Before Shape Train X : (17400, 10)

Before Shape Train y : (174, 29)

Before Shape Test X : (5800, 10)

Before Shape Test y : (58, 29)

Before Shape Valid X : (5800, 10)

Before Shape Valid Y : (58, 29)

Before Shape train Gesture\_label : (29, 1) Before Shape Train X : (17400, 10)

Before Shape Train y : (174, 29)

Before Shape Test X : (5800, 10)

Before Shape Test y : (58, 29)

Before Shape Valid X : (5800, 10)

Before Shape Valid Y : (58, 29)

Before Shape train Gesture\_label : (29, 1)

Before Shape Test Gesture\_label : (29,)

Before Shape Valid Gesture\_label : (29, 1)

Model: "sequential\_6"

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Layer (type) Output Shape Param #

=================================================================

conv1d\_6 (Conv1D) (None, 100, 32) 1632

conv1d\_7 (Conv1D) (None, 100, 64) 10304

conv1d\_8 (Conv1D) (None, 100, 128) 41088

max\_pooling1d\_2 (MaxPooling (None, 20, 128) 0

1D)

dropout\_2 (Dropout) (None, 20, 128) 0

flatten\_2 (Flatten) (None, 2560) 0

dense\_6 (Dense) (None, 256) 655616

dense\_7 (Dense) (None, 512) 131584

dense\_8 (Dense) (None, 29) 14877

=================================================================

Total params: 855,101

Trainable params: 855,101

Non-trainable params: 0

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Epoch 1/200

1/2 [==============>...............] - ETA: 5s - loss: 3.3767 - accuracy: 0.0469

Epoch 1: val\_loss improved from inf to 3.29052, saving model to weights.hdf5

2/2 [==============================] - 6s 698ms/step - loss: 3.3723 - accuracy: 0.0460 - val\_loss: 3.2905 - val\_accuracy: 0.1379

Epoch 2/200

1/2 [==============>...............] - ETA: 0s - loss: 3.2997 - accuracy: 0.0859

Epoch 2: val\_loss improved from 3.29052 to 3.16086, saving model to weights.hdf5

2/2 [==============================] - 0s 145ms/step - loss: 3.2934 - accuracy: 0.0805 - val\_loss: 3.1609 - val\_accuracy: 0.2414

Epoch 3/200

1/2 [==============>...............] - ETA: 0s - loss: 3.1844 - accuracy: 0.1953

Epoch 3: val\_loss improved from 3.16086 to 2.92485, saving model to weights.hdf5

2/2 [==============================] - 0s 187ms/step - loss: 3.1637 - accuracy: 0.1839 - val\_loss: 2.9248 - val\_accuracy: 0.2241

Epoch 4/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9449 - accuracy: 0.2188

Epoch 4: val\_loss improved from 2.92485 to 2.63088, saving model to weights.hdf5

2/2 [==============================] - 0s 119ms/step - loss: 2.9158 - accuracy: 0.2241 - val\_loss: 2.6309 - val\_accuracy: 0.1897

Epoch 5/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6612 - accuracy: 0.2266

Epoch 5: val\_loss improved from 2.63088 to 2.32684, saving model to weights.hdf5

2/2 [==============================] - 0s 190ms/step - loss: 2.6251 - accuracy: 0.2414 - val\_loss: 2.3268 - val\_accuracy: 0.2586

Epoch 6/200

1/2 [==============>...............] - ETA: 0s - loss: 2.3243 - accuracy: 0.2422

Epoch 6: val\_loss improved from 2.32684 to 1.93852, saving model to weights.hdf5

2/2 [==============================] - 0s 252ms/step - loss: 2.3358 - accuracy: 0.2356 - val\_loss: 1.9385 - val\_accuracy: 0.4138

Epoch 7/200

1/2 [==============>...............] - ETA: 0s - loss: 1.9799 - accuracy: 0.3438

Epoch 7: val\_loss improved from 1.93852 to 1.69282, saving model to weights.hdf5

2/2 [==============================] - 0s 224ms/step - loss: 1.9391 - accuracy: 0.4138 - val\_loss: 1.6928 - val\_accuracy: 0.6552

Epoch 8/200

1/2 [==============>...............] - ETA: 0s - loss: 1.7896 - accuracy: 0.5391

Epoch 8: val\_loss improved from 1.69282 to 1.29240, saving model to weights.hdf5

