracting 2 from 1 for 'max\_pooling2d\_7/MaxPool' (op: 'MaxPool') with input shapes: [?,1,1,1024].

------------------------------------------------------------------------------------

**256-4\_512-12\_4096-2\_1000-1.png**

Epoch 1/75

9/9 [==============================] - 75s 8s/step - loss: 1.6900 - acc: 0.5955 - val\_loss: 5.7935 - val\_acc: 0.5175

Epoch 2/75

9/9 [==============================] - 63s 7s/step - loss: 0.8126 - acc: 0.6843 - val\_loss: 2.2777 - val\_acc: 0.4254

Epoch 3/75

9/9 [==============================] - 67s 7s/step - loss: 0.5320 - acc: 0.7862 - val\_loss: 3.1430 - val\_acc: 0.4693

Epoch 4/75

9/9 [==============================] - 67s 7s/step - loss: 0.4902 - acc: 0.8118 - val\_loss: 2.8797 - val\_acc: 0.6360

Epoch 5/75

9/9 [==============================] - 84s 9s/step - loss: 0.5926 - acc: 0.8044 - val\_loss: 2.7547 - val\_acc: 0.6272

Epoch 6/75

9/9 [==============================] - 69s 8s/step - loss: 0.3549 - acc: 0.8474 - val\_loss: 3.0586 - val\_acc: 0.6886

Epoch 7/75

9/9 [==============================] - 69s 8s/step - loss: 0.4871 - acc: 0.8602 - val\_loss: 2.6152 - val\_acc: 0.6798

Epoch 8/75

9/9 [==============================] - 58s 6s/step - loss: 0.3262 - acc: 0.8817 - val\_loss: 1.0983 - val\_acc: 0.7632

Epoch 9/75

9/9 [==============================] - 57s 6s/step - loss: 0.3668 - acc: 0.8789 - val\_loss: 2.1648 - val\_acc: 0.6842

Epoch 10/75

9/9 [==============================] - 58s 6s/step - loss: 0.3929 - acc: 0.8537 - val\_loss: 1.7937 - val\_acc: 0.7105

Epoch 11/75

9/9 [==============================] - 57s 6s/step - loss: 0.2832 - acc: 0.9079 - val\_loss: 1.7741 - val\_acc: 0.8377

Epoch 12/75

9/9 [==============================] - 57s 6s/step - loss: 0.4887 - acc: 0.8351 - val\_loss: 0.8427 - val\_acc: 0.7719

Epoch 13/75

9/9 [==============================] - 57s 6s/step - loss: 0.4809 - acc: 0.8352 - val\_loss: 1.7304 - val\_acc: 0.6667

Epoch 14/75

9/9 [==============================] - 57s 6s/step - loss: 0.3628 - acc: 0.8824 - val\_loss: 0.9840 - val\_acc: 0.8114

Epoch 15/75

9/9 [==============================] - 61s 7s/step - loss: 0.3522 - acc: 0.8715 - val\_loss: 0.5530 - val\_acc: 0.8684

Epoch 16/75

9/9 [==============================] - 53s 6s/step - loss: 0.3287 - acc: 0.8775 - val\_loss: 1.2510 - val\_acc: 0.7105

Epoch 17/75

9/9 [==============================] - 60s 7s/step - loss: 0.3614 - acc: 0.8900 - val\_loss: 1.2521 - val\_acc: 0.7763

Epoch 18/75

9/9 [==============================] - 57s 6s/step - loss: 0.2839 - acc: 0.8816 - val\_loss: 0.6118 - val\_acc: 0.8421

Epoch 19/75

9/9 [==============================] - 71s 8s/step - loss: 0.3101 - acc: 0.8935 - val\_loss: 0.6470 - val\_acc: 0.8421

Epoch 20/75

9/9 [==============================] - 59s 7s/step - loss: 0.2151 - acc: 0.9190 - val\_loss: 0.3295 - val\_acc: 0.8509

Epoch 21/75

9/9 [==============================] - 57s 6s/step - loss: 0.2021 - acc: 0.9394 - val\_loss: 0.9825 - val\_acc: 0.7807

Epoch 22/75

9/9 [==============================] - 58s 6s/step - loss: 0.2456 - acc: 0.9137 - val\_loss: 0.3439 - val\_acc: 0.8289

Epoch 23/75

9/9 [==============================] - 58s 6s/step - loss: 0.2764 - acc: 0.8876 - val\_loss: 0.8818 - val\_acc: 0.7939

Epoch 24/75

9/9 [==============================] - 56s 6s/step - loss: 0.1899 - acc: 0.9318 - val\_loss: 1.1045 - val\_acc: 0.7500

Epoch 25/75

9/9 [==============================] - 56s 6s/step - loss: 0.2825 - acc: 0.8846 - val\_loss: 1.1052 - val\_acc: 0.7807

Epoch 26/75

9/9 [==============================] - 63s 7s/step - loss: 0.2096 - acc: 0.9132 - val\_loss: 0.2987 - val\_acc: 0.8596

Epoch 27/75

9/9 [==============================] - 59s 7s/step - loss: 0.1787 - acc: 0.9283 - val\_loss: 0.7768 - val\_acc: 0.8509

Epoch 28/75

9/9 [==============================] - 58s 6s/step - loss: 0.2908 - acc: 0.9032 - val\_loss: 0.6683 - val\_acc: 0.8596

Epoch 29/75

9/9 [==============================] - 57s 6s/step - loss: 0.3142 - acc: 0.8987 - val\_loss: 1.0394 - val\_acc: 0.7456

Epoch 30/75

9/9 [==============================] - 58s 6s/step - loss: 0.2114 - acc: 0.9196 - val\_loss: 0.5354 - val\_acc: 0.8333

Epoch 31/75

9/9 [==============================] - 57s 6s/step - loss: 0.1466 - acc: 0.9580 - val\_loss: 0.7852 - val\_acc: 0.8465

Epoch 32/75

9/9 [==============================] - 66s 7s/step - loss: 0.1397 - acc: 0.9499 - val\_loss: 1.2057 - val\_acc: 0.8070

Epoch 33/75

9/9 [==============================] - 59s 7s/step - loss: 0.1874 - acc: 0.9301 - val\_loss: 0.8400 - val\_acc: 0.7763

Epoch 34/75

9/9 [==============================] - 58s 6s/step - loss: 0.1635 - acc: 0.9278 - val\_loss: 0.7073 - val\_acc: 0.7149

Epoch 35/75

9/9 [==============================] - 63s 7s/step - loss: 0.2091 - acc: 0.9340 - val\_loss: 0.2202 - val\_acc: 0.9079

Epoch 36/75

9/9 [==============================] - 56s 6s/step - loss: 0.2832 - acc: 0.9132 - val\_loss: 0.7097 - val\_acc: 0.8772

Epoch 37/75

9/9 [==============================] - 71s 8s/step - loss: 0.1677 - acc: 0.9433 - val\_loss: 0.7529 - val\_acc: 0.8684

Epoch 38/75

9/9 [==============================] - 60s 7s/step - loss: 0.1824 - acc: 0.9248 - val\_loss: 1.0983 - val\_acc: 0.8640

Epoch 39/75

9/9 [==============================] - 58s 6s/step - loss: 0.2774 - acc: 0.9050 - val\_loss: 0.5879 - val\_acc: 0.8772

Epoch 40/75

9/9 [==============================] - 59s 7s/step - loss: 0.1521 - acc: 0.9178 - val\_loss: 0.8412 - val\_acc: 0.8289

Epoch 41/75

9/9 [==============================] - 58s 6s/step - loss: 0.2015 - acc: 0.9312 - val\_loss: 0.4465 - val\_acc: 0.8333

Epoch 42/75

9/9 [==============================] - 59s 7s/step - loss: 0.2060 - acc: 0.9202 - val\_loss: 0.6710 - val\_acc: 0.8289

Epoch 43/75

9/9 [==============================] - 63s 7s/step - loss: 0.1559 - acc: 0.9514 - val\_loss: 0.5600 - val\_acc: 0.8596

Epoch 44/75

9/9 [==============================] - 56s 6s/step - loss: 0.1679 - acc: 0.9401 - val\_loss: 1.2142 - val\_acc: 0.8070

Epoch 45/75

9/9 [==============================] - 62s 7s/step - loss: 0.1904 - acc: 0.9178 - val\_loss: 1.1616 - val\_acc: 0.8509

Epoch 46/75

9/9 [==============================] - 54s 6s/step - loss: 0.3355 - acc: 0.9015 - val\_loss: 0.3224 - val\_acc: 0.9211

Epoch 47/75

9/9 [==============================] - 59s 7s/step - loss: 0.1364 - acc: 0.9318 - val\_loss: 0.4137 - val\_acc: 0.8509

Epoch 48/75

9/9 [==============================] - 60s 7s/step - loss: 0.2512 - acc: 0.8957 - val\_loss: 0.3389 - val\_acc: 0.8772

Epoch 49/75

9/9 [==============================] - 71s 8s/step - loss: 0.1301 - acc: 0.9410 - val\_loss: 0.2376 - val\_acc: 0.8772

Epoch 50/75

9/9 [==============================] - 59s 7s/step - loss: 0.1585 - acc: 0.9266 - val\_loss: 0.4293 - val\_acc: 0.8860

Epoch 51/75

9/9 [==============================] - 56s 6s/step - loss: 0.0810 - acc: 0.9662 - val\_loss: 0.3085 - val\_acc: 0.8947

Epoch 52/75

9/9 [==============================] - 57s 6s/step - loss: 0.1895 - acc: 0.9324 - val\_loss: 0.8197 - val\_acc: 0.8904

Epoch 53/75

9/9 [==============================] - 57s 6s/step - loss: 0.1579 - acc: 0.9284 - val\_loss: 1.2777 - val\_acc: 0.7982

Epoch 54/75

9/9 [==============================] - 57s 6s/step - loss: 0.1566 - acc: 0.9301 - val\_loss: 0.2818 - val\_acc: 0.8904

Epoch 55/75

9/9 [==============================] - 57s 6s/step - loss: 0.1630 - acc: 0.9336 - val\_loss: 1.5124 - val\_acc: 0.8246

Epoch 56/75

9/9 [==============================] - 60s 7s/step - loss: 0.1642 - acc: 0.9363 - val\_loss: 0.6665 - val\_acc: 0.8860

Epoch 57/75

9/9 [==============================] - 56s 6s/step - loss: 0.2219 - acc: 0.9132 - val\_loss: 1.2818 - val\_acc: 0.8640

Epoch 58/75

9/9 [==============================] - 57s 6s/step - loss: 0.1035 - acc: 0.9557 - val\_loss: 0.9930 - val\_acc: 0.8202

Epoch 59/75

9/9 [==============================] - 57s 6s/step - loss: 0.2281 - acc: 0.9155 - val\_loss: 0.8467 - val\_acc: 0.8509

Epoch 60/75

9/9 [==============================] - 56s 6s/step - loss: 0.1586 - acc: 0.9458 - val\_loss: 0.9000 - val\_acc: 0.8860

Epoch 61/75

9/9 [==============================] - 57s 6s/step - loss: 0.3064 - acc: 0.8987 - val\_loss: 1.7760 - val\_acc: 0.8070

Epoch 62/75

9/9 [==============================] - 59s 7s/step - loss: 0.2153 - acc: 0.9411 - val\_loss: 0.7836 - val\_acc: 0.8596

Epoch 63/75

9/9 [==============================] - 57s 6s/step - loss: 0.1866 - acc: 0.9289 - val\_loss: 0.6784 - val\_acc: 0.8158

Epoch 64/75

9/9 [==============================] - 58s 6s/step - loss: 0.1706 - acc: 0.9220 - val\_loss: 0.7227 - val\_acc: 0.8202

Epoch 65/75

9/9 [==============================] - 74s 8s/step - loss: 0.1056 - acc: 0.9664 - val\_loss: 0.2227 - val\_acc: 0.9386

Epoch 66/75

9/9 [==============================] - 58s 6s/step - loss: 0.1145 - acc: 0.9643 - val\_loss: 0.2437 - val\_acc: 0.9211

Epoch 67/75

9/9 [==============================] - 68s 8s/step - loss: 0.1675 - acc: 0.9387 - val\_loss: 1.0415 - val\_acc: 0.8596

Epoch 68/75

9/9 [==============================] - 62s 7s/step - loss: 0.1592 - acc: 0.9318 - val\_loss: 0.9953 - val\_acc: 0.8596

Epoch 69/75

9/9 [==============================] - 61s 7s/step - loss: 0.1578 - acc: 0.9433 - val\_loss: 0.4032 - val\_acc: 0.8772

Epoch 70/75

9/9 [==============================] - 57s 6s/step - loss: 0.0931 - acc: 0.9708 - val\_loss: 0.2454 - val\_acc: 0.8947

Epoch 71/75

9/9 [==============================] - 57s 6s/step - loss: 0.1466 - acc: 0.9516 - val\_loss: 0.3889 - val\_acc: 0.8684

Epoch 72/75

9/9 [==============================] - 57s 6s/step - loss: 0.1222 - acc: 0.9400 - val\_loss: 0.6845 - val\_acc: 0.8421

Epoch 73/75

9/9 [==============================] - 58s 6s/step - loss: 0.0996 - acc: 0.9557 - val\_loss: 0.4872 - val\_acc: 0.8860

Epoch 74/75

9/9 [==============================] - 57s 6s/step - loss: 0.1087 - acc: 0.9493 - val\_loss: 0.5735 - val\_acc: 0.8509

Epoch 75/75

9/9 [==============================] - 57s 6s/step - loss: 0.1808 - acc: 0.9301 - val\_loss: 0.5575 - val\_acc: 0.8202

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**256-4\_512-16\_4096-2\_1000-1.png**

Epoch 1/75

9/9 [==============================] - 84s 9s/step - loss: 1.2947 - acc: 0.6403 - val\_loss: 7.3101 - val\_acc: 0.4474

Epoch 2/75

9/9 [==============================] - 66s 7s/step - loss: 0.7790 - acc: 0.8036 - val\_loss: 4.0092 - val\_acc: 0.6667

Epoch 3/75

9/9 [==============================] - 66s 7s/step - loss: 0.3260 - acc: 0.8742 - val\_loss: 4.2805 - val\_acc: 0.5965

Epoch 4/75

9/9 [==============================] - 66s 7s/step - loss: 0.3183 - acc: 0.8846 - val\_loss: 1.8246 - val\_acc: 0.6053

Epoch 5/75

9/9 [==============================] - 70s 8s/step - loss: 0.2746 - acc: 0.9097 - val\_loss: 2.8811 - val\_acc: 0.7412

Epoch 6/75

9/9 [==============================] - 67s 7s/step - loss: 0.1812 - acc: 0.9388 - val\_loss: 1.5626 - val\_acc: 0.8289

Epoch 7/75

9/9 [==============================] - 67s 7s/step - loss: 0.2094 - acc: 0.9365 - val\_loss: 0.6623 - val\_acc: 0.9079

Epoch 8/75

9/9 [==============================] - 66s 7s/step - loss: 0.1738 - acc: 0.9265 - val\_loss: 0.6442 - val\_acc: 0.8114

Epoch 9/75

9/9 [==============================] - 67s 7s/step - loss: 0.2019 - acc: 0.9359 - val\_loss: 0.9790 - val\_acc: 0.7544

Epoch 10/75

9/9 [==============================] - 994s 110s/step - loss: 0.1742 - acc: 0.9499 - val\_loss: 1.2127 - val\_acc: 0.7544

Epoch 11/75

9/9 [==============================] - 2186s 243s/step - loss: 0.2303 - acc: 0.8998 - val\_loss: 1.4525 - val\_acc: 0.7325

Epoch 12/75

9/9 [==============================] - 71s 8s/step - loss: 0.2658 - acc: 0.9300 - val\_loss: 1.4007 - val\_acc: 0.7895

Epoch 13/75

9/9 [==============================] - 74s 8s/step - loss: 0.1770 - acc: 0.9330 - val\_loss: 2.5714 - val\_acc: 0.7632

Epoch 14/75

9/9 [==============================] - 76s 8s/step - loss: 0.2566 - acc: 0.9278 - val\_loss: 2.0024 - val\_acc: 0.7325

Epoch 15/75

9/9 [==============================] - 85s 9s/step - loss: 0.1576 - acc: 0.9468 - val\_loss: 1.1084 - val\_acc: 0.8640

Epoch 16/75

9/9 [==============================] - 87s 10s/step - loss: 0.1713 - acc: 0.9430 - val\_loss: 1.3162 - val\_acc: 0.8377

Epoch 17/75

9/9 [==============================] - 107s 12s/step - loss: 0.1734 - acc: 0.9306 - val\_loss: 0.6770 - val\_acc: 0.8596

Epoch 18/75

9/9 [==============================] - 100s 11s/step - loss: 0.1233 - acc: 0.9460 - val\_loss: 0.7622 - val\_acc: 0.8421

Epoch 19/75

9/9 [==============================] - 113s 13s/step - loss: 0.1108 - acc: 0.9572 - val\_loss: 1.4031 - val\_acc: 0.7895

Epoch 20/75

9/9 [==============================] - 110s 12s/step - loss: 0.0956 - acc: 0.9650 - val\_loss: 0.9560 - val\_acc: 0.8596

Epoch 21/75

9/9 [==============================] - 108s 12s/step - loss: 0.0877 - acc: 0.9639 - val\_loss: 0.8126 - val\_acc: 0.8772

Epoch 22/75

9/9 [==============================] - 110s 12s/step - loss: 0.1182 - acc: 0.9528 - val\_loss: 1.2234 - val\_acc: 0.8333

Epoch 23/75

9/9 [==============================] - 114s 13s/step - loss: 0.2082 - acc: 0.9301 - val\_loss: 0.4750 - val\_acc: 0.8860

Epoch 24/75

9/9 [==============================] - 112s 12s/step - loss: 0.2000 - acc: 0.9376 - val\_loss: 1.1933 - val\_acc: 0.8421

Epoch 25/75

9/9 [==============================] - 113s 13s/step - loss: 0.1849 - acc: 0.9564 - val\_loss: 1.7376 - val\_acc: 0.8158

Epoch 26/75

9/9 [==============================] - 125s 14s/step - loss: 0.1547 - acc: 0.9421 - val\_loss: 1.0723 - val\_acc: 0.8289

Epoch 27/75

9/9 [==============================] - 97s 11s/step - loss: 0.0725 - acc: 0.9738 - val\_loss: 2.5747 - val\_acc: 0.7719

Epoch 28/75

9/9 [==============================] - 88s 10s/step - loss: 0.1356 - acc: 0.9557 - val\_loss: 2.5829 - val\_acc: 0.7719

Epoch 29/75

9/9 [==============================] - 89s 10s/step - loss: 0.1515 - acc: 0.9412 - val\_loss: 1.3368 - val\_acc: 0.7982

Epoch 30/75

9/9 [==============================] - 80s 9s/step - loss: 0.1683 - acc: 0.9488 - val\_loss: 0.9891 - val\_acc: 0.8377

Epoch 31/75

9/9 [==============================] - 73s 8s/step - loss: 0.1150 - acc: 0.9662 - val\_loss: 1.0118 - val\_acc: 0.8860

Epoch 32/75

9/9 [==============================] - 82s 9s/step - loss: 0.0922 - acc: 0.9732 - val\_loss: 1.6867 - val\_acc: 0.7719

Epoch 33/75

9/9 [==============================] - 72s 8s/step - loss: 0.0783 - acc: 0.9813 - val\_loss: 1.8070 - val\_acc: 0.7588

Epoch 34/75

9/9 [==============================] - 81s 9s/step - loss: 0.0606 - acc: 0.9814 - val\_loss: 1.5325 - val\_acc: 0.7895

Epoch 35/75

9/9 [==============================] - 77s 9s/step - loss: 0.1073 - acc: 0.9676 - val\_loss: 1.0943 - val\_acc: 0.8860

Epoch 36/75

9/9 [==============================] - 67s 7s/step - loss: 0.1423 - acc: 0.9432 - val\_loss: 1.1397 - val\_acc: 0.8816

Epoch 37/75

9/9 [==============================] - 73s 8s/step - loss: 0.0742 - acc: 0.9699 - val\_loss: 0.9124 - val\_acc: 0.8377

Epoch 38/75

9/9 [==============================] - 71s 8s/step - loss: 0.0527 - acc: 0.9744 - val\_loss: 1.0350 - val\_acc: 0.8246

Epoch 39/75

9/9 [==============================] - 70s 8s/step - loss: 0.0833 - acc: 0.9645 - val\_loss: 0.4455 - val\_acc: 0.8772

Epoch 40/75

9/9 [==============================] - 72s 8s/step - loss: 0.0681 - acc: 0.9767 - val\_loss: 0.2597 - val\_acc: 0.9298

Epoch 41/75

9/9 [==============================] - 77s 9s/step - loss: 0.0541 - acc: 0.9727 - val\_loss: 1.2106 - val\_acc: 0.8553

Epoch 42/75

9/9 [==============================] - 83s 9s/step - loss: 0.0459 - acc: 0.9802 - val\_loss: 1.8112 - val\_acc: 0.7544

Epoch 43/75

9/9 [==============================] - 103s 11s/step - loss: 0.0783 - acc: 0.9676 - val\_loss: 1.4210 - val\_acc: 0.8553

Epoch 44/75

9/9 [==============================] - 69s 8s/step - loss: 0.2466 - acc: 0.9479 - val\_loss: 1.4806 - val\_acc: 0.8202

Epoch 45/75

9/9 [==============================] - 75s 8s/step - loss: 0.1025 - acc: 0.9641 - val\_loss: 2.2603 - val\_acc: 0.7237

Epoch 46/75

9/9 [==============================] - 68s 8s/step - loss: 0.3283 - acc: 0.9210 - val\_loss: 1.1775 - val\_acc: 0.7807

Epoch 47/75

9/9 [==============================] - 68s 8s/step - loss: 0.0980 - acc: 0.9790 - val\_loss: 1.4308 - val\_acc: 0.7544

Epoch 48/75

9/9 [==============================] - 66s 7s/step - loss: 0.0726 - acc: 0.9825 - val\_loss: 2.3394 - val\_acc: 0.7018

Epoch 49/75

9/9 [==============================] - 73s 8s/step - loss: 0.1785 - acc: 0.9491 - val\_loss: 1.4503 - val\_acc: 0.7193

Epoch 50/75

9/9 [==============================] - 78s 9s/step - loss: 0.1729 - acc: 0.9580 - val\_loss: 2.1349 - val\_acc: 0.6930