2/2 [==============================] - 0s 285ms/step - loss: 1.7309 - accuracy: 0.5057 - val\_loss: 1.2924 - val\_accuracy: 0.6724

Epoch 9/200

1/2 [==============>...............] - ETA: 0s - loss: 1.3362 - accuracy: 0.5859

Epoch 9: val\_loss improved from 1.29240 to 1.22368, saving model to weights.hdf5

2/2 [==============================] - 0s 260ms/step - loss: 1.2830 - accuracy: 0.6092 - val\_loss: 1.2237 - val\_accuracy: 0.5172

Epoch 10/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2019 - accuracy: 0.6016

Epoch 10: val\_loss improved from 1.22368 to 0.83996, saving model to weights.hdf5

2/2 [==============================] - 0s 127ms/step - loss: 1.1758 - accuracy: 0.5977 - val\_loss: 0.8400 - val\_accuracy: 0.7759

Epoch 11/200

1/2 [==============>...............] - ETA: 0s - loss: 0.8660 - accuracy: 0.7578

Epoch 11: val\_loss improved from 0.83996 to 0.70637, saving model to weights.hdf5

2/2 [==============================] - 0s 125ms/step - loss: 0.8797 - accuracy: 0.7586 - val\_loss: 0.7064 - val\_accuracy: 0.7241

Epoch 12/200

1/2 [==============>...............] - ETA: 0s - loss: 0.7645 - accuracy: 0.7422

Epoch 12: val\_loss improved from 0.70637 to 0.54468, saving model to weights.hdf5

2/2 [==============================] - 0s 122ms/step - loss: 0.7188 - accuracy: 0.7586 - val\_loss: 0.5447 - val\_accuracy: 0.8276

Epoch 13/200

1/2 [==============>...............] - ETA: 0s - loss: 0.5377 - accuracy: 0.8125

Epoch 13: val\_loss improved from 0.54468 to 0.46952, saving model to weights.hdf5

2/2 [==============================] - 0s 155ms/step - loss: 0.5486 - accuracy: 0.8161 - val\_loss: 0.4695 - val\_accuracy: 0.8276

Epoch 14/200

1/2 [==============>...............] - ETA: 0s - loss: 0.5454 - accuracy: 0.8047

Epoch 14: val\_loss improved from 0.46952 to 0.36262, saving model to weights.hdf5

2/2 [==============================] - 0s 125ms/step - loss: 0.5249 - accuracy: 0.8046 - val\_loss: 0.3626 - val\_accuracy: 0.9138

Epoch 15/200

1/2 [==============>...............] - ETA: 0s - loss: 0.3423 - accuracy: 0.8984

Epoch 15: val\_loss improved from 0.36262 to 0.34751, saving model to weights.hdf5

2/2 [==============================] - 0s 122ms/step - loss: 0.3621 - accuracy: 0.8908 - val\_loss: 0.3475 - val\_accuracy: 0.8621

Epoch 16/200

1/2 [==============>...............] - ETA: 0s - loss: 0.3082 - accuracy: 0.8906

Epoch 16: val\_loss improved from 0.34751 to 0.22335, saving model to weights.hdf5

2/2 [==============================] - 0s 139ms/step - loss: 0.3026 - accuracy: 0.9023 - val\_loss: 0.2234 - val\_accuracy: 0.9483

Epoch 17/200

1/2 [==============>...............] - ETA: 0s - loss: 0.2645 - accuracy: 0.9141

Epoch 17: val\_loss improved from 0.22335 to 0.19050, saving model to weights.hdf5

2/2 [==============================] - 2s 2s/step - loss: 0.2367 - accuracy: 0.9310 - val\_loss: 0.1905 - val\_accuracy: 0.9483

Epoch 18/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1835 - accuracy: 0.9531

Epoch 18: val\_loss improved from 0.19050 to 0.15997, saving model to weights.hdf5

2/2 [==============================] - 1s 581ms/step - loss: 0.2010 - accuracy: 0.9368 - val\_loss: 0.1600 - val\_accuracy: 0.9483

Epoch 19/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1498 - accuracy: 0.9375

Epoch 19: val\_loss did not improve from 0.15997

2/2 [==============================] - 0s 38ms/step - loss: 0.1831 - accuracy: 0.9368 - val\_loss: 0.1726 - val\_accuracy: 0.9310

Epoch 20/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1183 - accuracy: 0.9766