Epoch 51/75

9/9 [==============================] - 67s 7s/step - loss: 0.1046 - acc: 0.9720 - val\_loss: 2.1890 - val\_acc: 0.6930

Epoch 52/75

9/9 [==============================] - 71s 8s/step - loss: 0.1548 - acc: 0.9557 - val\_loss: 2.6936 - val\_acc: 0.6930

Epoch 53/75

9/9 [==============================] - 84s 9s/step - loss: 0.1000 - acc: 0.9738 - val\_loss: 2.4799 - val\_acc: 0.6930

Epoch 54/75

9/9 [==============================] - 86s 10s/step - loss: 0.0646 - acc: 0.9732 - val\_loss: 1.8099 - val\_acc: 0.7500

Epoch 55/75

9/9 [==============================] - 81s 9s/step - loss: 0.0274 - acc: 0.9930 - val\_loss: 0.9761 - val\_acc: 0.8246

Epoch 56/75

9/9 [==============================] - 84s 9s/step - loss: 0.0802 - acc: 0.9757 - val\_loss: 0.7741 - val\_acc: 0.8596

Epoch 57/75

9/9 [==============================] - 81s 9s/step - loss: 0.1204 - acc: 0.9674 - val\_loss: 1.6190 - val\_acc: 0.8070

Epoch 58/75

9/9 [==============================] - 79s 9s/step - loss: 0.0315 - acc: 0.9930 - val\_loss: 2.4851 - val\_acc: 0.7368

Epoch 59/75

9/9 [==============================] - 82s 9s/step - loss: 0.0482 - acc: 0.9849 - val\_loss: 3.3391 - val\_acc: 0.6579

Epoch 60/75

9/9 [==============================] - 83s 9s/step - loss: 0.0330 - acc: 0.9930 - val\_loss: 3.7611 - val\_acc: 0.6053

Epoch 61/75

9/9 [==============================] - 82s 9s/step - loss: 0.0784 - acc: 0.9785 - val\_loss: 2.6527 - val\_acc: 0.6886

Epoch 62/75

9/9 [==============================] - 82s 9s/step - loss: 0.0169 - acc: 0.9942 - val\_loss: 0.7132 - val\_acc: 0.8377

Epoch 63/75

9/9 [==============================] - 78s 9s/step - loss: 0.0133 - acc: 0.9930 - val\_loss: 0.5822 - val\_acc: 0.9079

Epoch 64/75

9/9 [==============================] - 80s 9s/step - loss: 0.0636 - acc: 0.9895 - val\_loss: 2.7272 - val\_acc: 0.7544

Epoch 65/75

9/9 [==============================] - 85s 9s/step - loss: 0.0116 - acc: 0.9965 - val\_loss: 2.9290 - val\_acc: 0.7544

Epoch 66/75

9/9 [==============================] - 77s 9s/step - loss: 0.2792 - acc: 0.9556 - val\_loss: 2.7425 - val\_acc: 0.7456

Epoch 67/75

9/9 [==============================] - 78s 9s/step - loss: 0.0551 - acc: 0.9861 - val\_loss: 2.4236 - val\_acc: 0.7544

Epoch 68/75

9/9 [==============================] - 67s 7s/step - loss: 0.0436 - acc: 0.9895 - val\_loss: 2.7108 - val\_acc: 0.7632

Epoch 69/75

9/9 [==============================] - 73s 8s/step - loss: 0.0371 - acc: 0.9815 - val\_loss: 2.4877 - val\_acc: 0.7632

Epoch 70/75

9/9 [==============================] - 65s 7s/step - loss: 0.0553 - acc: 0.9848 - val\_loss: 0.3768 - val\_acc: 0.8684

Epoch 71/75

9/9 [==============================] - 66s 7s/step - loss: 0.0688 - acc: 0.9785 - val\_loss: 0.0911 - val\_acc: 0.9298

Epoch 72/75

9/9 [==============================] - 66s 7s/step - loss: 0.1245 - acc: 0.9732 - val\_loss: 0.7475 - val\_acc: 0.8728

Epoch 73/75

9/9 [==============================] - 66s 7s/step - loss: 0.0416 - acc: 0.9837 - val\_loss: 0.6056 - val\_acc: 0.8772

Epoch 74/75

9/9 [==============================] - 75s 8s/step - loss: 0.0470 - acc: 0.9878 - val\_loss: 0.2646 - val\_acc: 0.9386

Epoch 75/75

9/9 [==============================] - 67s 7s/step - loss: 0.0403 - acc: 0.9860 - val\_loss: 0.0325 - val\_acc: 0.9825

----------------------------------------------------------------------

**256-4\_512-8\_4096-2\_1000-1\_BS64.png**

Epoch 1/75

4/4 [==============================] - 56s 14s/step - loss: 1.6216 - acc: 0.6083 - val\_loss: 8.2451 - val\_acc: 0.4211

Epoch 2/75

4/4 [==============================] - 44s 11s/step - loss: 0.7979 - acc: 0.8628 - val\_loss: 8.8604 - val\_acc: 0.4167

Epoch 3/75

4/4 [==============================] - 46s 12s/step - loss: 0.3875 - acc: 0.8919 - val\_loss: 8.0666 - val\_acc: 0.4430

Epoch 4/75

4/4 [==============================] - 45s 11s/step - loss: 0.3805 - acc: 0.8775 - val\_loss: 7.9322 - val\_acc: 0.4737

Epoch 5/75

4/4 [==============================] - 44s 11s/step - loss: 0.2980 - acc: 0.9009 - val\_loss: 7.8503 - val\_acc: 0.4781

Epoch 6/75

4/4 [==============================] - 46s 12s/step - loss: 0.2017 - acc: 0.9256 - val\_loss: 7.2558 - val\_acc: 0.5044

Epoch 7/75

4/4 [==============================] - 44s 11s/step - loss: 0.1514 - acc: 0.9392 - val\_loss: 5.4845 - val\_acc: 0.5921

Epoch 8/75

4/4 [==============================] - 53s 13s/step - loss: 0.2390 - acc: 0.9297 - val\_loss: 4.7626 - val\_acc: 0.6798

Epoch 9/75

4/4 [==============================] - 58s 15s/step - loss: 0.1272 - acc: 0.9476 - val\_loss: 4.1291 - val\_acc: 0.7018

Epoch 10/75

4/4 [==============================] - 52s 13s/step - loss: 0.1609 - acc: 0.9536 - val\_loss: 3.0040 - val\_acc: 0.7500

Epoch 11/75

4/4 [==============================] - 50s 12s/step - loss: 0.1184 - acc: 0.9494 - val\_loss: 2.2984 - val\_acc: 0.7895

Epoch 12/75

4/4 [==============================] - 49s 12s/step - loss: 0.0873 - acc: 0.9768 - val\_loss: 2.7863 - val\_acc: 0.7675

Epoch 13/75

4/4 [==============================] - 51s 13s/step - loss: 0.0587 - acc: 0.9805 - val\_loss: 2.5343 - val\_acc: 0.7807

Epoch 14/75

4/4 [==============================] - 49s 12s/step - loss: 0.0721 - acc: 0.9687 - val\_loss: 1.8467 - val\_acc: 0.8289

Epoch 15/75

4/4 [==============================] - 53s 13s/step - loss: 0.0599 - acc: 0.9753 - val\_loss: 1.6202 - val\_acc: 0.8640

Epoch 16/75

4/4 [==============================] - 49s 12s/step - loss: 0.1034 - acc: 0.9710 - val\_loss: 0.8416 - val\_acc: 0.9211

Epoch 17/75

4/4 [==============================] - 49s 12s/step - loss: 0.1638 - acc: 0.9525 - val\_loss: 0.2344 - val\_acc: 0.9518

Epoch 18/75

4/4 [==============================] - 50s 13s/step - loss: 0.3515 - acc: 0.8942 - val\_loss: 1.3158 - val\_acc: 0.8070

Epoch 19/75

4/4 [==============================] - 51s 13s/step - loss: 0.0971 - acc: 0.9609 - val\_loss: 1.7767 - val\_acc: 0.7982

Epoch 20/75

4/4 [==============================] - 46s 12s/step - loss: 0.1479 - acc: 0.9160 - val\_loss: 2.3139 - val\_acc: 0.7544

Epoch 21/75

4/4 [==============================] - 50s 12s/step - loss: 0.0937 - acc: 0.9596 - val\_loss: 2.2791 - val\_acc: 0.7500

Epoch 22/75

4/4 [==============================] - 49s 12s/step - loss: 0.1225 - acc: 0.9507 - val\_loss: 1.4836 - val\_acc: 0.7895

Epoch 23/75

4/4 [==============================] - 53s 13s/step - loss: 0.1075 - acc: 0.9557 - val\_loss: 1.2521 - val\_acc: 0.8158

Epoch 24/75

4/4 [==============================] - 48s 12s/step - loss: 0.0780 - acc: 0.9688 - val\_loss: 0.7931 - val\_acc: 0.8947

Epoch 25/75

4/4 [==============================] - 55s 14s/step - loss: 0.0816 - acc: 0.9701 - val\_loss: 0.5892 - val\_acc: 0.9211

Epoch 26/75

4/4 [==============================] - 49s 12s/step - loss: 0.0639 - acc: 0.9770 - val\_loss: 0.5536 - val\_acc: 0.9298

Epoch 27/75

4/4 [==============================] - 49s 12s/step - loss: 0.0773 - acc: 0.9711 - val\_loss: 0.1686 - val\_acc: 0.9649

Epoch 28/75

4/4 [==============================] - 54s 14s/step - loss: 0.0284 - acc: 0.9883 - val\_loss: 0.0241 - val\_acc: 0.9825

Epoch 29/75

4/4 [==============================] - 51s 13s/step - loss: 0.0749 - acc: 0.9677 - val\_loss: 0.0530 - val\_acc: 0.9825

Epoch 30/75

4/4 [==============================] - 51s 13s/step - loss: 0.0775 - acc: 0.9708 - val\_loss: 0.0252 - val\_acc: 0.9825

Epoch 31/75

4/4 [==============================] - 50s 12s/step - loss: 0.0539 - acc: 0.9755 - val\_loss: 0.4191 - val\_acc: 0.9298

Epoch 32/75

4/4 [==============================] - 52s 13s/step - loss: 0.0786 - acc: 0.9721 - val\_loss: 0.4771 - val\_acc: 0.9211

Epoch 33/75

4/4 [==============================] - 46s 12s/step - loss: 0.0789 - acc: 0.9757 - val\_loss: 0.0229 - val\_acc: 0.9825

Epoch 34/75

4/4 [==============================] - 45s 11s/step - loss: 0.0662 - acc: 0.9766 - val\_loss: 0.0140 - val\_acc: 0.9825

Epoch 35/75

4/4 [==============================] - 43s 11s/step - loss: 0.0599 - acc: 0.9752 - val\_loss: 0.0560 - val\_acc: 0.9649

Epoch 36/75

4/4 [==============================] - 42s 10s/step - loss: 0.0519 - acc: 0.9777 - val\_loss: 0.0199 - val\_acc: 1.0000

Epoch 37/75

4/4 [==============================] - 39s 10s/step - loss: 0.0999 - acc: 0.9660 - val\_loss: 0.0088 - val\_acc: 1.0000

Epoch 38/75

4/4 [==============================] - 41s 10s/step - loss: 0.0165 - acc: 0.9948 - val\_loss: 0.0190 - val\_acc: 0.9912

Epoch 39/75

4/4 [==============================] - 50s 12s/step - loss: 0.0370 - acc: 0.9853 - val\_loss: 0.0292 - val\_acc: 0.9912

Epoch 40/75

4/4 [==============================] - 49s 12s/step - loss: 0.0412 - acc: 0.9880 - val\_loss: 0.0020 - val\_acc: 1.0000

Epoch 41/75

4/4 [==============================] - 49s 12s/step - loss: 0.0859 - acc: 0.9711 - val\_loss: 0.0011 - val\_acc: 1.0000

Epoch 42/75

4/4 [==============================] - 50s 12s/step - loss: 0.0323 - acc: 0.9938 - val\_loss: 0.0042 - val\_acc: 1.0000

Epoch 43/75

4/4 [==============================] - 52s 13s/step - loss: 0.0133 - acc: 0.9987 - val\_loss: 0.0186 - val\_acc: 1.0000

Epoch 44/75

4/4 [==============================] - 45s 11s/step - loss: 0.0880 - acc: 0.9683 - val\_loss: 0.0273 - val\_acc: 0.9956

Epoch 45/75

4/4 [==============================] - 52s 13s/step - loss: 0.0229 - acc: 0.9922 - val\_loss: 0.0027 - val\_acc: 1.0000

Epoch 46/75

4/4 [==============================] - 51s 13s/step - loss: 0.0127 - acc: 0.9987 - val\_loss: 0.0144 - val\_acc: 0.9912

Epoch 47/75

4/4 [==============================] - 50s 12s/step - loss: 0.0118 - acc: 0.9974 - val\_loss: 0.1675 - val\_acc: 0.9737

Epoch 48/75

4/4 [==============================] - 53s 13s/step - loss: 0.0083 - acc: 1.0000 - val\_loss: 0.1625 - val\_acc: 0.9737

Epoch 49/75

4/4 [==============================] - 45s 11s/step - loss: 0.0182 - acc: 0.9887 - val\_loss: 6.4134e-04 - val\_acc: 1.0000

Epoch 50/75

4/4 [==============================] - 54s 13s/step - loss: 0.0582 - acc: 0.9896 - val\_loss: 0.0013 - val\_acc: 1.0000

Epoch 51/75

4/4 [==============================] - 49s 12s/step - loss: 0.0090 - acc: 0.9974 - val\_loss: 0.0027 - val\_acc: 1.0000

Epoch 52/75

4/4 [==============================] - 44s 11s/step - loss: 0.0171 - acc: 0.9956 - val\_loss: 0.0109 - val\_acc: 1.0000

Epoch 53/75

4/4 [==============================] - 43s 11s/step - loss: 0.0228 - acc: 0.9947 - val\_loss: 0.0334 - val\_acc: 0.9781

Epoch 54/75

4/4 [==============================] - 41s 10s/step - loss: 0.0202 - acc: 0.9889 - val\_loss: 0.0783 - val\_acc: 0.9561

Epoch 55/75

4/4 [==============================] - 43s 11s/step - loss: 0.0255 - acc: 0.9916 - val\_loss: 0.2569 - val\_acc: 0.9561

Epoch 56/75

4/4 [==============================] - 43s 11s/step - loss: 0.0084 - acc: 0.9987 - val\_loss: 0.3393 - val\_acc: 0.9561

Epoch 57/75

4/4 [==============================] - 40s 10s/step - loss: 0.0194 - acc: 0.9937 - val\_loss: 0.4157 - val\_acc: 0.9386

Epoch 58/75

4/4 [==============================] - 44s 11s/step - loss: 0.0188 - acc: 0.9909 - val\_loss: 0.0860 - val\_acc: 0.9693

Epoch 59/75

4/4 [==============================] - 44s 11s/step - loss: 0.1259 - acc: 0.9792 - val\_loss: 0.2630 - val\_acc: 0.9737

Epoch 60/75

4/4 [==============================] - 1741s 435s/step - loss: 0.2398 - acc: 0.9559 - val\_loss: 0.4671 - val\_acc: 0.8684

Epoch 61/75

4/4 [==============================] - 38s 10s/step - loss: 0.0387 - acc: 0.9889 - val\_loss: 0.0829 - val\_acc: 0.9649

Epoch 62/75

4/4 [==============================] - 40s 10s/step - loss: 0.1243 - acc: 0.9492 - val\_loss: 0.2967 - val\_acc: 0.9649

Epoch 63/75

4/4 [==============================] - 37s 9s/step - loss: 0.0322 - acc: 0.9907 - val\_loss: 0.8152 - val\_acc: 0.8246

Epoch 64/75

4/4 [==============================] - 37s 9s/step - loss: 0.0704 - acc: 0.9704 - val\_loss: 0.7071 - val\_acc: 0.8421

Epoch 65/75

4/4 [==============================] - 38s 10s/step - loss: 0.0508 - acc: 0.9788 - val\_loss: 0.2791 - val\_acc: 0.9649

Epoch 66/75

4/4 [==============================] - 37s 9s/step - loss: 0.0228 - acc: 0.9938 - val\_loss: 0.0432 - val\_acc: 1.0000

Epoch 67/75

4/4 [==============================] - 40s 10s/step - loss: 0.0243 - acc: 0.9922 - val\_loss: 0.0299 - val\_acc: 0.9825

Epoch 68/75

4/4 [==============================] - 38s 9s/step - loss: 0.0264 - acc: 0.9911 - val\_loss: 0.0425 - val\_acc: 0.9825

Epoch 69/75

4/4 [==============================] - 37s 9s/step - loss: 0.0110 - acc: 0.9969 - val\_loss: 0.7635 - val\_acc: 0.9123

Epoch 70/75

4/4 [==============================] - 37s 9s/step - loss: 0.0224 - acc: 0.9934 - val\_loss: 0.7496 - val\_acc: 0.8947

Epoch 71/75

4/4 [==============================] - 37s 9s/step - loss: 0.0629 - acc: 0.9796 - val\_loss: 0.4097 - val\_acc: 0.8947

Epoch 72/75

4/4 [==============================] - 37s 9s/step - loss: 0.0114 - acc: 0.9964 - val\_loss: 1.0093 - val\_acc: 0.8947

Epoch 73/75

4/4 [==============================] - 37s 9s/step - loss: 0.0069 - acc: 0.9982 - val\_loss: 0.9402 - val\_acc: 0.8947

Epoch 74/75

4/4 [==============================] - 40s 10s/step - loss: 0.0076 - acc: 0.9974 - val\_loss: 0.4864 - val\_acc: 0.8947

Epoch 75/75

4/4 [==============================] - 38s 9s/step - loss: 0.0360 - acc: 0.9894 - val\_loss: 0.0959 - val\_acc: 0.9474

**256-4\_512-8\_4096-2\_1000-1\_BS64\_Epoch120.png**

use: AVX2 FMA

[INFO] training network...

Epoch 1/120

4/4 [==============================] - 56s 14s/step - loss: 1.5066 - acc: 0.5827 - val\_loss: 8.8384 - val\_acc: 0.3640

Epoch 2/120

4/4 [==============================] - 37s 9s/step - loss: 2.5407 - acc: 0.6086 - val\_loss: 8.3159 - val\_acc: 0.4561

Epoch 3/120

4/4 [==============================] - 40s 10s/step - loss: 0.7881 - acc: 0.6745 - val\_loss: 6.9793 - val\_acc: 0.4912

Epoch 4/120

4/4 [==============================] - 37s 9s/step - loss: 0.5171 - acc: 0.7718 - val\_loss: 4.5634 - val\_acc: 0.6930

Epoch 5/120

4/4 [==============================] - 40s 10s/step - loss: 0.5301 - acc: 0.7775 - val\_loss: 5.5032 - val\_acc: 0.6316

Epoch 6/120

4/4 [==============================] - 37s 9s/step - loss: 0.4682 - acc: 0.8045 - val\_loss: 4.7871 - val\_acc: 0.6404

Epoch 7/120

4/4 [==============================] - 44s 11s/step - loss: 0.3574 - acc: 0.8608 - val\_loss: 4.3360 - val\_acc: 0.6842

Epoch 8/120

4/4 [==============================] - 49s 12s/step - loss: 0.3651 - acc: 0.8594 - val\_loss: 3.6520 - val\_acc: 0.6711

Epoch 9/120

4/4 [==============================] - 47s 12s/step - loss: 0.3782 - acc: 0.8397 - val\_loss: 6.3278 - val\_acc: 0.5439

Epoch 10/120

4/4 [==============================] - 46s 11s/step - loss: 0.3912 - acc: 0.8602 - val\_loss: 3.6347 - val\_acc: 0.6930

Epoch 11/120

4/4 [==============================] - 46s 11s/step - loss: 0.2664 - acc: 0.9039 - val\_loss: 2.7284 - val\_acc: 0.7982

Epoch 12/120

4/4 [==============================] - 46s 12s/step - loss: 0.3420 - acc: 0.8870 - val\_loss: 2.8057 - val\_acc: 0.7982

Epoch 13/120

4/4 [==============================] - 50s 13s/step - loss: 0.3096 - acc: 0.8984 - val\_loss: 2.7225 - val\_acc: 0.7807

Epoch 14/120

4/4 [==============================] - 45s 11s/step - loss: 0.2557 - acc: 0.9115 - val\_loss: 2.7356 - val\_acc: 0.7807

Epoch 15/120

4/4 [==============================] - 50s 12s/step - loss: 0.2295 - acc: 0.9167 - val\_loss: 2.2672 - val\_acc: 0.7807

Epoch 16/120

4/4 [==============================] - 47s 12s/step - loss: 0.2014 - acc: 0.9249 - val\_loss: 2.2138 - val\_acc: 0.7544

Epoch 17/120

4/4 [==============================] - 48s 12s/step - loss: 0.1730 - acc: 0.9229 - val\_loss: 1.5456 - val\_acc: 0.7281

Epoch 18/120

4/4 [==============================] - 46s 11s/step - loss: 0.2105 - acc: 0.9351 - val\_loss: 0.9007 - val\_acc: 0.8289

Epoch 19/120

4/4 [==============================] - 49s 12s/step - loss: 0.2003 - acc: 0.9323 - val\_loss: 1.3640 - val\_acc: 0.7544

Epoch 20/120

4/4 [==============================] - 42s 10s/step - loss: 0.1934 - acc: 0.9194 - val\_loss: 1.1071 - val\_acc: 0.8158

Epoch 21/120

4/4 [==============================] - 42s 10s/step - loss: 0.1599 - acc: 0.9321 - val\_loss: 0.8256 - val\_acc: 0.8070

Epoch 22/120

4/4 [==============================] - 40s 10s/step - loss: 0.1307 - acc: 0.9562 - val\_loss: 1.1210 - val\_acc: 0.8158

Epoch 23/120

4/4 [==============================] - 41s 10s/step - loss: 0.0941 - acc: 0.9622 - val\_loss: 1.2381 - val\_acc: 0.7895

Epoch 24/120

4/4 [==============================] - 34s 9s/step - loss: 0.0815 - acc: 0.9621 - val\_loss: 1.1046 - val\_acc: 0.8246