Epoch 20: val\_loss did not improve from 0.15997

2/2 [==============================] - 0s 36ms/step - loss: 0.1209 - accuracy: 0.9713 - val\_loss: 0.2306 - val\_accuracy: 0.9655

Epoch 21/200

1/2 [==============>...............] - ETA: 0s - loss: 0.2488 - accuracy: 0.9375

Epoch 21: val\_loss improved from 0.15997 to 0.15087, saving model to weights.hdf5

2/2 [==============================] - 0s 86ms/step - loss: 0.2011 - accuracy: 0.9540 - val\_loss: 0.1509 - val\_accuracy: 0.9483

Epoch 22/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1148 - accuracy: 0.9688

Epoch 22: val\_loss did not improve from 0.15087

2/2 [==============================] - 0s 44ms/step - loss: 0.1021 - accuracy: 0.9770 - val\_loss: 0.1621 - val\_accuracy: 0.9483

Epoch 23/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0819 - accuracy: 0.9766

Epoch 23: val\_loss improved from 0.15087 to 0.10005, saving model to weights.hdf5

2/2 [==============================] - 0s 87ms/step - loss: 0.1146 - accuracy: 0.9655 - val\_loss: 0.1001 - val\_accuracy: 0.9655

Epoch 24/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0505 - accuracy: 0.9844

Epoch 24: val\_loss did not improve from 0.10005

2/2 [==============================] - 0s 41ms/step - loss: 0.0423 - accuracy: 0.9885 - val\_loss: 0.2389 - val\_accuracy: 0.9310

Epoch 25/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1098 - accuracy: 0.9688

Epoch 25: val\_loss did not improve from 0.10005

2/2 [==============================] - 0s 36ms/step - loss: 0.1825 - accuracy: 0.9598 - val\_loss: 0.1642 - val\_accuracy: 0.9310

Epoch 26/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0521 - accuracy: 0.9844

Epoch 26: val\_loss did not improve from 0.10005

2/2 [==============================] - 0s 39ms/step - loss: 0.0596 - accuracy: 0.9828 - val\_loss: 0.1666 - val\_accuracy: 0.9483

Epoch 27/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1498 - accuracy: 0.9531

Epoch 27: val\_loss did not improve from 0.10005

2/2 [==============================] - 0s 36ms/step - loss: 0.1142 - accuracy: 0.9655 - val\_loss: 0.1549 - val\_accuracy: 0.9655

Epoch 28/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1123 - accuracy: 0.9609

Epoch 28: val\_loss improved from 0.10005 to 0.09416, saving model to weights.hdf5

2/2 [==============================] - 0s 87ms/step - loss: 0.1099 - accuracy: 0.9540 - val\_loss: 0.0942 - val\_accuracy: 0.9828

Epoch 29/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1000 - accuracy: 0.9688

Epoch 29: val\_loss did not improve from 0.09416

2/2 [==============================] - 0s 39ms/step - loss: 0.1150 - accuracy: 0.9598 - val\_loss: 0.1239 - val\_accuracy: 0.9138

Epoch 30/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0845 - accuracy: 0.9531

Epoch 30: val\_loss improved from 0.09416 to 0.03846, saving model to weights.hdf5

2/2 [==============================] - 0s 83ms/step - loss: 0.0876 - accuracy: 0.9540 - val\_loss: 0.0385 - val\_accuracy: 1.0000

Epoch 31/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0291 - accuracy: 0.9922

Epoch 31: val\_loss improved from 0.03846 to 0.03636, saving model to weights.hdf5

2/2 [==============================] - 0s 109ms/step - loss: 0.0627 - accuracy: 0.9770 - val\_loss: 0.0364 - val\_accuracy: 1.0000

Epoch 32/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0373 - accuracy: 1.0000

Epoch 32: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 63ms/step - loss: 0.0352 - accuracy: 0.9943 - val\_loss: 0.1561 - val\_accuracy: 0.9483

Epoch 33/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1040 - accuracy: 0.9688

Epoch 33: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 41ms/step - loss: 0.0929 - accuracy: 0.9713 - val\_loss: 0.0462 - val\_accuracy: 0.9655

Epoch 34/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0494 - accuracy: 0.9844

Epoch 34: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 39ms/step - loss: 0.0431 - accuracy: 0.9885 - val\_loss: 0.1909 - val\_accuracy: 0.9310

Epoch 35/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0958 - accuracy: 0.9531