Epoch 25/120

4/4 [==============================] - 41s 10s/step - loss: 0.2398 - acc: 0.9193 - val\_loss: 1.0971 - val\_acc: 0.8246

Epoch 26/120

4/4 [==============================] - 42s 11s/step - loss: 0.1696 - acc: 0.9521 - val\_loss: 2.8455 - val\_acc: 0.6491

Epoch 27/120

4/4 [==============================] - 43s 11s/step - loss: 0.2339 - acc: 0.9166 - val\_loss: 1.5479 - val\_acc: 0.7719

Epoch 28/120

4/4 [==============================] - 51s 13s/step - loss: 0.1250 - acc: 0.9466 - val\_loss: 0.7591 - val\_acc: 0.8553

Epoch 29/120

4/4 [==============================] - 48s 12s/step - loss: 0.1620 - acc: 0.9294 - val\_loss: 0.9526 - val\_acc: 0.8421

Epoch 30/120

4/4 [==============================] - 47s 12s/step - loss: 0.1379 - acc: 0.9413 - val\_loss: 0.9764 - val\_acc: 0.8684

Epoch 31/120

4/4 [==============================] - 48s 12s/step - loss: 0.1220 - acc: 0.9442 - val\_loss: 1.4072 - val\_acc: 0.7719

Epoch 32/120

4/4 [==============================] - 47s 12s/step - loss: 0.0866 - acc: 0.9667 - val\_loss: 1.6011 - val\_acc: 0.7719

Epoch 33/120

4/4 [==============================] - 48s 12s/step - loss: 0.1172 - acc: 0.9636 - val\_loss: 1.2808 - val\_acc: 0.7895

Epoch 34/120

4/4 [==============================] - 53s 13s/step - loss: 0.0586 - acc: 0.9766 - val\_loss: 1.3515 - val\_acc: 0.8246

Epoch 35/120

4/4 [==============================] - 46s 12s/step - loss: 0.0490 - acc: 0.9844 - val\_loss: 1.3230 - val\_acc: 0.8377

Epoch 36/120

4/4 [==============================] - 47s 12s/step - loss: 0.0906 - acc: 0.9699 - val\_loss: 0.9223 - val\_acc: 0.8158

Epoch 37/120

4/4 [==============================] - 47s 12s/step - loss: 0.1401 - acc: 0.9539 - val\_loss: 1.0125 - val\_acc: 0.8509

Epoch 38/120

4/4 [==============================] - 50s 13s/step - loss: 0.0788 - acc: 0.9766 - val\_loss: 0.2385 - val\_acc: 0.9298

Epoch 39/120

4/4 [==============================] - 43s 11s/step - loss: 0.1861 - acc: 0.9470 - val\_loss: 0.6097 - val\_acc: 0.9298

Epoch 40/120

4/4 [==============================] - 42s 11s/step - loss: 0.0958 - acc: 0.9801 - val\_loss: 0.8503 - val\_acc: 0.9035

Epoch 41/120

4/4 [==============================] - 40s 10s/step - loss: 0.0744 - acc: 0.9768 - val\_loss: 0.7055 - val\_acc: 0.9123

Epoch 42/120

4/4 [==============================] - 39s 10s/step - loss: 0.1108 - acc: 0.9580 - val\_loss: 0.4529 - val\_acc: 0.9474

Epoch 43/120

4/4 [==============================] - 44s 11s/step - loss: 0.0493 - acc: 0.9870 - val\_loss: 0.3940 - val\_acc: 0.8947

Epoch 44/120

4/4 [==============================] - 37s 9s/step - loss: 0.1681 - acc: 0.9524 - val\_loss: 2.4194 - val\_acc: 0.7193

Epoch 45/120

4/4 [==============================] - 43s 11s/step - loss: 0.1196 - acc: 0.9570 - val\_loss: 3.1018 - val\_acc: 0.6667

Epoch 46/120

4/4 [==============================] - 39s 10s/step - loss: 0.2092 - acc: 0.9380 - val\_loss: 2.7355 - val\_acc: 0.6579

Epoch 47/120

4/4 [==============================] - 38s 10s/step - loss: 0.0970 - acc: 0.9690 - val\_loss: 3.7212 - val\_acc: 0.5702

Epoch 48/120

4/4 [==============================] - 44s 11s/step - loss: 0.0751 - acc: 0.9727 - val\_loss: 3.7036 - val\_acc: 0.5877

Epoch 49/120

4/4 [==============================] - 37s 9s/step - loss: 0.1143 - acc: 0.9542 - val\_loss: 2.4532 - val\_acc: 0.7632

Epoch 50/120

4/4 [==============================] - 42s 11s/step - loss: 0.0931 - acc: 0.9714 - val\_loss: 1.8574 - val\_acc: 0.7719

Epoch 51/120

4/4 [==============================] - 45s 11s/step - loss: 0.0447 - acc: 0.9831 - val\_loss: 1.1853 - val\_acc: 0.8158

Epoch 52/120

4/4 [==============================] - 42s 11s/step - loss: 0.1078 - acc: 0.9632 - val\_loss: 1.1499 - val\_acc: 0.8202

Epoch 53/120

4/4 [==============================] - 40s 10s/step - loss: 0.1110 - acc: 0.9670 - val\_loss: 1.1095 - val\_acc: 0.7719

Epoch 54/120

4/4 [==============================] - 37s 9s/step - loss: 0.0310 - acc: 0.9907 - val\_loss: 1.4233 - val\_acc: 0.6930

Epoch 55/120

4/4 [==============================] - 38s 9s/step - loss: 0.0366 - acc: 0.9844 - val\_loss: 1.1847 - val\_acc: 0.7544

Epoch 56/120

4/4 [==============================] - 40s 10s/step - loss: 0.0176 - acc: 0.9935 - val\_loss: 1.1589 - val\_acc: 0.7544

Epoch 57/120

4/4 [==============================] - 35s 9s/step - loss: 0.1023 - acc: 0.9695 - val\_loss: 1.0080 - val\_acc: 0.7544

Epoch 58/120

4/4 [==============================] - 75s 19s/step - loss: 0.0153 - acc: 0.9974 - val\_loss: 0.6159 - val\_acc: 0.8684

Epoch 59/120

4/4 [==============================] - 40s 10s/step - loss: 0.0181 - acc: 0.9987 - val\_loss: 0.7546 - val\_acc: 0.8596

Epoch 60/120

4/4 [==============================] - 38s 9s/step - loss: 0.0420 - acc: 0.9894 - val\_loss: 1.2454 - val\_acc: 0.8333

Epoch 61/120

4/4 [==============================] - 37s 9s/step - loss: 0.1851 - acc: 0.9473 - val\_loss: 0.6055 - val\_acc: 0.8246

Epoch 62/120

4/4 [==============================] - 40s 10s/step - loss: 0.1137 - acc: 0.9674 - val\_loss: 0.5198 - val\_acc: 0.8947

Epoch 63/120

4/4 [==============================] - 41s 10s/step - loss: 0.2238 - acc: 0.9328 - val\_loss: 0.4414 - val\_acc: 0.9123

Epoch 64/120

4/4 [==============================] - 39s 10s/step - loss: 0.1427 - acc: 0.9625 - val\_loss: 0.4999 - val\_acc: 0.8509

Epoch 65/120

4/4 [==============================] - 38s 10s/step - loss: 0.0980 - acc: 0.9680 - val\_loss: 0.3029 - val\_acc: 0.8509

Epoch 66/120

4/4 [==============================] - 38s 10s/step - loss: 0.0772 - acc: 0.9741 - val\_loss: 0.4718 - val\_acc: 0.9342

Epoch 67/120

4/4 [==============================] - 41s 10s/step - loss: 0.1020 - acc: 0.9622 - val\_loss: 0.7258 - val\_acc: 0.9211

Epoch 68/120

4/4 [==============================] - 39s 10s/step - loss: 0.1572 - acc: 0.9586 - val\_loss: 0.4223 - val\_acc: 0.9211

Epoch 69/120

4/4 [==============================] - 60s 15s/step - loss: 0.0913 - acc: 0.9719 - val\_loss: 0.2453 - val\_acc: 0.8421

Epoch 70/120

4/4 [==============================] - 48s 12s/step - loss: 0.0590 - acc: 0.9805 - val\_loss: 0.0669 - val\_acc: 0.9649

Epoch 71/120

4/4 [==============================] - 45s 11s/step - loss: 0.0625 - acc: 0.9770 - val\_loss: 0.1929 - val\_acc: 0.8860

Epoch 72/120

4/4 [==============================] - 43s 11s/step - loss: 0.0339 - acc: 0.9907 - val\_loss: 0.8447 - val\_acc: 0.8509

Epoch 73/120

4/4 [==============================] - 37s 9s/step - loss: 0.0392 - acc: 0.9880 - val\_loss: 0.8437 - val\_acc: 0.8333

Epoch 74/120

4/4 [==============================] - 40s 10s/step - loss: 0.0387 - acc: 0.9870 - val\_loss: 0.8229 - val\_acc: 0.8509

Epoch 75/120

4/4 [==============================] - 44s 11s/step - loss: 0.0113 - acc: 0.9987 - val\_loss: 1.0894 - val\_acc: 0.8333

Epoch 76/120

4/4 [==============================] - 52s 13s/step - loss: 0.0462 - acc: 0.9852 - val\_loss: 1.0523 - val\_acc: 0.8596

Epoch 77/120

4/4 [==============================] - 47s 12s/step - loss: 0.3072 - acc: 0.9336 - val\_loss: 2.0794 - val\_acc: 0.8158

Epoch 78/120

4/4 [==============================] - 42s 11s/step - loss: 1.0378 - acc: 0.7434 - val\_loss: 0.9617 - val\_acc: 0.7675

Epoch 79/120

4/4 [==============================] - 43s 11s/step - loss: 0.5030 - acc: 0.7958 - val\_loss: 1.1916 - val\_acc: 0.8158

Epoch 80/120

4/4 [==============================] - 45s 11s/step - loss: 0.1687 - acc: 0.9358 - val\_loss: 3.2677 - val\_acc: 0.6930

Epoch 81/120

4/4 [==============================] - 41s 10s/step - loss: 0.1295 - acc: 0.9561 - val\_loss: 3.0194 - val\_acc: 0.7982

Epoch 82/120

4/4 [==============================] - 42s 11s/step - loss: 0.1338 - acc: 0.9572 - val\_loss: 3.0997 - val\_acc: 0.7982

Epoch 83/120

4/4 [==============================] - 47s 12s/step - loss: 0.0844 - acc: 0.9766 - val\_loss: 3.0380 - val\_acc: 0.7982

Epoch 84/120

4/4 [==============================] - 43s 11s/step - loss: 0.0967 - acc: 0.9626 - val\_loss: 2.8034 - val\_acc: 0.8158

Epoch 85/120

4/4 [==============================] - 44s 11s/step - loss: 0.3490 - acc: 0.9074 - val\_loss: 2.8874 - val\_acc: 0.7982

Epoch 86/120

4/4 [==============================] - 38s 9s/step - loss: 0.2289 - acc: 0.9301 - val\_loss: 4.4840 - val\_acc: 0.6009

Epoch 87/120

4/4 [==============================] - 43s 11s/step - loss: 0.1296 - acc: 0.9531 - val\_loss: 4.5843 - val\_acc: 0.6930

Epoch 88/120

4/4 [==============================] - 43s 11s/step - loss: 0.0805 - acc: 0.9760 - val\_loss: 4.7048 - val\_acc: 0.6930

Epoch 89/120

4/4 [==============================] - 43s 11s/step - loss: 0.1639 - acc: 0.9393 - val\_loss: 2.6935 - val\_acc: 0.7939

Epoch 90/120

4/4 [==============================] - 45s 11s/step - loss: 0.0676 - acc: 0.9868 - val\_loss: 3.5022 - val\_acc: 0.7456

Epoch 91/120

4/4 [==============================] - 44s 11s/step - loss: 0.1172 - acc: 0.9652 - val\_loss: 3.9595 - val\_acc: 0.6930

Epoch 92/120

4/4 [==============================] - 42s 11s/step - loss: 0.1270 - acc: 0.9715 - val\_loss: 2.7565 - val\_acc: 0.8158

Epoch 93/120

4/4 [==============================] - 43s 11s/step - loss: 0.1065 - acc: 0.9632 - val\_loss: 2.1228 - val\_acc: 0.7807

Epoch 94/120

4/4 [==============================] - 49s 12s/step - loss: 0.1011 - acc: 0.9701 - val\_loss: 1.5184 - val\_acc: 0.9035

Epoch 95/120

4/4 [==============================] - 42s 11s/step - loss: 0.0739 - acc: 0.9815 - val\_loss: 1.5468 - val\_acc: 0.9035

Epoch 96/120

4/4 [==============================] - 42s 10s/step - loss: 0.1613 - acc: 0.9527 - val\_loss: 1.5578 - val\_acc: 0.9035

Epoch 97/120

4/4 [==============================] - 44s 11s/step - loss: 0.0571 - acc: 0.9800 - val\_loss: 1.9365 - val\_acc: 0.8333

Epoch 98/120

4/4 [==============================] - 45s 11s/step - loss: 0.0715 - acc: 0.9740 - val\_loss: 1.8980 - val\_acc: 0.8070

Epoch 99/120

4/4 [==============================] - 40s 10s/step - loss: 0.0995 - acc: 0.9666 - val\_loss: 1.6839 - val\_acc: 0.8421

Epoch 100/120

4/4 [==============================] - 46s 11s/step - loss: 0.0679 - acc: 0.9688 - val\_loss: 1.6958 - val\_acc: 0.8421

Epoch 101/120

4/4 [==============================] - 45s 11s/step - loss: 0.0411 - acc: 0.9831 - val\_loss: 1.6897 - val\_acc: 0.8509

Epoch 102/120

4/4 [==============================] - 41s 10s/step - loss: 0.0451 - acc: 0.9869 - val\_loss: 2.0831 - val\_acc: 0.7982

Epoch 103/120

4/4 [==============================] - 43s 11s/step - loss: 0.0508 - acc: 0.9840 - val\_loss: 1.9749 - val\_acc: 0.7456

Epoch 104/120

4/4 [==============================] - 43s 11s/step - loss: 0.0357 - acc: 0.9853 - val\_loss: 1.3400 - val\_acc: 0.8553

Epoch 105/120

4/4 [==============================] - 45s 11s/step - loss: 0.0402 - acc: 0.9818 - val\_loss: 1.1829 - val\_acc: 0.7719

Epoch 106/120

4/4 [==============================] - 42s 10s/step - loss: 0.0354 - acc: 0.9907 - val\_loss: 0.9078 - val\_acc: 0.9035

Epoch 107/120

4/4 [==============================] - 44s 11s/step - loss: 0.1382 - acc: 0.9698 - val\_loss: 2.1210 - val\_acc: 0.8158

Epoch 108/120

4/4 [==============================] - 38s 9s/step - loss: 0.0336 - acc: 0.9903 - val\_loss: 1.8855 - val\_acc: 0.7895

Epoch 109/120

4/4 [==============================] - 42s 10s/step - loss: 0.0497 - acc: 0.9818 - val\_loss: 1.0774 - val\_acc: 0.9035

Epoch 110/120

4/4 [==============================] - 43s 11s/step - loss: 0.0342 - acc: 0.9845 - val\_loss: 0.9912 - val\_acc: 0.9298

Epoch 111/120

4/4 [==============================] - 43s 11s/step - loss: 0.0242 - acc: 0.9942 - val\_loss: 0.8449 - val\_acc: 0.9386

Epoch 112/120

4/4 [==============================] - 51s 13s/step - loss: 0.0564 - acc: 0.9762 - val\_loss: 0.6548 - val\_acc: 0.9474

Epoch 113/120

4/4 [==============================] - 43s 11s/step - loss: 0.0804 - acc: 0.9751 - val\_loss: 0.8763 - val\_acc: 0.8421

Epoch 114/120

4/4 [==============================] - 43s 11s/step - loss: 0.0855 - acc: 0.9760 - val\_loss: 0.9123 - val\_acc: 0.8421

Epoch 115/120

4/4 [==============================] - 47s 12s/step - loss: 0.0367 - acc: 0.9935 - val\_loss: 0.8290 - val\_acc: 0.8596

Epoch 116/120

4/4 [==============================] - 45s 11s/step - loss: 0.0279 - acc: 0.9921 - val\_loss: 0.6453 - val\_acc: 0.8596

Epoch 117/120

4/4 [==============================] - 45s 11s/step - loss: 0.0536 - acc: 0.9762 - val\_loss: 0.5071 - val\_acc: 0.9561

Epoch 118/120

4/4 [==============================] - 47s 12s/step - loss: 0.0494 - acc: 0.9766 - val\_loss: 0.4750 - val\_acc: 0.9561

Epoch 119/120

4/4 [==============================] - 42s 11s/step - loss: 0.0165 - acc: 0.9934 - val\_loss: 0.4377 - val\_acc: 0.9649

Epoch 120/120

4/4 [==============================] - 44s 11s/step - loss: 0.0747 - acc: 0.9810 - val\_loss: 0.4240 - val\_acc: 0.9649

**256-4\_512-8\_4096-2\_1000-1\_BS64\_Epoch160.png**

Epoch 1/160

4/4 [==============================] - 58s 15s/step - loss: 1.3361 - acc: 0.6058 - val\_loss: 5.3986 - val\_acc: 0.5439

Epoch 2/160

4/4 [==============================] - 46s 12s/step - loss: 1.0762 - acc: 0.8179 - val\_loss: 6.4395 - val\_acc: 0.4474

Epoch 3/160

4/4 [==============================] - 47s 12s/step - loss: 0.6643 - acc: 0.8828 - val\_loss: 6.2985 - val\_acc: 0.4868

Epoch 4/160

4/4 [==============================] - 44s 11s/step - loss: 0.0804 - acc: 0.9680 - val\_loss: 4.5918 - val\_acc: 0.6798

Epoch 5/160

4/4 [==============================] - 44s 11s/step - loss: 0.1198 - acc: 0.9781 - val\_loss: 4.0445 - val\_acc: 0.7105

Epoch 6/160

4/4 [==============================] - 43s 11s/step - loss: 0.2560 - acc: 0.9407 - val\_loss: 5.0426 - val\_acc: 0.6535

Epoch 7/160

4/4 [==============================] - 45s 11s/step - loss: 0.2128 - acc: 0.9371 - val\_loss: 4.2190 - val\_acc: 0.6974

Epoch 8/160

4/4 [==============================] - 46s 12s/step - loss: 0.1496 - acc: 0.9453 - val\_loss: 4.2694 - val\_acc: 0.6491

Epoch 9/160

4/4 [==============================] - 45s 11s/step - loss: 0.1511 - acc: 0.9491 - val\_loss: 3.3705 - val\_acc: 0.7325

Epoch 10/160

4/4 [==============================] - 45s 11s/step - loss: 0.1271 - acc: 0.9622 - val\_loss: 3.5480 - val\_acc: 0.7544

Epoch 11/160

4/4 [==============================] - 45s 11s/step - loss: 0.1231 - acc: 0.9636 - val\_loss: 2.7444 - val\_acc: 0.7588

Epoch 12/160

4/4 [==============================] - 44s 11s/step - loss: 0.1367 - acc: 0.9637 - val\_loss: 1.3752 - val\_acc: 0.8465

Epoch 13/160

4/4 [==============================] - 47s 12s/step - loss: 0.1486 - acc: 0.9570 - val\_loss: 1.9704 - val\_acc: 0.8289

Epoch 14/160

4/4 [==============================] - 40s 10s/step - loss: 0.2835 - acc: 0.9196 - val\_loss: 1.8686 - val\_acc: 0.7588

Epoch 15/160

4/4 [==============================] - 47s 12s/step - loss: 0.0958 - acc: 0.9661 - val\_loss: 1.8315 - val\_acc: 0.7851

Epoch 16/160

4/4 [==============================] - 44s 11s/step - loss: 0.1148 - acc: 0.9539 - val\_loss: 1.1303 - val\_acc: 0.8509

Epoch 17/160

4/4 [==============================] - 44s 11s/step - loss: 0.1160 - acc: 0.9538 - val\_loss: 1.1289 - val\_acc: 0.7588

Epoch 18/160

4/4 [==============================] - 45s 11s/step - loss: 0.1404 - acc: 0.9453 - val\_loss: 1.1998 - val\_acc: 0.8509

Epoch 19/160

4/4 [==============================] - 48s 12s/step - loss: 0.0594 - acc: 0.9766 - val\_loss: 1.3809 - val\_acc: 0.7325

Epoch 20/160

4/4 [==============================] - 44s 11s/step - loss: 0.0904 - acc: 0.9719 - val\_loss: 1.0880 - val\_acc: 0.8465

Epoch 21/160

4/4 [==============================] - 43s 11s/step - loss: 0.0583 - acc: 0.9850 - val\_loss: 1.2051 - val\_acc: 0.7763

Epoch 22/160

4/4 [==============================] - 44s 11s/step - loss: 0.1352 - acc: 0.9507 - val\_loss: 0.7525 - val\_acc: 0.8421

Epoch 23/160

4/4 [==============================] - 49s 12s/step - loss: 0.0718 - acc: 0.9805 - val\_loss: 0.4555 - val\_acc: 0.8947

Epoch 24/160

4/4 [==============================] - 41s 10s/step - loss: 0.0306 - acc: 0.9855 - val\_loss: 0.4918 - val\_acc: 0.8772

Epoch 25/160

4/4 [==============================] - 47s 12s/step - loss: 0.0659 - acc: 0.9674 - val\_loss: 0.1309 - val\_acc: 0.9167

Epoch 26/160

4/4 [==============================] - 44s 11s/step - loss: 0.0958 - acc: 0.9668 - val\_loss: 0.0568 - val\_acc: 0.9825

Epoch 27/160

4/4 [==============================] - 43s 11s/step - loss: 0.0438 - acc: 0.9774 - val\_loss: 0.9656 - val\_acc: 0.8684

Epoch 28/160

4/4 [==============================] - 46s 12s/step - loss: 0.0948 - acc: 0.9674 - val\_loss: 0.9298 - val\_acc: 0.9123

Epoch 29/160

4/4 [==============================] - 45s 11s/step - loss: 0.0582 - acc: 0.9791 - val\_loss: 2.4431 - val\_acc: 0.7412

Epoch 30/160

4/4 [==============================] - 43s 11s/step - loss: 0.0880 - acc: 0.9600 - val\_loss: 0.8595 - val\_acc: 0.8772