Epoch 35: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 38ms/step - loss: 0.0760 - accuracy: 0.9655 - val\_loss: 0.0566 - val\_accuracy: 0.9655

Epoch 36/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0430 - accuracy: 0.9766

Epoch 36: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 39ms/step - loss: 0.0405 - accuracy: 0.9770 - val\_loss: 0.0897 - val\_accuracy: 0.9655

Epoch 37/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0437 - accuracy: 0.9766

Epoch 37: val\_loss did not improve from 0.03636

2/2 [==============================] - 0s 37ms/step - loss: 0.0340 - accuracy: 0.9828 - val\_loss: 0.0522 - val\_accuracy: 0.9655

Epoch 38/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0246 - accuracy: 0.9922

Epoch 38: val\_loss improved from 0.03636 to 0.03073, saving model to weights.hdf5

2/2 [==============================] - 0s 91ms/step - loss: 0.0448 - accuracy: 0.9770 - val\_loss: 0.0307 - val\_accuracy: 1.0000

Epoch 39/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0246 - accuracy: 0.9922

Epoch 39: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 38ms/step - loss: 0.0227 - accuracy: 0.9943 - val\_loss: 0.1278 - val\_accuracy: 0.9655

Epoch 40/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1250 - accuracy: 0.9531

Epoch 40: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 37ms/step - loss: 0.0935 - accuracy: 0.9655 - val\_loss: 0.0655 - val\_accuracy: 0.9828

Epoch 41/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0327 - accuracy: 0.9844

Epoch 41: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 39ms/step - loss: 0.0334 - accuracy: 0.9885 - val\_loss: 0.0631 - val\_accuracy: 0.9828

Epoch 42/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0167 - accuracy: 1.0000

Epoch 42: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 37ms/step - loss: 0.0391 - accuracy: 0.9943 - val\_loss: 0.0451 - val\_accuracy: 0.9828

Epoch 43/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0191 - accuracy: 0.9922

Epoch 43: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 36ms/step - loss: 0.0267 - accuracy: 0.9885 - val\_loss: 0.0582 - val\_accuracy: 0.9655

Epoch 44/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0204 - accuracy: 0.9922

Epoch 44: val\_loss did not improve from 0.03073

2/2 [==============================] - 0s 46ms/step - loss: 0.0240 - accuracy: 0.9885 - val\_loss: 0.0848 - val\_accuracy: 0.9655

Epoch 45/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0541 - accuracy: 0.9766

Epoch 45: val\_loss improved from 0.03073 to 0.02055, saving model to weights.hdf5

2/2 [==============================] - 0s 88ms/step - loss: 0.0442 - accuracy: 0.9828 - val\_loss: 0.0206 - val\_accuracy: 1.0000

Epoch 46/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0109 - accuracy: 1.0000

Epoch 46: val\_loss did not improve from 0.02055

2/2 [==============================] - 0s 37ms/step - loss: 0.0138 - accuracy: 0.9943 - val\_loss: 0.0241 - val\_accuracy: 1.0000

Epoch 47/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0072 - accuracy: 1.0000

Epoch 47: val\_loss improved from 0.02055 to 0.01449, saving model to weights.hdf5

2/2 [==============================] - 0s 89ms/step - loss: 0.0352 - accuracy: 0.9885 - val\_loss: 0.0145 - val\_accuracy: 1.0000

Epoch 48/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0089 - accuracy: 1.0000

Epoch 48: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 35ms/step - loss: 0.0150 - accuracy: 0.9943 - val\_loss: 0.0498 - val\_accuracy: 0.9828

Epoch 49/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0283 - accuracy: 0.9922

Epoch 49: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 36ms/step - loss: 0.0274 - accuracy: 0.9885 - val\_loss: 0.0260 - val\_accuracy: 0.9828

Epoch 50/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0105 - accuracy: 1.0000

Epoch 50: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 35ms/step - loss: 0.0120 - accuracy: 1.0000 - val\_loss: 0.0160 - val\_accuracy: 1.0000

Epoch 51/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0245 - accuracy: 0.9844

Epoch 51: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 36ms/step - loss: 0.0200 - accuracy: 0.9885 - val\_loss: 0.0259 - val\_accuracy: 1.0000

Epoch 52/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0210 - accuracy: 0.9922

Epoch 52: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 40ms/step - loss: 0.0258 - accuracy: 0.9885 - val\_loss: 0.0246 - val\_accuracy: 0.9828