Epoch 31/160

4/4 [==============================] - 43s 11s/step - loss: 0.0439 - acc: 0.9867 - val\_loss: 0.6865 - val\_acc: 0.9035

Epoch 32/160

4/4 [==============================] - 43s 11s/step - loss: 0.1136 - acc: 0.9756 - val\_loss: 0.4047 - val\_acc: 0.9649

Epoch 33/160

4/4 [==============================] - 43s 11s/step - loss: 0.0444 - acc: 0.9841 - val\_loss: 0.2194 - val\_acc: 0.9561

Epoch 34/160

4/4 [==============================] - 46s 12s/step - loss: 0.0309 - acc: 0.9896 - val\_loss: 0.6161 - val\_acc: 0.9386

Epoch 35/160

4/4 [==============================] - 45s 11s/step - loss: 0.0281 - acc: 0.9911 - val\_loss: 0.7441 - val\_acc: 0.9035

Epoch 36/160

4/4 [==============================] - 43s 11s/step - loss: 0.0489 - acc: 0.9796 - val\_loss: 0.7587 - val\_acc: 0.9211

Epoch 37/160

4/4 [==============================] - 44s 11s/step - loss: 0.0197 - acc: 0.9938 - val\_loss: 0.7708 - val\_acc: 0.8947

Epoch 38/160

4/4 [==============================] - 47s 12s/step - loss: 0.0643 - acc: 0.9727 - val\_loss: 0.3796 - val\_acc: 0.9167

Epoch 39/160

4/4 [==============================] - 46s 11s/step - loss: 0.0597 - acc: 0.9742 - val\_loss: 0.1537 - val\_acc: 0.9386

Epoch 40/160

4/4 [==============================] - 64s 16s/step - loss: 0.1301 - acc: 0.9622 - val\_loss: 0.9438 - val\_acc: 0.9298

Epoch 41/160

4/4 [==============================] - 72s 18s/step - loss: 0.0743 - acc: 0.9730 - val\_loss: 1.2796 - val\_acc: 0.8202

Epoch 42/160

4/4 [==============================] - 39s 10s/step - loss: 0.0557 - acc: 0.9876 - val\_loss: 0.7477 - val\_acc: 0.8421

Epoch 43/160

4/4 [==============================] - 40s 10s/step - loss: 0.0499 - acc: 0.9844 - val\_loss: 1.0159 - val\_acc: 0.8816

Epoch 44/160

4/4 [==============================] - 35s 9s/step - loss: 0.0324 - acc: 0.9878 - val\_loss: 1.2095 - val\_acc: 0.8509

Epoch 45/160

4/4 [==============================] - 40s 10s/step - loss: 0.1637 - acc: 0.9648 - val\_loss: 0.0983 - val\_acc: 0.9561

Epoch 46/160

4/4 [==============================] - 37s 9s/step - loss: 0.1315 - acc: 0.9699 - val\_loss: 0.1533 - val\_acc: 0.9518

Epoch 47/160

4/4 [==============================] - 37s 9s/step - loss: 0.1111 - acc: 0.9521 - val\_loss: 0.6015 - val\_acc: 0.9079

Epoch 48/160

4/4 [==============================] - 40s 10s/step - loss: 0.1343 - acc: 0.9453 - val\_loss: 1.6051 - val\_acc: 0.8333

Epoch 49/160

4/4 [==============================] - 35s 9s/step - loss: 0.0822 - acc: 0.9619 - val\_loss: 1.3227 - val\_acc: 0.8860

Epoch 50/160

4/4 [==============================] - 41s 10s/step - loss: 0.0456 - acc: 0.9831 - val\_loss: 0.6520 - val\_acc: 0.9211

Epoch 51/160

4/4 [==============================] - 40s 10s/step - loss: 0.0444 - acc: 0.9831 - val\_loss: 0.1966 - val\_acc: 0.9035

Epoch 52/160

4/4 [==============================] - 37s 9s/step - loss: 0.0790 - acc: 0.9708 - val\_loss: 0.1784 - val\_acc: 0.9211

Epoch 53/160

4/4 [==============================] - 37s 9s/step - loss: 0.0812 - acc: 0.9591 - val\_loss: 0.6268 - val\_acc: 0.9123

Epoch 54/160

4/4 [==============================] - 37s 9s/step - loss: 0.0646 - acc: 0.9763 - val\_loss: 1.3825 - val\_acc: 0.8158

Epoch 55/160

4/4 [==============================] - 38s 9s/step - loss: 0.0570 - acc: 0.9694 - val\_loss: 1.7556 - val\_acc: 0.8333

Epoch 56/160

4/4 [==============================] - 39s 10s/step - loss: 0.0354 - acc: 0.9831 - val\_loss: 1.7691 - val\_acc: 0.8158

Epoch 57/160

4/4 [==============================] - 35s 9s/step - loss: 0.0491 - acc: 0.9855 - val\_loss: 1.6298 - val\_acc: 0.8158

Epoch 58/160

4/4 [==============================] - 41s 10s/step - loss: 0.0384 - acc: 0.9831 - val\_loss: 1.5556 - val\_acc: 0.8421

Epoch 59/160

4/4 [==============================] - 1649s 412s/step - loss: 0.0677 - acc: 0.9757 - val\_loss: 1.3624 - val\_acc: 0.8684

Epoch 60/160

4/4 [==============================] - 39s 10s/step - loss: 0.0560 - acc: 0.9828 - val\_loss: 1.1566 - val\_acc: 0.8772

Epoch 61/160

4/4 [==============================] - 43s 11s/step - loss: 0.0297 - acc: 0.9889 - val\_loss: 0.9334 - val\_acc: 0.8772

Epoch 62/160

4/4 [==============================] - 46s 12s/step - loss: 0.0124 - acc: 0.9961 - val\_loss: 0.6905 - val\_acc: 0.9123

Epoch 63/160

4/4 [==============================] - 43s 11s/step - loss: 0.0461 - acc: 0.9916 - val\_loss: 0.9904 - val\_acc: 0.8772

Epoch 64/160

4/4 [==============================] - 44s 11s/step - loss: 0.0145 - acc: 0.9938 - val\_loss: 1.1634 - val\_acc: 0.8772

Epoch 65/160

4/4 [==============================] - 44s 11s/step - loss: 0.1203 - acc: 0.9652 - val\_loss: 0.4811 - val\_acc: 0.9430

Epoch 66/160

4/4 [==============================] - 43s 11s/step - loss: 0.0406 - acc: 0.9854 - val\_loss: 0.4686 - val\_acc: 0.9474

Epoch 67/160

4/4 [==============================] - 46s 12s/step - loss: 0.0388 - acc: 0.9883 - val\_loss: 0.5041 - val\_acc: 0.9474

Epoch 68/160

4/4 [==============================] - 43s 11s/step - loss: 0.0272 - acc: 0.9929 - val\_loss: 0.5553 - val\_acc: 0.9474

Epoch 69/160

4/4 [==============================] - 44s 11s/step - loss: 0.0288 - acc: 0.9947 - val\_loss: 0.5262 - val\_acc: 0.9211

Epoch 70/160

4/4 [==============================] - 44s 11s/step - loss: 0.0078 - acc: 0.9974 - val\_loss: 0.6501 - val\_acc: 0.9211

Epoch 71/160

4/4 [==============================] - 43s 11s/step - loss: 0.0735 - acc: 0.9834 - val\_loss: 0.6539 - val\_acc: 0.9474

Epoch 72/160

4/4 [==============================] - 43s 11s/step - loss: 0.1034 - acc: 0.9790 - val\_loss: 1.1916 - val\_acc: 0.8246

Epoch 73/160

4/4 [==============================] - 43s 11s/step - loss: 0.0674 - acc: 0.9787 - val\_loss: 2.8950 - val\_acc: 0.6491

Epoch 74/160

4/4 [==============================] - 47s 12s/step - loss: 0.0125 - acc: 0.9935 - val\_loss: 3.4840 - val\_acc: 0.6667

Epoch 75/160

4/4 [==============================] - 44s 11s/step - loss: 0.0230 - acc: 0.9911 - val\_loss: 3.7835 - val\_acc: 0.6667

Epoch 76/160

4/4 [==============================] - 46s 11s/step - loss: 0.0344 - acc: 0.9841 - val\_loss: 3.0586 - val\_acc: 0.6491

Epoch 77/160

4/4 [==============================] - 47s 12s/step - loss: 0.0092 - acc: 0.9974 - val\_loss: 2.8583 - val\_acc: 0.6842

Epoch 78/160

4/4 [==============================] - 43s 11s/step - loss: 0.0259 - acc: 0.9902 - val\_loss: 2.5363 - val\_acc: 0.6579

Epoch 79/160

4/4 [==============================] - 43s 11s/step - loss: 0.0248 - acc: 0.9928 - val\_loss: 2.2850 - val\_acc: 0.6754

Epoch 80/160

4/4 [==============================] - 43s 11s/step - loss: 0.0116 - acc: 0.9974 - val\_loss: 2.0955 - val\_acc: 0.7193

Epoch 81/160

4/4 [==============================] - 40s 10s/step - loss: 0.0092 - acc: 0.9982 - val\_loss: 2.2881 - val\_acc: 0.7281

Epoch 82/160

4/4 [==============================] - 43s 11s/step - loss: 0.0073 - acc: 0.9982 - val\_loss: 2.4401 - val\_acc: 0.7281

Epoch 83/160

4/4 [==============================] - 47s 12s/step - loss: 0.0031 - acc: 1.0000 - val\_loss: 2.5132 - val\_acc: 0.7281

Epoch 84/160

4/4 [==============================] - 44s 11s/step - loss: 0.0156 - acc: 0.9934 - val\_loss: 2.5116 - val\_acc: 0.7281

Epoch 85/160

4/4 [==============================] - 43s 11s/step - loss: 0.0103 - acc: 0.9947 - val\_loss: 2.2661 - val\_acc: 0.7281

Epoch 86/160

4/4 [==============================] - 43s 11s/step - loss: 0.0025 - acc: 1.0000 - val\_loss: 1.7387 - val\_acc: 0.7281

Epoch 87/160

4/4 [==============================] - 48s 12s/step - loss: 0.0032 - acc: 1.0000 - val\_loss: 1.5413 - val\_acc: 0.7544

Epoch 88/160

4/4 [==============================] - 44s 11s/step - loss: 0.0270 - acc: 0.9894 - val\_loss: 1.4631 - val\_acc: 0.8509

Epoch 89/160

4/4 [==============================] - 44s 11s/step - loss: 0.0068 - acc: 0.9974 - val\_loss: 1.3233 - val\_acc: 0.8333

Epoch 90/160

4/4 [==============================] - 44s 11s/step - loss: 0.2091 - acc: 0.9681 - val\_loss: 1.0784 - val\_acc: 0.8596

Epoch 91/160

4/4 [==============================] - 44s 11s/step - loss: 0.0375 - acc: 0.9921 - val\_loss: 0.7547 - val\_acc: 0.9211

Epoch 92/160

4/4 [==============================] - 43s 11s/step - loss: 0.0352 - acc: 0.9858 - val\_loss: 1.3079 - val\_acc: 0.8158

Epoch 93/160

4/4 [==============================] - 43s 11s/step - loss: 0.0237 - acc: 0.9921 - val\_loss: 4.6631 - val\_acc: 0.5439

Epoch 94/160

4/4 [==============================] - 47s 12s/step - loss: 0.0537 - acc: 0.9909 - val\_loss: 4.0125 - val\_acc: 0.5614

Epoch 95/160

4/4 [==============================] - 44s 11s/step - loss: 0.2547 - acc: 0.9642 - val\_loss: 3.1015 - val\_acc: 0.6754

Epoch 96/160

4/4 [==============================] - 46s 11s/step - loss: 0.0506 - acc: 0.9815 - val\_loss: 1.0027 - val\_acc: 0.8772

Epoch 97/160

4/4 [==============================] - 48s 12s/step - loss: 0.0912 - acc: 0.9739 - val\_loss: 1.9372 - val\_acc: 0.7281

Epoch 98/160

4/4 [==============================] - 45s 11s/step - loss: 0.0902 - acc: 0.9714 - val\_loss: 3.7859 - val\_acc: 0.6184

Epoch 99/160

4/4 [==============================] - 41s 10s/step - loss: 0.1090 - acc: 0.9773 - val\_loss: 3.3440 - val\_acc: 0.6447

Epoch 100/160

4/4 [==============================] - 74s 18s/step - loss: 0.0926 - acc: 0.9857 - val\_loss: 4.0607 - val\_acc: 0.6754

Epoch 101/160

4/4 [==============================] - 64s 16s/step - loss: 0.0614 - acc: 0.9766 - val\_loss: 5.0253 - val\_acc: 0.5088

Epoch 102/160

4/4 [==============================] - 49s 12s/step - loss: 0.0986 - acc: 0.9782 - val\_loss: 6.4124 - val\_acc: 0.4254

Epoch 103/160

4/4 [==============================] - 47s 12s/step - loss: 0.0409 - acc: 0.9893 - val\_loss: 6.8174 - val\_acc: 0.4737

Epoch 104/160

4/4 [==============================] - 46s 12s/step - loss: 0.0465 - acc: 0.9828 - val\_loss: 3.7165 - val\_acc: 0.4825

Epoch 105/160

4/4 [==============================] - 39s 10s/step - loss: 0.0355 - acc: 0.9857 - val\_loss: 1.3015 - val\_acc: 0.7544

Epoch 106/160

4/4 [==============================] - 36s 9s/step - loss: 0.0257 - acc: 0.9903 - val\_loss: 1.2029 - val\_acc: 0.8202

Epoch 107/160

4/4 [==============================] - 37s 9s/step - loss: 0.0053 - acc: 1.0000 - val\_loss: 1.2498 - val\_acc: 0.8509

Epoch 108/160

4/4 [==============================] - 47s 12s/step - loss: 0.0348 - acc: 0.9867 - val\_loss: 0.6392 - val\_acc: 0.8947

Epoch 109/160

4/4 [==============================] - 50s 13s/step - loss: 0.0162 - acc: 0.9961 - val\_loss: 2.5869 - val\_acc: 0.7105

Epoch 110/160

4/4 [==============================] - 47s 12s/step - loss: 0.0361 - acc: 0.9868 - val\_loss: 0.8347 - val\_acc: 0.9211

Epoch 111/160

4/4 [==============================] - 46s 12s/step - loss: 0.0728 - acc: 0.9871 - val\_loss: 1.1503 - val\_acc: 0.9035

Epoch 112/160

4/4 [==============================] - 47s 12s/step - loss: 0.0888 - acc: 0.9805 - val\_loss: 1.0367 - val\_acc: 0.9035

Epoch 113/160

4/4 [==============================] - 47s 12s/step - loss: 0.0672 - acc: 0.9763 - val\_loss: 1.7391 - val\_acc: 0.6930

Epoch 114/160

4/4 [==============================] - 47s 12s/step - loss: 0.2056 - acc: 0.9529 - val\_loss: 0.9203 - val\_acc: 0.8991

Epoch 115/160

4/4 [==============================] - 50s 13s/step - loss: 0.1153 - acc: 0.9570 - val\_loss: 2.3226 - val\_acc: 0.7061

Epoch 116/160

4/4 [==============================] - 47s 12s/step - loss: 0.1799 - acc: 0.9560 - val\_loss: 0.9439 - val\_acc: 0.8860

Epoch 117/160

4/4 [==============================] - 47s 12s/step - loss: 0.0945 - acc: 0.9624 - val\_loss: 1.4048 - val\_acc: 0.6053

Epoch 118/160

4/4 [==============================] - 50s 12s/step - loss: 0.0674 - acc: 0.9727 - val\_loss: 2.1976 - val\_acc: 0.5702

Epoch 119/160

4/4 [==============================] - 38s 10s/step - loss: 0.0418 - acc: 0.9836 - val\_loss: 3.6463 - val\_acc: 0.5746

Epoch 120/160

4/4 [==============================] - 37s 9s/step - loss: 0.0785 - acc: 0.9797 - val\_loss: 2.3592 - val\_acc: 0.5789

Epoch 121/160

4/4 [==============================] - 36s 9s/step - loss: 0.0209 - acc: 0.9969 - val\_loss: 1.8047 - val\_acc: 0.7237

Epoch 122/160

4/4 [==============================] - 39s 10s/step - loss: 0.0325 - acc: 0.9922 - val\_loss: 1.8402 - val\_acc: 0.7237

Epoch 123/160

4/4 [==============================] - 36s 9s/step - loss: 0.0089 - acc: 1.0000 - val\_loss: 1.7653 - val\_acc: 0.7368

Epoch 124/160

4/4 [==============================] - 36s 9s/step - loss: 0.0161 - acc: 0.9938 - val\_loss: 2.0231 - val\_acc: 0.7105

Epoch 125/160

4/4 [==============================] - 36s 9s/step - loss: 0.0160 - acc: 0.9924 - val\_loss: 1.3820 - val\_acc: 0.8509

Epoch 126/160

4/4 [==============================] - 38s 10s/step - loss: 0.0052 - acc: 1.0000 - val\_loss: 1.7544 - val\_acc: 0.8158

Epoch 127/160

4/4 [==============================] - 33s 8s/step - loss: 0.0040 - acc: 1.0000 - val\_loss: 1.7996 - val\_acc: 0.8070

Epoch 128/160

4/4 [==============================] - 38s 10s/step - loss: 0.0233 - acc: 0.9922 - val\_loss: 1.4090 - val\_acc: 0.7675

Epoch 129/160

4/4 [==============================] - 36s 9s/step - loss: 0.1177 - acc: 0.9752 - val\_loss: 1.5796 - val\_acc: 0.7807

Epoch 130/160

4/4 [==============================] - 36s 9s/step - loss: 0.0167 - acc: 0.9928 - val\_loss: 1.8922 - val\_acc: 0.7588

Epoch 131/160

4/4 [==============================] - 36s 9s/step - loss: 0.0026 - acc: 1.0000 - val\_loss: 1.8269 - val\_acc: 0.7368

Epoch 132/160

4/4 [==============================] - 36s 9s/step - loss: 0.0073 - acc: 0.9964 - val\_loss: 2.3417 - val\_acc: 0.6667

Epoch 133/160

4/4 [==============================] - 38s 10s/step - loss: 0.0279 - acc: 0.9922 - val\_loss: 2.4912 - val\_acc: 0.6491

Epoch 134/160

4/4 [==============================] - 36s 9s/step - loss: 0.0205 - acc: 0.9946 - val\_loss: 1.5993 - val\_acc: 0.7719

Epoch 135/160

4/4 [==============================] - 36s 9s/step - loss: 0.0077 - acc: 0.9974 - val\_loss: 1.5866 - val\_acc: 0.7719

Epoch 136/160

4/4 [==============================] - 38s 10s/step - loss: 0.0138 - acc: 0.9948 - val\_loss: 2.3891 - val\_acc: 0.6842

Epoch 137/160

4/4 [==============================] - 36s 9s/step - loss: 0.0016 - acc: 1.0000 - val\_loss: 3.1559 - val\_acc: 0.6053

Epoch 138/160

4/4 [==============================] - 33s 8s/step - loss: 0.1132 - acc: 0.9773 - val\_loss: 0.2777 - val\_acc: 0.9561

Epoch 139/160

4/4 [==============================] - 39s 10s/step - loss: 0.0656 - acc: 0.9857 - val\_loss: 2.0729 - val\_acc: 0.5965

Epoch 140/160

4/4 [==============================] - 36s 9s/step - loss: 0.2516 - acc: 0.9394 - val\_loss: 1.1524 - val\_acc: 0.6667

Epoch 141/160

4/4 [==============================] - 38s 10s/step - loss: 0.1330 - acc: 0.9635 - val\_loss: 4.0490 - val\_acc: 0.6140

Epoch 142/160

4/4 [==============================] - 33s 8s/step - loss: 0.2283 - acc: 0.9491 - val\_loss: 3.5544 - val\_acc: 0.6886

Epoch 143/160

4/4 [==============================] - 36s 9s/step - loss: 0.0646 - acc: 0.9841 - val\_loss: 2.9140 - val\_acc: 0.7193

Epoch 144/160

4/4 [==============================] - 38s 10s/step - loss: 0.0760 - acc: 0.9740 - val\_loss: 3.1471 - val\_acc: 0.7456

Epoch 145/160

4/4 [==============================] - 36s 9s/step - loss: 0.0147 - acc: 0.9974 - val\_loss: 3.6319 - val\_acc: 0.7456

Epoch 146/160

4/4 [==============================] - 36s 9s/step - loss: 0.0736 - acc: 0.9763 - val\_loss: 3.0765 - val\_acc: 0.7456

Epoch 147/160

4/4 [==============================] - 36s 9s/step - loss: 0.0478 - acc: 0.9862 - val\_loss: 2.9941 - val\_acc: 0.7456

Epoch 148/160

4/4 [==============================] - 39s 10s/step - loss: 0.0125 - acc: 0.9974 - val\_loss: 2.1762 - val\_acc: 0.8333

Epoch 149/160

4/4 [==============================] - 36s 9s/step - loss: 0.0235 - acc: 0.9929 - val\_loss: 2.0511 - val\_acc: 0.8421

Epoch 150/160

4/4 [==============================] - 36s 9s/step - loss: 0.0278 - acc: 0.9964 - val\_loss: 1.5516 - val\_acc: 0.8772

Epoch 151/160

4/4 [==============================] - 36s 9s/step - loss: 0.0142 - acc: 0.9946 - val\_loss: 1.3197 - val\_acc: 0.9035

Epoch 152/160

4/4 [==============================] - 36s 9s/step - loss: 0.0228 - acc: 0.9951 - val\_loss: 1.2494 - val\_acc: 0.9035

Epoch 153/160

4/4 [==============================] - 1902s 476s/step - loss: 0.0045 - acc: 1.0000 - val\_loss: 1.2779 - val\_acc: 0.9035

Epoch 154/160

4/4 [==============================] - 40s 10s/step - loss: 0.0149 - acc: 0.9974 - val\_loss: 1.1492 - val\_acc: 0.9035

Epoch 155/160

4/4 [==============================] - 43s 11s/step - loss: 0.0042 - acc: 0.9987 - val\_loss: 0.8341 - val\_acc: 0.9123

Epoch 156/160

4/4 [==============================] - 45s 11s/step - loss: 0.0067 - acc: 0.9974 - val\_loss: 0.7677 - val\_acc: 0.9211