Epoch 53/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0120 - accuracy: 0.9922

Epoch 53: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 43ms/step - loss: 0.0100 - accuracy: 0.9943 - val\_loss: 0.0778 - val\_accuracy: 0.9655

Epoch 54/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0268 - accuracy: 0.9844

Epoch 54: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 42ms/step - loss: 0.0324 - accuracy: 0.9828 - val\_loss: 0.0540 - val\_accuracy: 0.9655

Epoch 55/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0121 - accuracy: 1.0000

Epoch 55: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 45ms/step - loss: 0.0112 - accuracy: 1.0000 - val\_loss: 0.0339 - val\_accuracy: 0.9828

Epoch 56/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0116 - accuracy: 1.0000

Epoch 56: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 41ms/step - loss: 0.0099 - accuracy: 1.0000 - val\_loss: 0.0316 - val\_accuracy: 0.9828

Epoch 57/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0243 - accuracy: 0.9922

Epoch 57: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 36ms/step - loss: 0.0219 - accuracy: 0.9943 - val\_loss: 0.0173 - val\_accuracy: 1.0000

Epoch 58/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0134 - accuracy: 0.9922

Epoch 58: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 36ms/step - loss: 0.0118 - accuracy: 0.9943 - val\_loss: 0.0227 - val\_accuracy: 1.0000

Epoch 59/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0074 - accuracy: 1.0000

Epoch 59: val\_loss did not improve from 0.01449

2/2 [==============================] - 0s 39ms/step - loss: 0.0097 - accuracy: 1.0000 - val\_loss: 0.0234 - val\_accuracy: 0.9828

Epoch 60/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0089 - accuracy: 1.0000

Epoch 60: val\_loss improved from 0.01449 to 0.01083, saving model to weights.hdf5

2/2 [==============================] - 0s 101ms/step - loss: 0.0069 - accuracy: 1.0000 - val\_loss: 0.0108 - val\_accuracy: 1.0000

Epoch 61/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0086 - accuracy: 1.0000

Epoch 61: val\_loss improved from 0.01083 to 0.00928, saving model to weights.hdf5

2/2 [==============================] - 0s 97ms/step - loss: 0.0073 - accuracy: 1.0000 - val\_loss: 0.0093 - val\_accuracy: 1.0000

Epoch 62/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0049 - accuracy: 1.0000

Epoch 62: val\_loss improved from 0.00928 to 0.00857, saving model to weights.hdf5

2/2 [==============================] - 0s 84ms/step - loss: 0.0041 - accuracy: 1.0000 - val\_loss: 0.0086 - val\_accuracy: 1.0000

Epoch 63/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0069 - accuracy: 0.9922

Epoch 63: val\_loss improved from 0.00857 to 0.00854, saving model to weights.hdf5

2/2 [==============================] - 0s 86ms/step - loss: 0.0068 - accuracy: 0.9943 - val\_loss: 0.0085 - val\_accuracy: 1.0000

Epoch 64/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0022 - accuracy: 1.0000

Epoch 64: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 44ms/step - loss: 0.0018 - accuracy: 1.0000 - val\_loss: 0.0136 - val\_accuracy: 1.0000

Epoch 65/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0021 - accuracy: 1.0000

Epoch 65: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 39ms/step - loss: 0.0047 - accuracy: 1.0000 - val\_loss: 0.0144 - val\_accuracy: 1.0000

Epoch 66/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0033 - accuracy: 1.0000

Epoch 66: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 39ms/step - loss: 0.0036 - accuracy: 1.0000 - val\_loss: 0.0118 - val\_accuracy: 1.0000

Epoch 67/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0018 - accuracy: 1.0000

Epoch 67: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 38ms/step - loss: 0.0044 - accuracy: 1.0000 - val\_loss: 0.0116 - val\_accuracy: 1.0000

Epoch 68/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0057 - accuracy: 1.0000

Epoch 68: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 39ms/step - loss: 0.0046 - accuracy: 1.0000 - val\_loss: 0.0132 - val\_accuracy: 1.0000

Epoch 69/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0032 - accuracy: 1.0000

Epoch 69: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 53ms/step - loss: 0.0028 - accuracy: 1.0000 - val\_loss: 0.0154 - val\_accuracy: 1.0000

Epoch 70/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0028 - accuracy: 1.0000