Epoch 157/160

4/4 [==============================] - 49s 12s/step - loss: 0.0109 - acc: 0.9960 - val\_loss: 1.0715 - val\_acc: 0.8947

Epoch 158/160

4/4 [==============================] - 57s 14s/step - loss: 0.0255 - acc: 0.9964 - val\_loss: 0.5270 - val\_acc: 0.9474

Epoch 159/160

4/4 [==============================] - 64s 16s/step - loss: 0.0175 - acc: 0.9929 - val\_loss: 0.8815 - val\_acc: 0.8860

Epoch 160/160

4/4 [==============================] - 75s 19s/step - loss: 0.0016 - acc: 1.0000 - val\_loss: 1.5094 - val\_acc: 0.8246

**256-4\_512-8\_4096-2\_1000-1\_BS64\_Epoch200.png**

Epoch 1/200

4/4 [==============================] - 47s 12s/step - loss: 2.0222 - acc: 0.5749 - val\_loss: 8.8651 - val\_acc: 0.4254

Epoch 2/200

4/4 [==============================] - 36s 9s/step - loss: 1.1434 - acc: 0.7742 - val\_loss: 8.3477 - val\_acc: 0.4737

Epoch 3/200

4/4 [==============================] - 39s 10s/step - loss: 0.6207 - acc: 0.8242 - val\_loss: 6.5603 - val\_acc: 0.4956

Epoch 4/200

4/4 [==============================] - 36s 9s/step - loss: 0.3665 - acc: 0.8670 - val\_loss: 6.0126 - val\_acc: 0.5658

Epoch 5/200

4/4 [==============================] - 36s 9s/step - loss: 0.2695 - acc: 0.9226 - val\_loss: 5.8221 - val\_acc: 0.6140

Epoch 6/200

4/4 [==============================] - 36s 9s/step - loss: 0.3251 - acc: 0.9115 - val\_loss: 6.0027 - val\_acc: 0.4605

Epoch 7/200

4/4 [==============================] - 36s 9s/step - loss: 0.2517 - acc: 0.9048 - val\_loss: 5.0949 - val\_acc: 0.6360

Epoch 8/200

4/4 [==============================] - 39s 10s/step - loss: 0.1825 - acc: 0.9388 - val\_loss: 5.0611 - val\_acc: 0.6184

Epoch 9/200

4/4 [==============================] - 36s 9s/step - loss: 0.1949 - acc: 0.9395 - val\_loss: 4.6554 - val\_acc: 0.6316

Epoch 10/200

4/4 [==============================] - 36s 9s/step - loss: 0.2229 - acc: 0.9417 - val\_loss: 4.2858 - val\_acc: 0.6272

Epoch 11/200

4/4 [==============================] - 37s 9s/step - loss: 0.1981 - acc: 0.9371 - val\_loss: 3.9008 - val\_acc: 0.6447

Epoch 12/200

4/4 [==============================] - 36s 9s/step - loss: 0.1142 - acc: 0.9584 - val\_loss: 3.5325 - val\_acc: 0.7193

Epoch 13/200

4/4 [==============================] - 39s 10s/step - loss: 0.0846 - acc: 0.9740 - val\_loss: 3.4207 - val\_acc: 0.6667

Epoch 14/200

4/4 [==============================] - 34s 8s/step - loss: 0.1430 - acc: 0.9614 - val\_loss: 3.7772 - val\_acc: 0.6140

Epoch 15/200

4/4 [==============================] - 39s 10s/step - loss: 0.0560 - acc: 0.9818 - val\_loss: 3.5243 - val\_acc: 0.6053

Epoch 16/200

4/4 [==============================] - 36s 9s/step - loss: 0.0588 - acc: 0.9747 - val\_loss: 3.5891 - val\_acc: 0.6842

Epoch 17/200

4/4 [==============================] - 36s 9s/step - loss: 0.1597 - acc: 0.9554 - val\_loss: 3.5049 - val\_acc: 0.6140

Epoch 18/200

4/4 [==============================] - 2429s 607s/step - loss: 0.1751 - acc: 0.9394 - val\_loss: 3.2011 - val\_acc: 0.6667

Epoch 19/200

4/4 [==============================] - 39s 10s/step - loss: 0.0869 - acc: 0.9714 - val\_loss: 2.8695 - val\_acc: 0.7105

Epoch 20/200

4/4 [==============================] - 41s 10s/step - loss: 0.0962 - acc: 0.9722 - val\_loss: 2.2732 - val\_acc: 0.8246

Epoch 21/200

4/4 [==============================] - 40s 10s/step - loss: 0.1538 - acc: 0.9421 - val\_loss: 2.5102 - val\_acc: 0.7456

Epoch 22/200

4/4 [==============================] - 41s 10s/step - loss: 0.1452 - acc: 0.9612 - val\_loss: 2.3262 - val\_acc: 0.7588

Epoch 23/200

4/4 [==============================] - 45s 11s/step - loss: 0.1475 - acc: 0.9557 - val\_loss: 2.5764 - val\_acc: 0.7456

Epoch 24/200

4/4 [==============================] - 40s 10s/step - loss: 0.1698 - acc: 0.9461 - val\_loss: 1.8996 - val\_acc: 0.7412

Epoch 25/200

4/4 [==============================] - 47s 12s/step - loss: 0.0752 - acc: 0.9753 - val\_loss: 2.4008 - val\_acc: 0.7456

Epoch 26/200

4/4 [==============================] - 48s 12s/step - loss: 0.1282 - acc: 0.9537 - val\_loss: 2.0925 - val\_acc: 0.7281

Epoch 27/200

4/4 [==============================] - 54s 13s/step - loss: 0.0884 - acc: 0.9653 - val\_loss: 1.8775 - val\_acc: 0.7193

Epoch 28/200

4/4 [==============================] - 61s 15s/step - loss: 0.1005 - acc: 0.9622 - val\_loss: 1.9479 - val\_acc: 0.7193

Epoch 29/200

4/4 [==============================] - 60s 15s/step - loss: 0.1514 - acc: 0.9500 - val\_loss: 1.6432 - val\_acc: 0.8421

Epoch 30/200

4/4 [==============================] - 62s 16s/step - loss: 0.0722 - acc: 0.9742 - val\_loss: 1.2694 - val\_acc: 0.8684

Epoch 31/200

4/4 [==============================] - 64s 16s/step - loss: 0.0645 - acc: 0.9791 - val\_loss: 1.1941 - val\_acc: 0.8509

Epoch 32/200

4/4 [==============================] - 65s 16s/step - loss: 0.0720 - acc: 0.9786 - val\_loss: 1.2003 - val\_acc: 0.8509

Epoch 33/200

4/4 [==============================] - 65s 16s/step - loss: 0.0568 - acc: 0.9744 - val\_loss: 1.1173 - val\_acc: 0.8947

Epoch 34/200

4/4 [==============================] - 71s 18s/step - loss: 0.0678 - acc: 0.9701 - val\_loss: 1.3793 - val\_acc: 0.8596

Epoch 35/200

4/4 [==============================] - 69s 17s/step - loss: 0.0694 - acc: 0.9676 - val\_loss: 1.3874 - val\_acc: 0.8509

Epoch 36/200

4/4 [==============================] - 64s 16s/step - loss: 0.0704 - acc: 0.9738 - val\_loss: 1.3144 - val\_acc: 0.8596

Epoch 37/200

4/4 [==============================] - 55s 14s/step - loss: 0.1102 - acc: 0.9694 - val\_loss: 1.2402 - val\_acc: 0.8640

Epoch 38/200

4/4 [==============================] - 60s 15s/step - loss: 0.0789 - acc: 0.9714 - val\_loss: 1.8969 - val\_acc: 0.8202

Epoch 39/200

4/4 [==============================] - 57s 14s/step - loss: 0.0516 - acc: 0.9752 - val\_loss: 2.3532 - val\_acc: 0.7281

Epoch 40/200

4/4 [==============================] - 55s 14s/step - loss: 0.0529 - acc: 0.9832 - val\_loss: 2.3960 - val\_acc: 0.7719

Epoch 41/200

4/4 [==============================] - 54s 13s/step - loss: 0.1017 - acc: 0.9679 - val\_loss: 2.2154 - val\_acc: 0.7588

Epoch 42/200

4/4 [==============================] - 53s 13s/step - loss: 0.1063 - acc: 0.9578 - val\_loss: 1.6312 - val\_acc: 0.7588

Epoch 43/200

4/4 [==============================] - 57s 14s/step - loss: 0.0509 - acc: 0.9831 - val\_loss: 1.3887 - val\_acc: 0.8640

Epoch 44/200

4/4 [==============================] - 93s 23s/step - loss: 0.0558 - acc: 0.9828 - val\_loss: 1.4066 - val\_acc: 0.8640

Epoch 45/200

4/4 [==============================] - 64s 16s/step - loss: 0.0403 - acc: 0.9857 - val\_loss: 1.3380 - val\_acc: 0.8640

Epoch 46/200

4/4 [==============================] - 58s 14s/step - loss: 0.0548 - acc: 0.9795 - val\_loss: 1.2858 - val\_acc: 0.8728

Epoch 47/200

4/4 [==============================] - 49s 12s/step - loss: 0.0299 - acc: 0.9894 - val\_loss: 1.2195 - val\_acc: 0.8772

Epoch 48/200

4/4 [==============================] - 59s 15s/step - loss: 0.0757 - acc: 0.9753 - val\_loss: 1.6528 - val\_acc: 0.7719

Epoch 49/200

4/4 [==============================] - 41s 10s/step - loss: 0.0643 - acc: 0.9687 - val\_loss: 1.7108 - val\_acc: 0.7807

Epoch 50/200

4/4 [==============================] - 45s 11s/step - loss: 0.0203 - acc: 0.9948 - val\_loss: 1.4941 - val\_acc: 0.7982

Epoch 51/200

4/4 [==============================] - 57s 14s/step - loss: 0.0390 - acc: 0.9818 - val\_loss: 1.3532 - val\_acc: 0.7982

Epoch 52/200

4/4 [==============================] - 43s 11s/step - loss: 0.0806 - acc: 0.9725 - val\_loss: 1.2585 - val\_acc: 0.8333

Epoch 53/200

4/4 [==============================] - 49s 12s/step - loss: 0.0307 - acc: 0.9836 - val\_loss: 1.2352 - val\_acc: 0.8202

Epoch 54/200

4/4 [==============================] - 49s 12s/step - loss: 0.0483 - acc: 0.9788 - val\_loss: 1.1321 - val\_acc: 0.7895

Epoch 55/200

4/4 [==============================] - 47s 12s/step - loss: 0.0902 - acc: 0.9744 - val\_loss: 1.3292 - val\_acc: 0.7807

Epoch 56/200

4/4 [==============================] - 53s 13s/step - loss: 0.0309 - acc: 0.9870 - val\_loss: 1.2523 - val\_acc: 0.8158

Epoch 57/200

4/4 [==============================] - 51s 13s/step - loss: 0.0356 - acc: 0.9869 - val\_loss: 1.1467 - val\_acc: 0.8509

Epoch 58/200

4/4 [==============================] - 44s 11s/step - loss: 0.0365 - acc: 0.9870 - val\_loss: 1.0929 - val\_acc: 0.8333

Epoch 59/200

4/4 [==============================] - 39s 10s/step - loss: 0.0448 - acc: 0.9850 - val\_loss: 1.0069 - val\_acc: 0.8596

Epoch 60/200

4/4 [==============================] - 38s 10s/step - loss: 0.0624 - acc: 0.9694 - val\_loss: 1.0919 - val\_acc: 0.8509

Epoch 61/200

4/4 [==============================] - 46s 12s/step - loss: 0.0374 - acc: 0.9796 - val\_loss: 1.0965 - val\_acc: 0.8596

Epoch 62/200

4/4 [==============================] - 47s 12s/step - loss: 0.0809 - acc: 0.9805 - val\_loss: 0.7210 - val\_acc: 0.8509

Epoch 63/200

4/4 [==============================] - 43s 11s/step - loss: 0.0307 - acc: 0.9863 - val\_loss: 0.5966 - val\_acc: 0.8509

Epoch 64/200

4/4 [==============================] - 43s 11s/step - loss: 0.0965 - acc: 0.9626 - val\_loss: 0.6037 - val\_acc: 0.8421

Epoch 65/200

4/4 [==============================] - 44s 11s/step - loss: 0.0337 - acc: 0.9921 - val\_loss: 0.3499 - val\_acc: 0.9386

Epoch 66/200

4/4 [==============================] - 39s 10s/step - loss: 0.0696 - acc: 0.9755 - val\_loss: 0.2490 - val\_acc: 0.9474

Epoch 67/200

4/4 [==============================] - 41s 10s/step - loss: 0.0751 - acc: 0.9687 - val\_loss: 0.6609 - val\_acc: 0.8596

Epoch 68/200

4/4 [==============================] - 38s 9s/step - loss: 0.1076 - acc: 0.9725 - val\_loss: 1.0281 - val\_acc: 0.8333

Epoch 69/200

4/4 [==============================] - 39s 10s/step - loss: 0.1350 - acc: 0.9748 - val\_loss: 0.9860 - val\_acc: 0.8421

Epoch 70/200

4/4 [==============================] - 38s 9s/step - loss: 0.1902 - acc: 0.9534 - val\_loss: 1.4572 - val\_acc: 0.9035

Epoch 71/200

4/4 [==============================] - 41s 10s/step - loss: 0.2309 - acc: 0.9322 - val\_loss: 2.2402 - val\_acc: 0.8509

Epoch 72/200

4/4 [==============================] - 41s 10s/step - loss: 0.1043 - acc: 0.9669 - val\_loss: 2.7238 - val\_acc: 0.8114

Epoch 73/200

4/4 [==============================] - 39s 10s/step - loss: 0.1437 - acc: 0.9464 - val\_loss: 3.2311 - val\_acc: 0.7719

Epoch 74/200

4/4 [==============================] - 43s 11s/step - loss: 0.0869 - acc: 0.9753 - val\_loss: 3.1638 - val\_acc: 0.7456

Epoch 75/200

4/4 [==============================] - 48s 12s/step - loss: 0.0580 - acc: 0.9804 - val\_loss: 3.1739 - val\_acc: 0.6930

Epoch 76/200

4/4 [==============================] - 47s 12s/step - loss: 0.0621 - acc: 0.9746 - val\_loss: 3.1624 - val\_acc: 0.6842

Epoch 77/200

4/4 [==============================] - 44s 11s/step - loss: 0.1977 - acc: 0.9349 - val\_loss: 3.0834 - val\_acc: 0.7588

Epoch 78/200

4/4 [==============================] - 43s 11s/step - loss: 0.0776 - acc: 0.9743 - val\_loss: 2.5403 - val\_acc: 0.7632

Epoch 79/200

4/4 [==============================] - 41s 10s/step - loss: 0.0572 - acc: 0.9716 - val\_loss: 2.7225 - val\_acc: 0.7412

Epoch 80/200

4/4 [==============================] - 40s 10s/step - loss: 0.0541 - acc: 0.9800 - val\_loss: 2.8291 - val\_acc: 0.7325

Epoch 81/200

4/4 [==============================] - 40s 10s/step - loss: 0.0350 - acc: 0.9881 - val\_loss: 2.5771 - val\_acc: 0.7325

Epoch 82/200

4/4 [==============================] - 41s 10s/step - loss: 0.0475 - acc: 0.9815 - val\_loss: 2.4812 - val\_acc: 0.7412

Epoch 83/200

4/4 [==============================] - 44s 11s/step - loss: 0.0380 - acc: 0.9818 - val\_loss: 2.3183 - val\_acc: 0.7675

Epoch 84/200

4/4 [==============================] - 41s 10s/step - loss: 0.0548 - acc: 0.9778 - val\_loss: 2.2753 - val\_acc: 0.8158

Epoch 85/200

4/4 [==============================] - 41s 10s/step - loss: 0.0534 - acc: 0.9792 - val\_loss: 1.8048 - val\_acc: 0.8377

Epoch 86/200

4/4 [==============================] - 42s 11s/step - loss: 0.0551 - acc: 0.9804 - val\_loss: 2.9337 - val\_acc: 0.7982

Epoch 87/200

4/4 [==============================] - 48s 12s/step - loss: 0.1087 - acc: 0.9674 - val\_loss: 1.1358 - val\_acc: 0.9123

Epoch 88/200

4/4 [==============================] - 37s 9s/step - loss: 0.0563 - acc: 0.9800 - val\_loss: 1.0231 - val\_acc: 0.8640

Epoch 89/200

4/4 [==============================] - 37s 9s/step - loss: 0.1470 - acc: 0.9352 - val\_loss: 2.8391 - val\_acc: 0.7149

Epoch 90/200

4/4 [==============================] - 36s 9s/step - loss: 0.0623 - acc: 0.9746 - val\_loss: 2.6694 - val\_acc: 0.7895

Epoch 91/200

4/4 [==============================] - 36s 9s/step - loss: 0.0596 - acc: 0.9787 - val\_loss: 2.6443 - val\_acc: 0.8114

Epoch 92/200

4/4 [==============================] - 37s 9s/step - loss: 0.1578 - acc: 0.9613 - val\_loss: 3.8413 - val\_acc: 0.7105

Epoch 93/200

4/4 [==============================] - 37s 9s/step - loss: 0.0923 - acc: 0.9708 - val\_loss: 2.8225 - val\_acc: 0.7632

Epoch 94/200

4/4 [==============================] - 40s 10s/step - loss: 0.0507 - acc: 0.9753 - val\_loss: 2.4407 - val\_acc: 0.8114

Epoch 95/200

4/4 [==============================] - 37s 9s/step - loss: 0.0600 - acc: 0.9827 - val\_loss: 2.4889 - val\_acc: 0.7807

Epoch 96/200

4/4 [==============================] - 36s 9s/step - loss: 0.0553 - acc: 0.9787 - val\_loss: 2.8665 - val\_acc: 0.7763

Epoch 97/200

4/4 [==============================] - 37s 9s/step - loss: 0.1241 - acc: 0.9589 - val\_loss: 2.1919 - val\_acc: 0.7939

Epoch 98/200

4/4 [==============================] - 39s 10s/step - loss: 0.0537 - acc: 0.9870 - val\_loss: 1.6696 - val\_acc: 0.8509

Epoch 99/200

4/4 [==============================] - 34s 8s/step - loss: 0.0593 - acc: 0.9783 - val\_loss: 0.9327 - val\_acc: 0.8509

Epoch 100/200

4/4 [==============================] - 39s 10s/step - loss: 0.1063 - acc: 0.9609 - val\_loss: 0.7062 - val\_acc: 0.8509

Epoch 101/200

4/4 [==============================] - 39s 10s/step - loss: 0.0311 - acc: 0.9896 - val\_loss: 0.9755 - val\_acc: 0.8509

Epoch 102/200

4/4 [==============================] - 35s 9s/step - loss: 0.0361 - acc: 0.9869 - val\_loss: 1.4478 - val\_acc: 0.8509

Epoch 103/200

4/4 [==============================] - 37s 9s/step - loss: 0.0349 - acc: 0.9907 - val\_loss: 1.5237 - val\_acc: 0.8509

Epoch 104/200

4/4 [==============================] - 37s 9s/step - loss: 0.0674 - acc: 0.9756 - val\_loss: 1.2231 - val\_acc: 0.8509

Epoch 105/200

4/4 [==============================] - 1177s 294s/step - loss: 0.0832 - acc: 0.9661 - val\_loss: 0.5398 - val\_acc: 0.8684

Epoch 106/200

4/4 [==============================] - 2983s 746s/step - loss: 0.0385 - acc: 0.9805 - val\_loss: 0.2180 - val\_acc: 0.9211

Epoch 107/200

4/4 [==============================] - 47s 12s/step - loss: 0.0196 - acc: 0.9942 - val\_loss: 0.0736 - val\_acc: 0.9737

Epoch 108/200

4/4 [==============================] - 37s 9s/step - loss: 0.0594 - acc: 0.9832 - val\_loss: 0.0217 - val\_acc: 0.9825

Epoch 109/200

4/4 [==============================] - 40s 10s/step - loss: 0.0232 - acc: 0.9948 - val\_loss: 0.0198 - val\_acc: 0.9825

Epoch 110/200

4/4 [==============================] - 38s 10s/step - loss: 0.0320 - acc: 0.9885 - val\_loss: 0.0250 - val\_acc: 1.0000

Epoch 111/200

4/4 [==============================] - 37s 9s/step - loss: 0.0314 - acc: 0.9834 - val\_loss: 0.0426 - val\_acc: 0.9649

Epoch 112/200

4/4 [==============================] - 38s 9s/step - loss: 0.0526 - acc: 0.9841 - val\_loss: 0.0399 - val\_acc: 0.9825

Epoch 113/200

4/4 [==============================] - 39s 10s/step - loss: 0.0550 - acc: 0.9796 - val\_loss: 0.0610 - val\_acc: 0.9825

Epoch 114/200

4/4 [==============================] - 47s 12s/step - loss: 0.0362 - acc: 0.9898 - val\_loss: 0.0356 - val\_acc: 0.9825

Epoch 115/200

4/4 [==============================] - 49s 12s/step - loss: 0.0196 - acc: 0.9883 - val\_loss: 0.0282 - val\_acc: 0.9825

Epoch 116/200

4/4 [==============================] - 40s 10s/step - loss: 0.0372 - acc: 0.9805 - val\_loss: 0.0185 - val\_acc: 1.0000

Epoch 117/200

4/4 [==============================] - 37s 9s/step - loss: 0.0522 - acc: 0.9752 - val\_loss: 0.0748 - val\_acc: 0.9825

Epoch 118/200

4/4 [==============================] - 40s 10s/step - loss: 0.0358 - acc: 0.9857 - val\_loss: 0.1118 - val\_acc: 0.9825

Epoch 119/200

4/4 [==============================] - 37s 9s/step - loss: 0.0500 - acc: 0.9821 - val\_loss: 0.1520 - val\_acc: 0.9123

Epoch 120/200

4/4 [==============================] - 39s 10s/step - loss: 0.0256 - acc: 0.9911 - val\_loss: 0.4239 - val\_acc: 0.8596

Epoch 121/200

4/4 [==============================] - 37s 9s/step - loss: 0.0168 - acc: 0.9987 - val\_loss: 0.4865 - val\_acc: 0.8246

Epoch 122/200

4/4 [==============================] - 40s 10s/step - loss: 0.0809 - acc: 0.9714 - val\_loss: 0.4765 - val\_acc: 0.8246