Epoch 70: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 36ms/step - loss: 0.0022 - accuracy: 1.0000 - val\_loss: 0.0148 - val\_accuracy: 1.0000

Epoch 71/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0017 - accuracy: 1.0000

Epoch 71: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 37ms/step - loss: 0.0036 - accuracy: 1.0000 - val\_loss: 0.0146 - val\_accuracy: 1.0000

Epoch 72/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0045 - accuracy: 1.0000

Epoch 72: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 36ms/step - loss: 0.0040 - accuracy: 1.0000 - val\_loss: 0.0177 - val\_accuracy: 0.9828

Epoch 73/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0029 - accuracy: 1.0000

Epoch 73: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 39ms/step - loss: 0.0072 - accuracy: 1.0000 - val\_loss: 0.0132 - val\_accuracy: 1.0000

Epoch 74/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0027 - accuracy: 1.0000

Epoch 74: val\_loss did not improve from 0.00854

2/2 [==============================] - 0s 38ms/step - loss: 0.0022 - accuracy: 1.0000 - val\_loss: 0.0209 - val\_accuracy: 0.9828

Epoch 75/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0118 - accuracy: 0.9922

Epoch 75: val\_loss improved from 0.00854 to 0.00787, saving model to weights.hdf5

2/2 [==============================] - 0s 94ms/step - loss: 0.0091 - accuracy: 0.9943 - val\_loss: 0.0079 - val\_accuracy: 1.0000

Epoch 76/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0058 - accuracy: 1.0000

Epoch 76: val\_loss improved from 0.00787 to 0.00509, saving model to weights.hdf5

2/2 [==============================] - 0s 92ms/step - loss: 0.0050 - accuracy: 1.0000 - val\_loss: 0.0051 - val\_accuracy: 1.0000

Epoch 77/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0048 - accuracy: 1.0000

Epoch 77: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 0.0040 - accuracy: 1.0000 - val\_loss: 0.0068 - val\_accuracy: 1.0000

Epoch 78/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0038 - accuracy: 1.0000

Epoch 78: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0031 - accuracy: 1.0000 - val\_loss: 0.0092 - val\_accuracy: 1.0000

Epoch 79/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0014 - accuracy: 1.0000

Epoch 79: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.0120 - val\_accuracy: 1.0000

Epoch 80/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0040 - accuracy: 1.0000

Epoch 80: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0032 - accuracy: 1.0000 - val\_loss: 0.0167 - val\_accuracy: 1.0000

Epoch 81/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0022 - accuracy: 1.0000

Epoch 81: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0041 - accuracy: 1.0000 - val\_loss: 0.0146 - val\_accuracy: 1.0000

Epoch 82/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0026 - accuracy: 1.0000

Epoch 82: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 35ms/step - loss: 0.0022 - accuracy: 1.0000 - val\_loss: 0.0105 - val\_accuracy: 1.0000

Epoch 83/200

1/2 [==============>...............] - ETA: 0s - loss: 6.5785e-04 - accuracy: 1.0000

Epoch 83: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 0.0107 - accuracy: 0.9943 - val\_loss: 0.0116 - val\_accuracy: 1.0000

Epoch 84/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0015 - accuracy: 1.0000

Epoch 84: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 52ms/step - loss: 0.0012 - accuracy: 1.0000 - val\_loss: 0.0899 - val\_accuracy: 0.9828

Epoch 85/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0411 - accuracy: 0.9922

Epoch 85: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 43ms/step - loss: 0.0433 - accuracy: 0.9885 - val\_loss: 0.0082 - val\_accuracy: 1.0000

Epoch 86/200

1/2 [==============>...............] - ETA: 0s - loss: 6.2203e-04 - accuracy: 1.0000

Epoch 86: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0045 - accuracy: 1.0000 - val\_loss: 0.0186 - val\_accuracy: 1.0000

Epoch 87/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0375 - accuracy: 0.9844

Epoch 87: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0279 - accuracy: 0.9885 - val\_loss: 0.0084 - val\_accuracy: 1.0000

Epoch 88/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0142 - accuracy: 0.9922

Epoch 88: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0105 - accuracy: 0.9943 - val\_loss: 0.0139 - val\_accuracy: 1.0000

Epoch 89/200

1/2 [==============>...............] - ETA: 0s - loss: 9.2922e-04 - accuracy: 1.0000

Epoch 89: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 40ms/step - loss: 0.0141 - accuracy: 0.9943 - val\_loss: 0.0149 - val\_accuracy: 1.0000