Epoch 123/200

4/4 [==============================] - 47s 12s/step - loss: 0.0413 - acc: 0.9863 - val\_loss: 0.5825 - val\_acc: 0.8596

Epoch 124/200

4/4 [==============================] - 37s 9s/step - loss: 0.0205 - acc: 0.9911 - val\_loss: 0.6313 - val\_acc: 0.8114

Epoch 125/200

4/4 [==============================] - 36s 9s/step - loss: 0.0226 - acc: 0.9894 - val\_loss: 0.6407 - val\_acc: 0.8246

Epoch 126/200

4/4 [==============================] - 39s 10s/step - loss: 0.0102 - acc: 0.9987 - val\_loss: 0.5929 - val\_acc: 0.8246

Epoch 127/200

4/4 [==============================] - 34s 8s/step - loss: 0.0313 - acc: 0.9869 - val\_loss: 0.9564 - val\_acc: 0.7982

Epoch 128/200

4/4 [==============================] - 37s 9s/step - loss: 0.0155 - acc: 0.9948 - val\_loss: 1.5949 - val\_acc: 0.7807

Epoch 129/200

4/4 [==============================] - 37s 9s/step - loss: 0.1010 - acc: 0.9839 - val\_loss: 1.6892 - val\_acc: 0.8070

Epoch 130/200

4/4 [==============================] - 37s 9s/step - loss: 0.1067 - acc: 0.9783 - val\_loss: 0.6897 - val\_acc: 0.8772

Epoch 131/200

4/4 [==============================] - 36s 9s/step - loss: 0.0136 - acc: 0.9974 - val\_loss: 1.2427 - val\_acc: 0.8114

Epoch 132/200

4/4 [==============================] - 37s 9s/step - loss: 0.0331 - acc: 0.9845 - val\_loss: 1.4407 - val\_acc: 0.8772

Epoch 133/200

4/4 [==============================] - 41s 10s/step - loss: 0.0456 - acc: 0.9909 - val\_loss: 1.5649 - val\_acc: 0.8509

Epoch 134/200

4/4 [==============================] - 37s 9s/step - loss: 0.0184 - acc: 0.9951 - val\_loss: 1.7319 - val\_acc: 0.7456

Epoch 135/200

4/4 [==============================] - 44s 11s/step - loss: 0.0489 - acc: 0.9817 - val\_loss: 2.0320 - val\_acc: 0.7456

Epoch 136/200

4/4 [==============================] - 39s 10s/step - loss: 0.0453 - acc: 0.9831 - val\_loss: 1.3363 - val\_acc: 0.8509

Epoch 137/200

4/4 [==============================] - 38s 9s/step - loss: 0.0153 - acc: 0.9934 - val\_loss: 1.5711 - val\_acc: 0.8202

Epoch 138/200

4/4 [==============================] - 35s 9s/step - loss: 0.0406 - acc: 0.9824 - val\_loss: 0.8119 - val\_acc: 0.8772

Epoch 139/200

4/4 [==============================] - 39s 10s/step - loss: 0.0064 - acc: 1.0000 - val\_loss: 0.3157 - val\_acc: 0.9211

Epoch 140/200

4/4 [==============================] - 37s 9s/step - loss: 0.0619 - acc: 0.9849 - val\_loss: 0.1398 - val\_acc: 0.9737

Epoch 141/200

4/4 [==============================] - 40s 10s/step - loss: 0.0235 - acc: 0.9883 - val\_loss: 0.1190 - val\_acc: 0.9737

Epoch 142/200

4/4 [==============================] - 40s 10s/step - loss: 0.0120 - acc: 0.9973 - val\_loss: 0.2222 - val\_acc: 0.9211

Epoch 143/200

4/4 [==============================] - 37s 9s/step - loss: 0.0203 - acc: 0.9947 - val\_loss: 0.3367 - val\_acc: 0.9211

Epoch 144/200

4/4 [==============================] - 41s 10s/step - loss: 0.0088 - acc: 0.9974 - val\_loss: 0.2593 - val\_acc: 0.9211

Epoch 145/200

4/4 [==============================] - 38s 9s/step - loss: 0.0494 - acc: 0.9788 - val\_loss: 0.0118 - val\_acc: 1.0000

Epoch 146/200

4/4 [==============================] - 37s 9s/step - loss: 0.0043 - acc: 1.0000 - val\_loss: 0.0301 - val\_acc: 0.9825

Epoch 147/200

4/4 [==============================] - 38s 9s/step - loss: 0.0094 - acc: 0.9987 - val\_loss: 0.0748 - val\_acc: 0.9825

Epoch 148/200

4/4 [==============================] - 41s 10s/step - loss: 0.0068 - acc: 0.9987 - val\_loss: 0.1731 - val\_acc: 0.9123

Epoch 149/200

4/4 [==============================] - 40s 10s/step - loss: 0.1098 - acc: 0.9761 - val\_loss: 0.0969 - val\_acc: 0.9737

Epoch 150/200

4/4 [==============================] - 42s 10s/step - loss: 0.0346 - acc: 0.9888 - val\_loss: 1.1897 - val\_acc: 0.7895

Epoch 151/200

4/4 [==============================] - 42s 11s/step - loss: 0.0718 - acc: 0.9782 - val\_loss: 1.0500 - val\_acc: 0.8509

Epoch 152/200

4/4 [==============================] - 37s 9s/step - loss: 0.0593 - acc: 0.9816 - val\_loss: 1.0900 - val\_acc: 0.8158

Epoch 153/200

4/4 [==============================] - 40s 10s/step - loss: 0.0126 - acc: 0.9974 - val\_loss: 2.5211 - val\_acc: 0.6754

Epoch 154/200

4/4 [==============================] - 38s 10s/step - loss: 0.0588 - acc: 0.9788 - val\_loss: 2.6037 - val\_acc: 0.6842

Epoch 155/200

4/4 [==============================] - 37s 9s/step - loss: 0.0139 - acc: 0.9934 - val\_loss: 1.6006 - val\_acc: 0.8553

Epoch 156/200

4/4 [==============================] - 37s 9s/step - loss: 0.0308 - acc: 0.9875 - val\_loss: 1.2702 - val\_acc: 0.8772

Epoch 157/200

4/4 [==============================] - 37s 9s/step - loss: 0.0194 - acc: 0.9947 - val\_loss: 1.6356 - val\_acc: 0.8509

Epoch 158/200

4/4 [==============================] - 37s 9s/step - loss: 0.1140 - acc: 0.9835 - val\_loss: 2.4430 - val\_acc: 0.7719

Epoch 159/200

4/4 [==============================] - 37s 9s/step - loss: 0.0418 - acc: 0.9814 - val\_loss: 2.7018 - val\_acc: 0.7456

Epoch 160/200

4/4 [==============================] - 44s 11s/step - loss: 0.0232 - acc: 0.9870 - val\_loss: 2.1218 - val\_acc: 0.7807

Epoch 161/200

4/4 [==============================] - 42s 10s/step - loss: 0.0561 - acc: 0.9740 - val\_loss: 1.8930 - val\_acc: 0.7807

Epoch 162/200

4/4 [==============================] - 50s 12s/step - loss: 0.0545 - acc: 0.9779 - val\_loss: 2.1669 - val\_acc: 0.6754

Epoch 163/200

4/4 [==============================] - 42s 10s/step - loss: 0.0989 - acc: 0.9605 - val\_loss: 2.2071 - val\_acc: 0.6754

Epoch 164/200

4/4 [==============================] - 43s 11s/step - loss: 0.0411 - acc: 0.9844 - val\_loss: 1.9044 - val\_acc: 0.7939

Epoch 165/200

4/4 [==============================] - 43s 11s/step - loss: 0.0306 - acc: 0.9907 - val\_loss: 1.7935 - val\_acc: 0.8070

Epoch 166/200

4/4 [==============================] - 48s 12s/step - loss: 0.0869 - acc: 0.9684 - val\_loss: 1.5965 - val\_acc: 0.7719

Epoch 167/200

4/4 [==============================] - 47s 12s/step - loss: 0.0160 - acc: 0.9948 - val\_loss: 1.3787 - val\_acc: 0.7895

Epoch 168/200

4/4 [==============================] - 39s 10s/step - loss: 0.0328 - acc: 0.9835 - val\_loss: 1.2836 - val\_acc: 0.6667

Epoch 169/200

4/4 [==============================] - 37s 9s/step - loss: 0.0851 - acc: 0.9832 - val\_loss: 1.0098 - val\_acc: 0.8026

Epoch 170/200

4/4 [==============================] - 42s 10s/step - loss: 0.0175 - acc: 0.9942 - val\_loss: 0.7791 - val\_acc: 0.7763

Epoch 171/200

4/4 [==============================] - 50s 12s/step - loss: 0.0283 - acc: 0.9916 - val\_loss: 0.7601 - val\_acc: 0.7939

Epoch 172/200

4/4 [==============================] - 60s 15s/step - loss: 0.0214 - acc: 0.9948 - val\_loss: 0.7717 - val\_acc: 0.7807

Epoch 173/200

4/4 [==============================] - 47s 12s/step - loss: 0.0150 - acc: 0.9964 - val\_loss: 0.8364 - val\_acc: 0.7456

Epoch 174/200

4/4 [==============================] - 50s 12s/step - loss: 0.0264 - acc: 0.9881 - val\_loss: 0.8521 - val\_acc: 0.7193

Epoch 175/200

4/4 [==============================] - 52s 13s/step - loss: 0.0306 - acc: 0.9862 - val\_loss: 0.7848 - val\_acc: 0.7632

Epoch 176/200

4/4 [==============================] - 49s 12s/step - loss: 0.0945 - acc: 0.9756 - val\_loss: 0.8082 - val\_acc: 0.8947

Epoch 177/200

4/4 [==============================] - 49s 12s/step - loss: 0.0338 - acc: 0.9889 - val\_loss: 1.5019 - val\_acc: 0.7281

Epoch 178/200

4/4 [==============================] - 54s 13s/step - loss: 0.0369 - acc: 0.9896 - val\_loss: 0.8550 - val\_acc: 0.8114

Epoch 179/200

4/4 [==============================] - 55s 14s/step - loss: 0.0485 - acc: 0.9835 - val\_loss: 0.7738 - val\_acc: 0.6842

Epoch 180/200

4/4 [==============================] - 51s 13s/step - loss: 0.0252 - acc: 0.9907 - val\_loss: 0.7081 - val\_acc: 0.8333

Epoch 181/200

4/4 [==============================] - 49s 12s/step - loss: 0.0271 - acc: 0.9921 - val\_loss: 0.7758 - val\_acc: 0.7763

Epoch 182/200

4/4 [==============================] - 50s 12s/step - loss: 0.0127 - acc: 0.9974 - val\_loss: 0.7448 - val\_acc: 0.7982

Epoch 183/200

4/4 [==============================] - 49s 12s/step - loss: 0.0227 - acc: 0.9898 - val\_loss: 0.7833 - val\_acc: 0.7588

Epoch 184/200

4/4 [==============================] - 55s 14s/step - loss: 0.0208 - acc: 0.9883 - val\_loss: 0.5474 - val\_acc: 0.8509

Epoch 185/200

4/4 [==============================] - 53s 13s/step - loss: 0.0065 - acc: 1.0000 - val\_loss: 0.8269 - val\_acc: 0.8509

Epoch 186/200

4/4 [==============================] - 50s 13s/step - loss: 0.0127 - acc: 0.9956 - val\_loss: 0.9002 - val\_acc: 0.8509

Epoch 187/200

4/4 [==============================] - 50s 13s/step - loss: 0.0045 - acc: 1.0000 - val\_loss: 0.9422 - val\_acc: 0.7456

Epoch 188/200

4/4 [==============================] - 41s 10s/step - loss: 0.0041 - acc: 1.0000 - val\_loss: 1.2566 - val\_acc: 0.7719

Epoch 189/200

4/4 [==============================] - 43s 11s/step - loss: 0.0026 - acc: 1.0000 - val\_loss: 1.3930 - val\_acc: 0.7719

Epoch 190/200

4/4 [==============================] - 40s 10s/step - loss: 0.0074 - acc: 0.9974 - val\_loss: 1.3801 - val\_acc: 0.7719

Epoch 191/200

4/4 [==============================] - 41s 10s/step - loss: 0.0060 - acc: 0.9987 - val\_loss: 1.2831 - val\_acc: 0.7895

Epoch 192/200

4/4 [==============================] - 39s 10s/step - loss: 0.0358 - acc: 0.9902 - val\_loss: 1.1299 - val\_acc: 0.7456

Epoch 193/200

4/4 [==============================] - 41s 10s/step - loss: 0.0046 - acc: 0.9987 - val\_loss: 0.9435 - val\_acc: 0.8246

Epoch 194/200

4/4 [==============================] - 43s 11s/step - loss: 0.0217 - acc: 0.9948 - val\_loss: 1.0270 - val\_acc: 0.7982

Epoch 195/200

4/4 [==============================] - 42s 11s/step - loss: 0.0058 - acc: 0.9987 - val\_loss: 1.2821 - val\_acc: 0.7149

Epoch 196/200

4/4 [==============================] - 37s 9s/step - loss: 0.0744 - acc: 0.9852 - val\_loss: 1.0409 - val\_acc: 0.8333

Epoch 197/200

4/4 [==============================] - 39s 10s/step - loss: 0.0276 - acc: 0.9907 - val\_loss: 0.8797 - val\_acc: 0.8421

Epoch 198/200

4/4 [==============================] - 51s 13s/step - loss: 0.0442 - acc: 0.9888 - val\_loss: 1.1295 - val\_acc: 0.8421

Epoch 199/200

4/4 [==============================] - 63s 16s/step - loss: 0.0041 - acc: 1.0000 - val\_loss: 0.8749 - val\_acc: 0.8684

Epoch 200/200

4/4 [==============================] - 50s 12s/step - loss: 0.0182 - acc: 0.9938 - val\_loss: 1.0429 - val\_acc: 0.8158

**256-4\_512-8\_4096-2\_1000-1\_BS64\_Epoch300.png**

Epoch 1/300

4/4 [==============================] - 54s 14s/step - loss: 1.0662 - acc: 0.6164 - val\_loss: 4.7534 - val\_acc: 0.5702

Epoch 2/300

4/4 [==============================] - 40s 10s/step - loss: 2.3773 - acc: 0.6725 - val\_loss: 8.1823 - val\_acc: 0.3772

Epoch 3/300

4/4 [==============================] - 41s 10s/step - loss: 0.5005 - acc: 0.8529 - val\_loss: 5.4761 - val\_acc: 0.5921

Epoch 4/300

4/4 [==============================] - 37s 9s/step - loss: 0.2082 - acc: 0.9207 - val\_loss: 4.4216 - val\_acc: 0.6623

Epoch 5/300

4/4 [==============================] - 38s 9s/step - loss: 0.1423 - acc: 0.9431 - val\_loss: 4.4421 - val\_acc: 0.6053

Epoch 6/300

4/4 [==============================] - 37s 9s/step - loss: 0.1343 - acc: 0.9464 - val\_loss: 2.2869 - val\_acc: 0.7544

Epoch 7/300

4/4 [==============================] - 37s 9s/step - loss: 0.1487 - acc: 0.9384 - val\_loss: 2.0095 - val\_acc: 0.7939

Epoch 8/300

4/4 [==============================] - 40s 10s/step - loss: 0.1743 - acc: 0.9453 - val\_loss: 1.2664 - val\_acc: 0.8421

Epoch 9/300

4/4 [==============================] - 37s 9s/step - loss: 0.1768 - acc: 0.9216 - val\_loss: 1.0394 - val\_acc: 0.9035

Epoch 10/300

4/4 [==============================] - 37s 9s/step - loss: 0.0742 - acc: 0.9726 - val\_loss: 1.2165 - val\_acc: 0.9035

Epoch 11/300

4/4 [==============================] - 37s 9s/step - loss: 0.0930 - acc: 0.9633 - val\_loss: 1.2244 - val\_acc: 0.9035

Epoch 12/300

4/4 [==============================] - 37s 9s/step - loss: 0.1173 - acc: 0.9600 - val\_loss: 1.1183 - val\_acc: 0.9035

Epoch 13/300

4/4 [==============================] - 39s 10s/step - loss: 0.0667 - acc: 0.9740 - val\_loss: 1.5656 - val\_acc: 0.7544

Epoch 14/300

4/4 [==============================] - 34s 9s/step - loss: 0.0819 - acc: 0.9692 - val\_loss: 1.7196 - val\_acc: 0.7544

Epoch 15/300

4/4 [==============================] - 39s 10s/step - loss: 0.0834 - acc: 0.9609 - val\_loss: 1.6502 - val\_acc: 0.7763

Epoch 16/300

4/4 [==============================] - 36s 9s/step - loss: 0.0532 - acc: 0.9765 - val\_loss: 1.3183 - val\_acc: 0.8070

Epoch 17/300

4/4 [==============================] - 37s 9s/step - loss: 0.0869 - acc: 0.9571 - val\_loss: 0.9093 - val\_acc: 0.9211

Epoch 18/300

4/4 [==============================] - 37s 9s/step - loss: 0.0637 - acc: 0.9733 - val\_loss: 0.9057 - val\_acc: 0.8596

Epoch 19/300

4/4 [==============================] - 40s 10s/step - loss: 0.0842 - acc: 0.9674 - val\_loss: 1.0270 - val\_acc: 0.8421

Epoch 20/300

4/4 [==============================] - 37s 9s/step - loss: 0.0530 - acc: 0.9686 - val\_loss: 0.5182 - val\_acc: 0.8728

Epoch 21/300

4/4 [==============================] - 36s 9s/step - loss: 0.0505 - acc: 0.9805 - val\_loss: 0.0464 - val\_acc: 1.0000

Epoch 22/300

4/4 [==============================] - 37s 9s/step - loss: 0.1070 - acc: 0.9588 - val\_loss: 0.3766 - val\_acc: 0.9123

Epoch 23/300

4/4 [==============================] - 40s 10s/step - loss: 0.0312 - acc: 0.9844 - val\_loss: 0.9045 - val\_acc: 0.8728

Epoch 24/300

4/4 [==============================] - 35s 9s/step - loss: 0.0512 - acc: 0.9765 - val\_loss: 0.7571 - val\_acc: 0.8860

Epoch 25/300

4/4 [==============================] - 40s 10s/step - loss: 0.0810 - acc: 0.9635 - val\_loss: 0.3708 - val\_acc: 0.8860

Epoch 26/300

4/4 [==============================] - 37s 9s/step - loss: 0.1377 - acc: 0.9633 - val\_loss: 0.6191 - val\_acc: 0.9035

Epoch 27/300

4/4 [==============================] - 37s 9s/step - loss: 0.1936 - acc: 0.9397 - val\_loss: 1.1521 - val\_acc: 0.7939

Epoch 28/300

4/4 [==============================] - 40s 10s/step - loss: 0.1943 - acc: 0.9375 - val\_loss: 1.3779 - val\_acc: 0.7456

Epoch 29/300

4/4 [==============================] - 2986s 747s/step - loss: 0.2589 - acc: 0.9257 - val\_loss: 1.5693 - val\_acc: 0.8333

Epoch 30/300

4/4 [==============================] - 39s 10s/step - loss: 0.0845 - acc: 0.9601 - val\_loss: 0.9922 - val\_acc: 0.9035

Epoch 31/300

4/4 [==============================] - 42s 10s/step - loss: 0.1039 - acc: 0.9663 - val\_loss: 1.1986 - val\_acc: 0.8333

Epoch 32/300

4/4 [==============================] - 43s 11s/step - loss: 0.0689 - acc: 0.9792 - val\_loss: 1.5839 - val\_acc: 0.8333

Epoch 33/300

4/4 [==============================] - 44s 11s/step - loss: 0.0846 - acc: 0.9573 - val\_loss: 1.4513 - val\_acc: 0.8333

Epoch 34/300

4/4 [==============================] - 53s 13s/step - loss: 0.0512 - acc: 0.9818 - val\_loss: 1.0217 - val\_acc: 0.8333

Epoch 35/300

4/4 [==============================] - 56s 14s/step - loss: 0.0509 - acc: 0.9804 - val\_loss: 0.9724 - val\_acc: 0.8333

Epoch 36/300

4/4 [==============================] - 63s 16s/step - loss: 0.1363 - acc: 0.9763 - val\_loss: 1.5560 - val\_acc: 0.8246

Epoch 37/300

4/4 [==============================] - 68s 17s/step - loss: 0.0738 - acc: 0.9735 - val\_loss: 1.6845 - val\_acc: 0.8246

Epoch 38/300

4/4 [==============================] - 74s 19s/step - loss: 0.1044 - acc: 0.9792 - val\_loss: 1.6192 - val\_acc: 0.8246

Epoch 39/300

4/4 [==============================] - 73s 18s/step - loss: 0.0298 - acc: 0.9911 - val\_loss: 1.4381 - val\_acc: 0.8684

Epoch 40/300

4/4 [==============================] - 78s 20s/step - loss: 0.0550 - acc: 0.9815 - val\_loss: 0.7440 - val\_acc: 0.9035

Epoch 41/300

4/4 [==============================] - 76s 19s/step - loss: 0.0329 - acc: 0.9858 - val\_loss: 0.9749 - val\_acc: 0.8772

Epoch 42/300

4/4 [==============================] - 76s 19s/step - loss: 0.0753 - acc: 0.9744 - val\_loss: 0.8318 - val\_acc: 0.9035

Epoch 43/300

4/4 [==============================] - 86s 22s/step - loss: 0.0501 - acc: 0.9792 - val\_loss: 1.2325 - val\_acc: 0.8246

Epoch 44/300

4/4 [==============================] - 74s 18s/step - loss: 0.0673 - acc: 0.9725 - val\_loss: 0.8980 - val\_acc: 0.9035

Epoch 45/300

4/4 [==============================] - 85s 21s/step - loss: 0.0619 - acc: 0.9818 - val\_loss: 0.6588 - val\_acc: 0.9298

Epoch 46/300

4/4 [==============================] - 79s 20s/step - loss: 0.0709 - acc: 0.9686 - val\_loss: 0.6713 - val\_acc: 0.9298

Epoch 47/300

4/4 [==============================] - 78s 20s/step - loss: 0.0571 - acc: 0.9715 - val\_loss: 0.4988 - val\_acc: 0.9474

Epoch 48/300

4/4 [==============================] - 85s 21s/step - loss: 0.0515 - acc: 0.9818 - val\_loss: 0.5177 - val\_acc: 0.9474