Epoch 90/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0015 - accuracy: 1.0000

Epoch 90: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 40ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.0091 - val\_accuracy: 1.0000

Epoch 91/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0029 - accuracy: 1.0000

Epoch 91: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0034 - accuracy: 1.0000 - val\_loss: 0.0102 - val\_accuracy: 1.0000

Epoch 92/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0089 - accuracy: 1.0000

Epoch 92: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 44ms/step - loss: 0.0068 - accuracy: 1.0000 - val\_loss: 0.0088 - val\_accuracy: 1.0000

Epoch 93/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0041 - accuracy: 1.0000

Epoch 93: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 0.0032 - accuracy: 1.0000 - val\_loss: 0.0084 - val\_accuracy: 1.0000

Epoch 94/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0012 - accuracy: 1.0000

Epoch 94: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 0.0013 - accuracy: 1.0000 - val\_loss: 0.0116 - val\_accuracy: 1.0000

Epoch 95/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0014 - accuracy: 1.0000

Epoch 95: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 40ms/step - loss: 0.0013 - accuracy: 1.0000 - val\_loss: 0.0217 - val\_accuracy: 0.9828

Epoch 96/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0051 - accuracy: 1.0000

Epoch 96: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 0.0040 - accuracy: 1.0000 - val\_loss: 0.0178 - val\_accuracy: 1.0000

Epoch 97/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0048 - accuracy: 1.0000

Epoch 97: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 43ms/step - loss: 0.0037 - accuracy: 1.0000 - val\_loss: 0.0096 - val\_accuracy: 1.0000

Epoch 98/200

1/2 [==============>...............] - ETA: 0s - loss: 7.2925e-04 - accuracy: 1.0000

Epoch 98: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 8.7297e-04 - accuracy: 1.0000 - val\_loss: 0.0093 - val\_accuracy: 1.0000

Epoch 99/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0013 - accuracy: 1.0000

Epoch 99: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 43ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.0104 - val\_accuracy: 1.0000

Epoch 100/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0021 - accuracy: 1.0000

Epoch 100: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 42ms/step - loss: 0.0019 - accuracy: 1.0000 - val\_loss: 0.0113 - val\_accuracy: 1.0000

Epoch 101/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0052 - accuracy: 1.0000

Epoch 101: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 0.0040 - accuracy: 1.0000 - val\_loss: 0.0116 - val\_accuracy: 1.0000

Epoch 102/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 102: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 37ms/step - loss: 9.2461e-04 - accuracy: 1.0000 - val\_loss: 0.0123 - val\_accuracy: 1.0000

Epoch 103/200

1/2 [==============>...............] - ETA: 0s - loss: 8.4113e-04 - accuracy: 1.0000

Epoch 103: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 8.0158e-04 - accuracy: 1.0000 - val\_loss: 0.0138 - val\_accuracy: 1.0000

Epoch 104/200

1/2 [==============>...............] - ETA: 0s - loss: 8.3434e-04 - accuracy: 1.0000

Epoch 104: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 8.8621e-04 - accuracy: 1.0000 - val\_loss: 0.0160 - val\_accuracy: 1.0000

Epoch 105/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0013 - accuracy: 1.0000

Epoch 105: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 0.0012 - accuracy: 1.0000 - val\_loss: 0.0159 - val\_accuracy: 1.0000

Epoch 106/200

1/2 [==============>...............] - ETA: 0s - loss: 7.0850e-04 - accuracy: 1.0000

Epoch 106: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 40ms/step - loss: 0.0025 - accuracy: 1.0000 - val\_loss: 0.0108 - val\_accuracy: 1.0000

Epoch 107/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 107: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 0.0012 - accuracy: 1.0000 - val\_loss: 0.0091 - val\_accuracy: 1.0000

Epoch 108/200

1/2 [==============>...............] - ETA: 0s - loss: 4.5684e-04 - accuracy: 1.0000

Epoch 108: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 43ms/step - loss: 0.0010 - accuracy: 1.0000 - val\_loss: 0.0090 - val\_accuracy: 1.0000

Epoch 109/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0014 - accuracy: 1.0000

Epoch 109: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 44ms/step - loss: 0.0016 - accuracy: 1.0000 - val\_loss: 0.0084 - val\_accuracy: 1.0000

Epoch 110/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0024 - accuracy: 1.0000