Epoch 49/300

4/4 [==============================] - 74s 19s/step - loss: 0.0823 - acc: 0.9679 - val\_loss: 1.4639 - val\_acc: 0.7719

Epoch 50/300

4/4 [==============================] - 86s 22s/step - loss: 0.0611 - acc: 0.9727 - val\_loss: 1.3197 - val\_acc: 0.7719

Epoch 51/300

4/4 [==============================] - 87s 22s/step - loss: 0.0242 - acc: 0.9909 - val\_loss: 0.9791 - val\_acc: 0.8158

Epoch 52/300

4/4 [==============================] - 82s 21s/step - loss: 0.0133 - acc: 0.9947 - val\_loss: 0.8171 - val\_acc: 0.8158

Epoch 53/300

4/4 [==============================] - 82s 21s/step - loss: 0.0550 - acc: 0.9827 - val\_loss: 0.6765 - val\_acc: 0.8421

Epoch 54/300

4/4 [==============================] - 83s 21s/step - loss: 0.0717 - acc: 0.9790 - val\_loss: 0.6157 - val\_acc: 0.8772

Epoch 55/300

4/4 [==============================] - 83s 21s/step - loss: 0.0494 - acc: 0.9880 - val\_loss: 0.5278 - val\_acc: 0.8772

Epoch 56/300

4/4 [==============================] - 88s 22s/step - loss: 0.0361 - acc: 0.9844 - val\_loss: 0.5117 - val\_acc: 0.8947

Epoch 57/300

4/4 [==============================] - 77s 19s/step - loss: 0.0953 - acc: 0.9769 - val\_loss: 0.5633 - val\_acc: 0.8421

Epoch 58/300

4/4 [==============================] - 88s 22s/step - loss: 0.0410 - acc: 0.9857 - val\_loss: 0.4818 - val\_acc: 0.9474

Epoch 59/300

4/4 [==============================] - 83s 21s/step - loss: 0.0569 - acc: 0.9827 - val\_loss: 0.4794 - val\_acc: 0.9474

Epoch 60/300

4/4 [==============================] - 82s 21s/step - loss: 0.0382 - acc: 0.9863 - val\_loss: 0.4236 - val\_acc: 0.9474

Epoch 61/300

4/4 [==============================] - 82s 21s/step - loss: 0.0442 - acc: 0.9826 - val\_loss: 0.4665 - val\_acc: 0.9474

Epoch 62/300

4/4 [==============================] - 89s 22s/step - loss: 0.0434 - acc: 0.9792 - val\_loss: 0.6229 - val\_acc: 0.9211

Epoch 63/300

4/4 [==============================] - 83s 21s/step - loss: 0.0116 - acc: 0.9964 - val\_loss: 0.8599 - val\_acc: 0.8772

Epoch 64/300

4/4 [==============================] - 83s 21s/step - loss: 0.0441 - acc: 0.9898 - val\_loss: 1.2010 - val\_acc: 0.7719

Epoch 65/300

4/4 [==============================] - 82s 21s/step - loss: 0.1174 - acc: 0.9758 - val\_loss: 0.7758 - val\_acc: 0.8158

Epoch 66/300

4/4 [==============================] - 81s 20s/step - loss: 0.0435 - acc: 0.9840 - val\_loss: 0.4751 - val\_acc: 0.9474

Epoch 67/300

4/4 [==============================] - 88s 22s/step - loss: 0.0587 - acc: 0.9896 - val\_loss: 0.4764 - val\_acc: 0.9474

Epoch 68/300

4/4 [==============================] - 82s 21s/step - loss: 0.0183 - acc: 0.9951 - val\_loss: 0.4599 - val\_acc: 0.9474

Epoch 69/300

4/4 [==============================] - 83s 21s/step - loss: 0.0577 - acc: 0.9775 - val\_loss: 0.2634 - val\_acc: 0.9474

Epoch 70/300

4/4 [==============================] - 82s 21s/step - loss: 0.0268 - acc: 0.9881 - val\_loss: 0.2231 - val\_acc: 0.9474

Epoch 71/300

4/4 [==============================] - 82s 20s/step - loss: 0.0183 - acc: 0.9964 - val\_loss: 0.4418 - val\_acc: 0.8947

Epoch 72/300

4/4 [==============================] - 83s 21s/step - loss: 0.0248 - acc: 0.9921 - val\_loss: 0.9723 - val\_acc: 0.8509

Epoch 73/300

4/4 [==============================] - 89s 22s/step - loss: 0.0067 - acc: 1.0000 - val\_loss: 1.2761 - val\_acc: 0.8377

Epoch 74/300

4/4 [==============================] - 90s 23s/step - loss: 0.0081 - acc: 0.9987 - val\_loss: 1.2817 - val\_acc: 0.8596

Epoch 75/300

4/4 [==============================] - 86s 21s/step - loss: 0.0059 - acc: 1.0000 - val\_loss: 0.9717 - val\_acc: 0.9123

Epoch 76/300

4/4 [==============================] - 85s 21s/step - loss: 0.0080 - acc: 0.9974 - val\_loss: 0.8884 - val\_acc: 0.9211

Epoch 77/300

4/4 [==============================] - 92s 23s/step - loss: 0.0021 - acc: 1.0000 - val\_loss: 0.9279 - val\_acc: 0.8947

Epoch 78/300

4/4 [==============================] - 84s 21s/step - loss: 0.0456 - acc: 0.9921 - val\_loss: 0.5564 - val\_acc: 0.9211

Epoch 79/300

4/4 [==============================] - 82s 21s/step - loss: 0.0108 - acc: 0.9951 - val\_loss: 0.8851 - val\_acc: 0.9035

Epoch 80/300

4/4 [==============================] - 82s 20s/step - loss: 0.0608 - acc: 0.9849 - val\_loss: 0.9862 - val\_acc: 0.8860

Epoch 81/300

4/4 [==============================] - 82s 20s/step - loss: 0.0278 - acc: 0.9907 - val\_loss: 2.3176 - val\_acc: 0.7632

Epoch 82/300

4/4 [==============================] - 82s 21s/step - loss: 0.0866 - acc: 0.9822 - val\_loss: 3.8920 - val\_acc: 0.6579

Epoch 83/300

4/4 [==============================] - 89s 22s/step - loss: 0.1717 - acc: 0.9740 - val\_loss: 4.6851 - val\_acc: 0.5263

Epoch 84/300

4/4 [==============================] - 84s 21s/step - loss: 0.0319 - acc: 0.9964 - val\_loss: 4.1795 - val\_acc: 0.5263

Epoch 85/300

4/4 [==============================] - 83s 21s/step - loss: 0.2044 - acc: 0.9577 - val\_loss: 3.1987 - val\_acc: 0.5263

Epoch 86/300

4/4 [==============================] - 82s 20s/step - loss: 0.1245 - acc: 0.9588 - val\_loss: 4.0383 - val\_acc: 0.5526

Epoch 87/300

4/4 [==============================] - 91s 23s/step - loss: 0.2445 - acc: 0.9635 - val\_loss: 2.3386 - val\_acc: 0.6140

Epoch 88/300

4/4 [==============================] - 84s 21s/step - loss: 0.0857 - acc: 0.9739 - val\_loss: 1.0601 - val\_acc: 0.6579

Epoch 89/300

4/4 [==============================] - 84s 21s/step - loss: 0.0729 - acc: 0.9756 - val\_loss: 1.6883 - val\_acc: 0.7018

Epoch 90/300

4/4 [==============================] - 84s 21s/step - loss: 0.0625 - acc: 0.9836 - val\_loss: 1.5048 - val\_acc: 0.7368

Epoch 91/300

4/4 [==============================] - 84s 21s/step - loss: 0.0421 - acc: 0.9841 - val\_loss: 1.5081 - val\_acc: 0.7018

Epoch 92/300

4/4 [==============================] - 83s 21s/step - loss: 0.0988 - acc: 0.9746 - val\_loss: 1.0887 - val\_acc: 0.7456

Epoch 93/300

4/4 [==============================] - 83s 21s/step - loss: 0.0430 - acc: 0.9787 - val\_loss: 1.3706 - val\_acc: 0.6842

Epoch 94/300

4/4 [==============================] - 89s 22s/step - loss: 0.0568 - acc: 0.9727 - val\_loss: 1.4240 - val\_acc: 0.6842

Epoch 95/300

4/4 [==============================] - 82s 20s/step - loss: 0.0275 - acc: 0.9889 - val\_loss: 1.6018 - val\_acc: 0.5921

Epoch 96/300

4/4 [==============================] - 81s 20s/step - loss: 0.0275 - acc: 0.9818 - val\_loss: 1.9254 - val\_acc: 0.5965

Epoch 97/300

4/4 [==============================] - 82s 20s/step - loss: 0.0306 - acc: 0.9828 - val\_loss: 1.6769 - val\_acc: 0.6316

Epoch 98/300

4/4 [==============================] - 90s 22s/step - loss: 0.0325 - acc: 0.9831 - val\_loss: 1.2052 - val\_acc: 0.6228

Epoch 99/300

4/4 [==============================] - 76s 19s/step - loss: 0.0138 - acc: 0.9968 - val\_loss: 1.3255 - val\_acc: 0.6667

Epoch 100/300

4/4 [==============================] - 89s 22s/step - loss: 0.0441 - acc: 0.9831 - val\_loss: 1.0140 - val\_acc: 0.6404

Epoch 101/300

4/4 [==============================] - 90s 23s/step - loss: 0.0112 - acc: 0.9987 - val\_loss: 1.0052 - val\_acc: 0.6579

Epoch 102/300

4/4 [==============================] - 77s 19s/step - loss: 0.0455 - acc: 0.9895 - val\_loss: 1.1277 - val\_acc: 0.6667

Epoch 103/300

4/4 [==============================] - 82s 21s/step - loss: 0.0087 - acc: 0.9974 - val\_loss: 1.3638 - val\_acc: 0.6667

Epoch 104/300

4/4 [==============================] - 82s 20s/step - loss: 0.0076 - acc: 0.9960 - val\_loss: 2.3944 - val\_acc: 0.6667

Epoch 105/300

4/4 [==============================] - 89s 22s/step - loss: 0.0419 - acc: 0.9922 - val\_loss: 3.0318 - val\_acc: 0.7368

Epoch 106/300

4/4 [==============================] - 81s 20s/step - loss: 0.0238 - acc: 0.9974 - val\_loss: 3.0435 - val\_acc: 0.7544

Epoch 107/300

4/4 [==============================] - 83s 21s/step - loss: 0.0055 - acc: 0.9987 - val\_loss: 1.3982 - val\_acc: 0.6842

Epoch 108/300

4/4 [==============================] - 84s 21s/step - loss: 0.0444 - acc: 0.9921 - val\_loss: 0.7158 - val\_acc: 0.7719

Epoch 109/300

4/4 [==============================] - 89s 22s/step - loss: 0.0209 - acc: 0.9948 - val\_loss: 0.5620 - val\_acc: 0.8596

Epoch 110/300

4/4 [==============================] - 83s 21s/step - loss: 0.0062 - acc: 0.9987 - val\_loss: 0.8697 - val\_acc: 0.8947

Epoch 111/300

4/4 [==============================] - 82s 20s/step - loss: 0.0123 - acc: 0.9987 - val\_loss: 0.4383 - val\_acc: 0.9561

Epoch 112/300

4/4 [==============================] - 83s 21s/step - loss: 0.0086 - acc: 0.9974 - val\_loss: 0.4680 - val\_acc: 0.9561

Epoch 113/300

4/4 [==============================] - 83s 21s/step - loss: 0.0493 - acc: 0.9910 - val\_loss: 0.6717 - val\_acc: 0.9211

Epoch 114/300

4/4 [==============================] - 83s 21s/step - loss: 0.0039 - acc: 1.0000 - val\_loss: 0.6766 - val\_acc: 0.9474

Epoch 115/300

4/4 [==============================] - 92s 23s/step - loss: 0.0623 - acc: 0.9896 - val\_loss: 0.8472 - val\_acc: 0.8947

Epoch 116/300

4/4 [==============================] - 85s 21s/step - loss: 0.0147 - acc: 0.9938 - val\_loss: 0.3997 - val\_acc: 0.9474

Epoch 117/300

4/4 [==============================] - 83s 21s/step - loss: 0.0365 - acc: 0.9875 - val\_loss: 0.3022 - val\_acc: 0.9649

Epoch 118/300

4/4 [==============================] - 88s 22s/step - loss: 0.0455 - acc: 0.9831 - val\_loss: 0.4449 - val\_acc: 0.9211

Epoch 119/300

4/4 [==============================] - 82s 21s/step - loss: 0.0369 - acc: 0.9921 - val\_loss: 1.3461 - val\_acc: 0.6404

Epoch 120/300

4/4 [==============================] - 81s 20s/step - loss: 0.0060 - acc: 0.9987 - val\_loss: 1.5132 - val\_acc: 0.6667

Epoch 121/300

4/4 [==============================] - 81s 20s/step - loss: 0.0203 - acc: 0.9938 - val\_loss: 1.5094 - val\_acc: 0.6667

Epoch 122/300

4/4 [==============================] - 87s 22s/step - loss: 0.0480 - acc: 0.9857 - val\_loss: 2.0596 - val\_acc: 0.6667

Epoch 123/300

4/4 [==============================] - 81s 20s/step - loss: 0.0109 - acc: 0.9960 - val\_loss: 0.8448 - val\_acc: 0.7719

Epoch 124/300

4/4 [==============================] - 81s 20s/step - loss: 0.0171 - acc: 0.9938 - val\_loss: 0.0172 - val\_acc: 1.0000

Epoch 125/300

4/4 [==============================] - 81s 20s/step - loss: 0.0078 - acc: 1.0000 - val\_loss: 0.0098 - val\_acc: 1.0000

Epoch 126/300

4/4 [==============================] - 87s 22s/step - loss: 0.0090 - acc: 0.9974 - val\_loss: 0.2271 - val\_acc: 0.9825

Epoch 127/300

4/4 [==============================] - 77s 19s/step - loss: 0.0042 - acc: 1.0000 - val\_loss: 0.2636 - val\_acc: 0.9561

Epoch 128/300

4/4 [==============================] - 87s 22s/step - loss: 0.0109 - acc: 0.9974 - val\_loss: 0.2509 - val\_acc: 0.9605

Epoch 129/300

4/4 [==============================] - 82s 21s/step - loss: 0.0025 - acc: 1.0000 - val\_loss: 0.2391 - val\_acc: 0.9825

Epoch 130/300

4/4 [==============================] - 82s 21s/step - loss: 0.0646 - acc: 0.9921 - val\_loss: 0.1535 - val\_acc: 0.9737

Epoch 131/300

4/4 [==============================] - 82s 20s/step - loss: 0.0220 - acc: 0.9947 - val\_loss: 4.9772 - val\_acc: 0.5789

Epoch 132/300

4/4 [==============================] - 83s 21s/step - loss: 0.1538 - acc: 0.9682 - val\_loss: 5.1918 - val\_acc: 0.5351

Epoch 133/300

4/4 [==============================] - 89s 22s/step - loss: 0.0207 - acc: 0.9948 - val\_loss: 4.7472 - val\_acc: 0.4912

Epoch 134/300

4/4 [==============================] - 83s 21s/step - loss: 0.0518 - acc: 0.9921 - val\_loss: 3.3955 - val\_acc: 0.5088

Epoch 135/300

4/4 [==============================] - 85s 21s/step - loss: 0.0556 - acc: 0.9921 - val\_loss: 3.2110 - val\_acc: 0.5351

Epoch 136/300

4/4 [==============================] - 88s 22s/step - loss: 0.0383 - acc: 0.9935 - val\_loss: 3.1211 - val\_acc: 0.5351

Epoch 137/300

4/4 [==============================] - 84s 21s/step - loss: 0.0320 - acc: 0.9960 - val\_loss: 3.6993 - val\_acc: 0.5263

Epoch 138/300

4/4 [==============================] - 78s 20s/step - loss: 0.0696 - acc: 0.9914 - val\_loss: 4.6673 - val\_acc: 0.5175

Epoch 139/300

4/4 [==============================] - 96s 24s/step - loss: 0.0135 - acc: 0.9974 - val\_loss: 5.2886 - val\_acc: 0.5088

Epoch 140/300

4/4 [==============================] - 88s 22s/step - loss: 0.0222 - acc: 0.9947 - val\_loss: 5.1511 - val\_acc: 0.5175

Epoch 141/300

4/4 [==============================] - 98s 24s/step - loss: 0.0725 - acc: 0.9805 - val\_loss: 3.9362 - val\_acc: 0.6053

Epoch 142/300

4/4 [==============================] - 81s 20s/step - loss: 0.0550 - acc: 0.9818 - val\_loss: 3.1644 - val\_acc: 0.5263

Epoch 143/300

4/4 [==============================] - 85s 21s/step - loss: 0.0333 - acc: 0.9881 - val\_loss: 2.5706 - val\_acc: 0.6316

Epoch 144/300

4/4 [==============================] - 91s 23s/step - loss: 0.1143 - acc: 0.9648 - val\_loss: 5.1786 - val\_acc: 0.5263

Epoch 145/300

4/4 [==============================] - 85s 21s/step - loss: 0.0145 - acc: 0.9974 - val\_loss: 5.6041 - val\_acc: 0.5175

Epoch 146/300

4/4 [==============================] - 85s 21s/step - loss: 0.0111 - acc: 0.9987 - val\_loss: 5.9123 - val\_acc: 0.5351

Epoch 147/300

4/4 [==============================] - 85s 21s/step - loss: 0.0133 - acc: 0.9987 - val\_loss: 6.2080 - val\_acc: 0.5351

Epoch 148/300

4/4 [==============================] - 91s 23s/step - loss: 0.0245 - acc: 0.9896 - val\_loss: 6.0380 - val\_acc: 0.5439

Epoch 149/300

4/4 [==============================] - 86s 21s/step - loss: 0.0334 - acc: 0.9938 - val\_loss: 5.9561 - val\_acc: 0.5175

Epoch 150/300

4/4 [==============================] - 85s 21s/step - loss: 0.0029 - acc: 1.0000 - val\_loss: 5.8443 - val\_acc: 0.5351

Epoch 151/300

4/4 [==============================] - 85s 21s/step - loss: 0.0334 - acc: 0.9884 - val\_loss: 5.9031 - val\_acc: 0.5351

Epoch 152/300

4/4 [==============================] - 85s 21s/step - loss: 0.0056 - acc: 0.9982 - val\_loss: 5.8216 - val\_acc: 0.5263

Epoch 153/300

4/4 [==============================] - 89s 22s/step - loss: 0.0092 - acc: 0.9974 - val\_loss: 5.7149 - val\_acc: 0.5263

Epoch 154/300

4/4 [==============================] - 83s 21s/step - loss: 0.0032 - acc: 1.0000 - val\_loss: 5.5966 - val\_acc: 0.5263

Epoch 155/300

4/4 [==============================] - 84s 21s/step - loss: 0.0234 - acc: 0.9934 - val\_loss: 5.3317 - val\_acc: 0.5526

Epoch 156/300

4/4 [==============================] - 83s 21s/step - loss: 0.0367 - acc: 0.9924 - val\_loss: 5.8643 - val\_acc: 0.5263

Epoch 157/300

4/4 [==============================] - 84s 21s/step - loss: 0.0259 - acc: 0.9894 - val\_loss: 5.8751 - val\_acc: 0.5263

Epoch 158/300

4/4 [==============================] - 84s 21s/step - loss: 0.0035 - acc: 1.0000 - val\_loss: 5.8259 - val\_acc: 0.5263

Epoch 159/300

4/4 [==============================] - 83s 21s/step - loss: 0.0147 - acc: 0.9934 - val\_loss: 5.7864 - val\_acc: 0.5263

Epoch 160/300

4/4 [==============================] - 88s 22s/step - loss: 0.0025 - acc: 1.0000 - val\_loss: 5.6623 - val\_acc: 0.5263

Epoch 161/300

4/4 [==============================] - 88s 22s/step - loss: 0.0273 - acc: 0.9935 - val\_loss: 5.5165 - val\_acc: 0.5263

Epoch 162/300

4/4 [==============================] - 78s 20s/step - loss: 0.0027 - acc: 0.9986 - val\_loss: 5.3552 - val\_acc: 0.5263

Epoch 163/300

4/4 [==============================] - 82s 20s/step - loss: 0.0316 - acc: 0.9938 - val\_loss: 5.1767 - val\_acc: 0.5351

Epoch 164/300

4/4 [==============================] - 87s 22s/step - loss: 0.0029 - acc: 1.0000 - val\_loss: 4.9821 - val\_acc: 0.5351

Epoch 165/300

4/4 [==============================] - 82s 21s/step - loss: 0.0071 - acc: 0.9974 - val\_loss: 4.8118 - val\_acc: 0.5351

Epoch 166/300

4/4 [==============================] - 81s 20s/step - loss: 0.0053 - acc: 0.9987 - val\_loss: 4.7777 - val\_acc: 0.5351

Epoch 167/300

4/4 [==============================] - 88s 22s/step - loss: 0.0013 - acc: 1.0000 - val\_loss: 4.9997 - val\_acc: 0.5351

Epoch 168/300

4/4 [==============================] - 82s 20s/step - loss: 0.0013 - acc: 1.0000 - val\_loss: 5.1017 - val\_acc: 0.5351

Epoch 169/300

4/4 [==============================] - 83s 21s/step - loss: 9.3736e-04 - acc: 1.0000 - val\_loss: 5.1341 - val\_acc: 0.5351

Epoch 170/300

4/4 [==============================] - 82s 20s/step - loss: 0.0012 - acc: 1.0000 - val\_loss: 5.1314 - val\_acc: 0.5351

Epoch 171/300

4/4 [==============================] - 81s 20s/step - loss: 0.0014 - acc: 1.0000 - val\_loss: 5.0919 - val\_acc: 0.5351

Epoch 172/300

4/4 [==============================] - 88s 22s/step - loss: 0.0011 - acc: 1.0000 - val\_loss: 5.0266 - val\_acc: 0.5351

Epoch 173/300

4/4 [==============================] - 82s 20s/step - loss: 0.0011 - acc: 1.0000 - val\_loss: 4.9331 - val\_acc: 0.5351

Epoch 174/300

4/4 [==============================] - 82s 20s/step - loss: 0.0015 - acc: 1.0000 - val\_loss: 4.8956 - val\_acc: 0.5351

Epoch 175/300

4/4 [==============================] - 82s 21s/step - loss: 0.0018 - acc: 1.0000 - val\_loss: 4.8192 - val\_acc: 0.5351

Epoch 176/300

4/4 [==============================] - 82s 21s/step - loss: 0.0065 - acc: 0.9974 - val\_loss: 4.6374 - val\_acc: 0.5351

Epoch 177/300

4/4 [==============================] - 82s 20s/step - loss: 0.0054 - acc: 0.9974 - val\_loss: 4.2516 - val\_acc: 0.5351

Epoch 178/300

4/4 [==============================] - 87s 22s/step - loss: 0.0011 - acc: 1.0000 - val\_loss: 3.3177 - val\_acc: 0.5789

Epoch 179/300

4/4 [==============================] - 82s 21s/step - loss: 0.0193 - acc: 0.9934 - val\_loss: 2.7958 - val\_acc: 0.5614

Epoch 180/300

4/4 [==============================] - 82s 21s/step - loss: 0.0025 - acc: 1.0000 - val\_loss: 1.6653 - val\_acc: 0.7281

Epoch 181/300

4/4 [==============================] - 81s 20s/step - loss: 0.0054 - acc: 0.9974 - val\_loss: 1.0622 - val\_acc: 0.8509

Epoch 182/300

4/4 [==============================] - 81s 20s/step - loss: 7.7883e-04 - acc: 1.0000 - val\_loss: 0.6987 - val\_acc: 0.9035

Epoch 183/300

4/4 [==============================] - 82s 20s/step - loss: 7.4831e-04 - acc: 1.0000 - val\_loss: 0.5301 - val\_acc: 0.9035

Epoch 184/300

4/4 [==============================] - 87s 22s/step - loss: 0.0014 - acc: 1.0000 - val\_loss: 0.3052 - val\_acc: 0.9211

Epoch 185/300

4/4 [==============================] - 82s 20s/step - loss: 6.6020e-04 - acc: 1.0000 - val\_loss: 0.2422 - val\_acc: 0.9211

Epoch 186/300

4/4 [==============================] - 82s 20s/step - loss: 8.0452e-04 - acc: 1.0000 - val\_loss: 0.1839 - val\_acc: 0.9211

Epoch 187/300

4/4 [==============================] - 83s 21s/step - loss: 7.1035e-04 - acc: 1.0000 - val\_loss: 0.1439 - val\_acc: 0.9211

Epoch 188/300

4/4 [==============================] - 81s 20s/step - loss: 0.0984 - acc: 0.9807 - val\_loss: 0.2294 - val\_acc: 0.9649

Epoch 189/300

4/4 [==============================] - 87s 22s/step - loss: 0.0443 - acc: 0.9870 - val\_loss: 1.8491 - val\_acc: 0.7807

Epoch 190/300

4/4 [==============================] - 82s 20s/step - loss: 0.0761 - acc: 0.9765 - val\_loss: 1.3352 - val\_acc: 0.9035

Epoch 191/300

4/4 [==============================] - 81s 20s/step - loss: 0.0243 - acc: 0.9911 - val\_loss: 1.2533 - val\_acc: 0.8070

Epoch 192/300

4/4 [==============================] - 81s 20s/step - loss: 0.0169 - acc: 0.9934 - val\_loss: 1.5970 - val\_acc: 0.7851

Epoch 193/300

4/4 [==============================] - 82s 20s/step - loss: 0.0284 - acc: 0.9881 - val\_loss: 1.5924 - val\_acc: 0.7456

Epoch 194/300

4/4 [==============================] - 88s 22s/step - loss: 0.0263 - acc: 0.9922 - val\_loss: 1.1233 - val\_acc: 0.8860

Epoch 195/300

4/4 [==============================] - 81s 20s/step - loss: 0.0124 - acc: 0.9960 - val\_loss: 0.9438 - val\_acc: 0.8947

Epoch 196/300

4/4 [==============================] - 81s 20s/step - loss: 0.0040 - acc: 1.0000 - val\_loss: 0.6806 - val\_acc: 0.9386

Epoch 197/300

4/4 [==============================] - 82s 20s/step - loss: 0.0808 - acc: 0.9870 - val\_loss: 0.6858 - val\_acc: 0.9474

Epoch 198/300

4/4 [==============================] - 83s 21s/step - loss: 0.0023 - acc: 1.0000 - val\_loss: 0.0350 - val\_acc: 0.9825

Epoch 199/300

4/4 [==============================] - 87s 22s/step - loss: 0.0015 - acc: 1.0000 - val\_loss: 1.3566 - val\_acc: 0.8421

Epoch 200/300

4/4 [==============================] - 81s 20s/step - loss: 0.0285 - acc: 0.9911 - val\_loss: 0.5450 - val\_acc: 0.9474

Epoch 201/300

4/4 [==============================] - 81s 20s/step - loss: 0.0635 - acc: 0.9832 - val\_loss: 1.2675 - val\_acc: 0.8596

Epoch 202/300

4/4 [==============================] - 82s 21s/step - loss: 0.0301 - acc: 0.9964 - val\_loss: 1.3156 - val\_acc: 0.8596

Epoch 203/300

4/4 [==============================] - 87s 22s/step - loss: 0.0537 - acc: 0.9805 - val\_loss: 1.9913 - val\_acc: 0.7544

Epoch 204/300

4/4 [==============================] - 83s 21s/step - loss: 0.0572 - acc: 0.9828 - val\_loss: 2.2035 - val\_acc: 0.7281

Epoch 205/300

4/4 [==============================] - 82s 20s/step - loss: 0.0281 - acc: 0.9903 - val\_loss: 2.6319 - val\_acc: 0.7281

Epoch 206/300

4/4 [==============================] - 86s 22s/step - loss: 0.0624 - acc: 0.9857 - val\_loss: 1.6577 - val\_acc: 0.7544

Epoch 207/300

4/4 [==============================] - 75s 19s/step - loss: 0.0685 - acc: 0.9837 - val\_loss: 1.3791 - val\_acc: 0.8947

Epoch 208/300

4/4 [==============================] - 87s 22s/step - loss: 0.0347 - acc: 0.9922 - val\_loss: 1.6696 - val\_acc: 0.8509

Epoch 209/300

4/4 [==============================] - 82s 20s/step - loss: 0.0730 - acc: 0.9767 - val\_loss: 1.4013 - val\_acc: 0.8596

Epoch 210/300

4/4 [==============================] - 81s 20s/step - loss: 0.3174 - acc: 0.9308 - val\_loss: 1.2894 - val\_acc: 0.8772

Epoch 211/300

4/4 [==============================] - 80s 20s/step - loss: 0.0875 - acc: 0.9725 - val\_loss: 1.3889 - val\_acc: 0.8333

Epoch 212/300

4/4 [==============================] - 81s 20s/step - loss: 0.0638 - acc: 0.9808 - val\_loss: 0.3991 - val\_acc: 0.9035

Epoch 213/300

4/4 [==============================] - 87s 22s/step - loss: 0.0367 - acc: 0.9922 - val\_loss: 0.6141 - val\_acc: 0.7456

Epoch 214/300

4/4 [==============================] - 81s 20s/step - loss: 0.0545 - acc: 0.9854 - val\_loss: 1.0115 - val\_acc: 0.7719

Epoch 215/300

4/4 [==============================] - 82s 20s/step - loss: 0.0164 - acc: 0.9974 - val\_loss: 1.7563 - val\_acc: 0.7456

Epoch 216/300

4/4 [==============================] - 81s 20s/step - loss: 0.0194 - acc: 0.9947 - val\_loss: 2.1318 - val\_acc: 0.7544

Epoch 217/300

4/4 [==============================] - 88s 22s/step - loss: 0.0048 - acc: 1.0000 - val\_loss: 2.5790 - val\_acc: 0.7281

Epoch 218/300

4/4 [==============================] - 83s 21s/step - loss: 0.0101 - acc: 0.9960 - val\_loss: 3.0658 - val\_acc: 0.6930

Epoch 219/300

4/4 [==============================] - 82s 20s/step - loss: 0.0030 - acc: 1.0000 - val\_loss: 3.6648 - val\_acc: 0.6754

Epoch 220/300

4/4 [==============================] - 82s 21s/step - loss: 0.0068 - acc: 0.9964 - val\_loss: 4.0696 - val\_acc: 0.6667

Epoch 221/300

4/4 [==============================] - 81s 20s/step - loss: 0.0165 - acc: 0.9938 - val\_loss: 4.2401 - val\_acc: 0.5789

Epoch 222/300

4/4 [==============================] - 82s 21s/step - loss: 0.0283 - acc: 0.9934 - val\_loss: 2.8911 - val\_acc: 0.7456

Epoch 223/300

4/4 [==============================] - 83s 21s/step - loss: 0.0037 - acc: 1.0000 - val\_loss: 2.4159 - val\_acc: 0.7719

Epoch 224/300

4/4 [==============================] - 88s 22s/step - loss: 0.0402 - acc: 0.9948 - val\_loss: 2.6665 - val\_acc: 0.6842

Epoch 225/300

4/4 [==============================] - 82s 21s/step - loss: 0.0017 - acc: 1.0000 - val\_loss: 2.4418 - val\_acc: 0.6842

Epoch 226/300

4/4 [==============================] - 88s 22s/step - loss: 0.0404 - acc: 0.9948 - val\_loss: 2.5730 - val\_acc: 0.6667

Epoch 227/300

4/4 [==============================] - 77s 19s/step - loss: 0.0402 - acc: 0.9937 - val\_loss: 2.7371 - val\_acc: 0.6491

Epoch 228/300

4/4 [==============================] - 82s 21s/step - loss: 0.0662 - acc: 0.9796 - val\_loss: 0.7893 - val\_acc: 0.8509

Epoch 229/300

4/4 [==============================] - 89s 22s/step - loss: 0.0728 - acc: 0.9792 - val\_loss: 0.1900 - val\_acc: 0.9561

Epoch 230/300

4/4 [==============================] - 83s 21s/step - loss: 0.0721 - acc: 0.9794 - val\_loss: 0.0407 - val\_acc: 0.9825

Epoch 231/300

4/4 [==============================] - 81s 20s/step - loss: 0.0225 - acc: 0.9960 - val\_loss: 0.1930 - val\_acc: 0.9825

Epoch 232/300

4/4 [==============================] - 88s 22s/step - loss: 0.0244 - acc: 0.9935 - val\_loss: 0.1831 - val\_acc: 0.9825

Epoch 233/300

4/4 [==============================] - 77s 19s/step - loss: 0.0437 - acc: 0.9773 - val\_loss: 0.0368 - val\_acc: 0.9825

Epoch 234/300

4/4 [==============================] - 88s 22s/step - loss: 0.0148 - acc: 0.9948 - val\_loss: 0.0012 - val\_acc: 1.0000

Epoch 235/300

4/4 [==============================] - 82s 20s/step - loss: 0.0099 - acc: 0.9964 - val\_loss: 0.0338 - val\_acc: 0.9737

Epoch 236/300

4/4 [==============================] - 88s 22s/step - loss: 0.0092 - acc: 0.9961 - val\_loss: 0.0015 - val\_acc: 1.0000

Epoch 237/300

4/4 [==============================] - 82s 20s/step - loss: 0.0263 - acc: 0.9928 - val\_loss: 0.0403 - val\_acc: 0.9868

Epoch 238/300

4/4 [==============================] - 81s 20s/step - loss: 0.0119 - acc: 0.9947 - val\_loss: 0.3689 - val\_acc: 0.9561

Epoch 239/300

4/4 [==============================] - 81s 20s/step - loss: 0.0019 - acc: 1.0000 - val\_loss: 1.2271 - val\_acc: 0.8158

Epoch 240/300

4/4 [==============================] - 82s 20s/step - loss: 0.0040 - acc: 1.0000 - val\_loss: 0.9769 - val\_acc: 0.9079

Epoch 241/300

4/4 [==============================] - 80s 20s/step - loss: 0.0029 - acc: 1.0000 - val\_loss: 1.2986 - val\_acc: 0.8772

Epoch 242/300

4/4 [==============================] - 81s 20s/step - loss: 0.0013 - acc: 1.0000 - val\_loss: 1.4114 - val\_acc: 0.8772

Epoch 243/300

4/4 [==============================] - 86s 21s/step - loss: 0.0026 - acc: 1.0000 - val\_loss: 1.7229 - val\_acc: 0.8377

Epoch 244/300

4/4 [==============================] - 80s 20s/step - loss: 0.0013 - acc: 1.0000 - val\_loss: 2.0060 - val\_acc: 0.8333

Epoch 245/300

4/4 [==============================] - 81s 20s/step - loss: 0.0245 - acc: 0.9938 - val\_loss: 1.1959 - val\_acc: 0.8684

Epoch 246/300

4/4 [==============================] - 80s 20s/step - loss: 0.0178 - acc: 0.9956 - val\_loss: 1.1842 - val\_acc: 0.8684

Epoch 247/300

4/4 [==============================] - 81s 20s/step - loss: 0.0014 - acc: 1.0000 - val\_loss: 1.1662 - val\_acc: 0.8684

Epoch 248/300

4/4 [==============================] - 82s 20s/step - loss: 0.0136 - acc: 0.9934 - val\_loss: 0.7800 - val\_acc: 0.8509

Epoch 249/300

4/4 [==============================] - 87s 22s/step - loss: 7.1949e-04 - acc: 1.0000 - val\_loss: 1.1253 - val\_acc: 0.8509

Epoch 250/300

4/4 [==============================] - 81s 20s/step - loss: 0.0013 - acc: 1.0000 - val\_loss: 1.1308 - val\_acc: 0.8509

Epoch 251/300

4/4 [==============================] - 81s 20s/step - loss: 0.0102 - acc: 0.9964 - val\_loss: 2.4622 - val\_acc: 0.7193

Epoch 252/300

4/4 [==============================] - 86s 22s/step - loss: 0.0152 - acc: 0.9974 - val\_loss: 3.5164 - val\_acc: 0.6974

Epoch 253/300

4/4 [==============================] - 76s 19s/step - loss: 0.0012 - acc: 1.0000 - val\_loss: 3.7470 - val\_acc: 0.6842

Epoch 254/300

4/4 [==============================] - 87s 22s/step - loss: 0.0266 - acc: 0.9935 - val\_loss: 0.9351 - val\_acc: 0.8640

Epoch 255/300

4/4 [==============================] - 81s 20s/step - loss: 0.0298 - acc: 0.9947 - val\_loss: 1.2485 - val\_acc: 0.8246

Epoch 256/300

4/4 [==============================] - 80s 20s/step - loss: 0.0012 - acc: 1.0000 - val\_loss: 1.4297 - val\_acc: 0.8158

Epoch 257/300

4/4 [==============================] - 80s 20s/step - loss: 0.0296 - acc: 0.9974 - val\_loss: 1.5695 - val\_acc: 0.8070

Epoch 258/300

4/4 [==============================] - 87s 22s/step - loss: 0.0032 - acc: 1.0000 - val\_loss: 1.6351 - val\_acc: 0.8070

Epoch 259/300

4/4 [==============================] - 75s 19s/step - loss: 0.0033 - acc: 0.9986 - val\_loss: 1.6035 - val\_acc: 0.8070

Epoch 260/300

4/4 [==============================] - 87s 22s/step - loss: 0.0015 - acc: 1.0000 - val\_loss: 1.5716 - val\_acc: 0.8070

Epoch 261/300

4/4 [==============================] - 81s 20s/step - loss: 0.0525 - acc: 0.9928 - val\_loss: 1.6864 - val\_acc: 0.8070

Epoch 262/300

4/4 [==============================] - 85s 21s/step - loss: 0.0018 - acc: 1.0000 - val\_loss: 1.6955 - val\_acc: 0.8333

Epoch 263/300

4/4 [==============================] - 75s 19s/step - loss: 0.0344 - acc: 0.9932 - val\_loss: 1.5615 - val\_acc: 0.8333

Epoch 264/300

4/4 [==============================] - 80s 20s/step - loss: 0.0022 - acc: 1.0000 - val\_loss: 1.0078 - val\_acc: 0.8772

Epoch 265/300

4/4 [==============================] - 85s 21s/step - loss: 0.0021 - acc: 1.0000 - val\_loss: 0.7506 - val\_acc: 0.9123

Epoch 266/300

4/4 [==============================] - 79s 20s/step - loss: 0.0306 - acc: 0.9893 - val\_loss: 0.6861 - val\_acc: 0.9211

Epoch 267/300

4/4 [==============================] - 79s 20s/step - loss: 9.3813e-04 - acc: 1.0000 - val\_loss: 1.0941 - val\_acc: 0.8684

Epoch 268/300

4/4 [==============================] - 86s 22s/step - loss: 0.0099 - acc: 0.9961 - val\_loss: 1.6964 - val\_acc: 0.7632

Epoch 269/300

4/4 [==============================] - 81s 20s/step - loss: 0.0010 - acc: 1.0000 - val\_loss: 2.6721 - val\_acc: 0.7632

Epoch 270/300

4/4 [==============================] - 80s 20s/step - loss: 0.0150 - acc: 0.9934 - val\_loss: 0.7715 - val\_acc: 0.8246

Epoch 271/300

4/4 [==============================] - 81s 20s/step - loss: 0.0010 - acc: 1.0000 - val\_loss: 0.2080 - val\_acc: 0.9561

Epoch 272/300

4/4 [==============================] - 81s 20s/step - loss: 0.0449 - acc: 0.9910 - val\_loss: 0.1568 - val\_acc: 0.9825

Epoch 273/300

4/4 [==============================] - 79s 20s/step - loss: 0.0321 - acc: 0.9893 - val\_loss: 0.3419 - val\_acc: 0.9342

Epoch 274/300

4/4 [==============================] - 79s 20s/step - loss: 0.0620 - acc: 0.9845 - val\_loss: 5.6189 - val\_acc: 0.5263

Epoch 275/300

4/4 [==============================] - 84s 21s/step - loss: 0.0206 - acc: 0.9896 - val\_loss: 6.5765 - val\_acc: 0.5088

Epoch 276/300

4/4 [==============================] - 78s 20s/step - loss: 0.0069 - acc: 1.0000 - val\_loss: 6.8364 - val\_acc: 0.4825

Epoch 277/300

4/4 [==============================] - 84s 21s/step - loss: 0.0429 - acc: 0.9896 - val\_loss: 6.8784 - val\_acc: 0.4825

Epoch 278/300

4/4 [==============================] - 75s 19s/step - loss: 0.0192 - acc: 0.9964 - val\_loss: 6.6459 - val\_acc: 0.5175

Epoch 279/300

4/4 [==============================] - 85s 21s/step - loss: 0.0035 - acc: 1.0000 - val\_loss: 6.3289 - val\_acc: 0.5263

Epoch 280/300

4/4 [==============================] - 81s 20s/step - loss: 0.0302 - acc: 0.9911 - val\_loss: 6.0956 - val\_acc: 0.5263

Epoch 281/300

4/4 [==============================] - 80s 20s/step - loss: 0.0094 - acc: 0.9974 - val\_loss: 4.9676 - val\_acc: 0.5263

Epoch 282/300

4/4 [==============================] - 86s 22s/step - loss: 0.0034 - acc: 1.0000 - val\_loss: 3.9811 - val\_acc: 0.6272

Epoch 283/300

4/4 [==============================] - 74s 18s/step - loss: 0.0014 - acc: 1.0000 - val\_loss: 3.6411 - val\_acc: 0.6842

Epoch 284/300

4/4 [==============================] - 78s 20s/step - loss: 0.0188 - acc: 0.9947 - val\_loss: 3.5658 - val\_acc: 0.7018

Epoch 285/300

4/4 [==============================] - 83s 21s/step - loss: 0.0046 - acc: 0.9987 - val\_loss: 3.4881 - val\_acc: 0.7018

Epoch 286/300

4/4 [==============================] - 81s 20s/step - loss: 6.2113e-04 - acc: 1.0000 - val\_loss: 3.3627 - val\_acc: 0.6842

Epoch 287/300

4/4 [==============================] - 76s 19s/step - loss: 0.0168 - acc: 0.9964 - val\_loss: 5.2046 - val\_acc: 0.6053

Epoch 288/300

4/4 [==============================] - 77s 19s/step - loss: 0.1280 - acc: 0.9668 - val\_loss: 6.4529 - val\_acc: 0.5263

Epoch 289/300

4/4 [==============================] - 78s 19s/step - loss: 0.0061 - acc: 1.0000 - val\_loss: 5.5819 - val\_acc: 0.5263

Epoch 290/300

4/4 [==============================] - 77s 19s/step - loss: 0.0194 - acc: 0.9964 - val\_loss: 4.0369 - val\_acc: 0.6316

Epoch 291/300

4/4 [==============================] - 79s 20s/step - loss: 0.0126 - acc: 0.9974 - val\_loss: 1.3530 - val\_acc: 0.7544

Epoch 292/300

4/4 [==============================] - 87s 22s/step - loss: 0.0130 - acc: 0.9938 - val\_loss: 1.1726 - val\_acc: 0.7675

Epoch 293/300

4/4 [==============================] - 84s 21s/step - loss: 0.0239 - acc: 0.9883 - val\_loss: 1.3600 - val\_acc: 0.7368

Epoch 294/300

4/4 [==============================] - 72s 18s/step - loss: 0.0028 - acc: 1.0000 - val\_loss: 0.9749 - val\_acc: 0.7851

Epoch 295/300

4/4 [==============================] - 82s 21s/step - loss: 0.0066 - acc: 0.9974 - val\_loss: 0.8996 - val\_acc: 0.7982

Epoch 296/300

4/4 [==============================] - 83s 21s/step - loss: 0.0021 - acc: 1.0000 - val\_loss: 0.9738 - val\_acc: 0.7982

Epoch 297/300

4/4 [==============================] - 73s 18s/step - loss: 0.0017 - acc: 1.0000 - val\_loss: 1.1399 - val\_acc: 0.8070

Epoch 298/300

4/4 [==============================] - 83s 21s/step - loss: 0.0032 - acc: 0.9987 - val\_loss: 1.2030 - val\_acc: 0.8070

Epoch 299/300

4/4 [==============================] - 78s 19s/step - loss: 0.0067 - acc: 0.9960 - val\_loss: 1.1436 - val\_acc: 0.7982

Epoch 300/300

4/4 [==============================] - 77s 19s/step - loss: 0.0039 - acc: 0.9987 - val\_loss: 0.9451 - val\_acc: 0.7982