Epoch 110: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 55ms/step - loss: 0.0019 - accuracy: 1.0000 - val\_loss: 0.0074 - val\_accuracy: 1.0000

Epoch 111/200

1/2 [==============>...............] - ETA: 0s - loss: 3.5873e-04 - accuracy: 1.0000

Epoch 111: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 39ms/step - loss: 5.7516e-04 - accuracy: 1.0000 - val\_loss: 0.0067 - val\_accuracy: 1.0000

Epoch 112/200

1/2 [==============>...............] - ETA: 0s - loss: 4.7968e-04 - accuracy: 1.0000

Epoch 112: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 5.6665e-04 - accuracy: 1.0000 - val\_loss: 0.0063 - val\_accuracy: 1.0000

Epoch 113/200

1/2 [==============>...............] - ETA: 0s - loss: 5.8899e-04 - accuracy: 1.0000

Epoch 113: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 5.8807e-04 - accuracy: 1.0000 - val\_loss: 0.0066 - val\_accuracy: 1.0000

Epoch 114/200

1/2 [==============>...............] - ETA: 0s - loss: 6.0076e-04 - accuracy: 1.0000

Epoch 114: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 5.2427e-04 - accuracy: 1.0000 - val\_loss: 0.0074 - val\_accuracy: 1.0000

Epoch 115/200

1/2 [==============>...............] - ETA: 0s - loss: 6.8216e-04 - accuracy: 1.0000

Epoch 115: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 42ms/step - loss: 9.8759e-04 - accuracy: 1.0000 - val\_loss: 0.0076 - val\_accuracy: 1.0000

Epoch 116/200

1/2 [==============>...............] - ETA: 0s - loss: 4.9762e-04 - accuracy: 1.0000

Epoch 116: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 4.8729e-04 - accuracy: 1.0000 - val\_loss: 0.0070 - val\_accuracy: 1.0000

Epoch 117/200

1/2 [==============>...............] - ETA: 0s - loss: 9.8275e-04 - accuracy: 1.0000

Epoch 117: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 56ms/step - loss: 8.8413e-04 - accuracy: 1.0000 - val\_loss: 0.0068 - val\_accuracy: 1.0000

Epoch 118/200

1/2 [==============>...............] - ETA: 0s - loss: 6.1350e-04 - accuracy: 1.0000

Epoch 118: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 38ms/step - loss: 5.3460e-04 - accuracy: 1.0000 - val\_loss: 0.0067 - val\_accuracy: 1.0000

Epoch 119/200

1/2 [==============>...............] - ETA: 0s - loss: 5.3795e-04 - accuracy: 1.0000

Epoch 119: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 6.1724e-04 - accuracy: 1.0000 - val\_loss: 0.0065 - val\_accuracy: 1.0000

Epoch 120/200

1/2 [==============>...............] - ETA: 0s - loss: 6.9044e-04 - accuracy: 1.0000

Epoch 120: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 43ms/step - loss: 7.0445e-04 - accuracy: 1.0000 - val\_loss: 0.0063 - val\_accuracy: 1.0000

Epoch 121/200

1/2 [==============>...............] - ETA: 0s - loss: 4.4493e-04 - accuracy: 1.0000

Epoch 121: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 41ms/step - loss: 3.9130e-04 - accuracy: 1.0000 - val\_loss: 0.0061 - val\_accuracy: 1.0000

Epoch 122/200

1/2 [==============>...............] - ETA: 0s - loss: 3.8276e-04 - accuracy: 1.0000

Epoch 122: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 46ms/step - loss: 4.8182e-04 - accuracy: 1.0000 - val\_loss: 0.0059 - val\_accuracy: 1.0000

Epoch 123/200

1/2 [==============>...............] - ETA: 0s - loss: 5.1655e-04 - accuracy: 1.0000

Epoch 123: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 42ms/step - loss: 8.3065e-04 - accuracy: 1.0000 - val\_loss: 0.0061 - val\_accuracy: 1.0000

Epoch 124/200

1/2 [==============>...............] - ETA: 0s - loss: 4.2563e-04 - accuracy: 1.0000

Epoch 124: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 42ms/step - loss: 3.6274e-04 - accuracy: 1.0000 - val\_loss: 0.0066 - val\_accuracy: 1.0000

Epoch 125/200

1/2 [==============>...............] - ETA: 0s - loss: 3.4176e-04 - accuracy: 1.0000

Epoch 125: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 36ms/step - loss: 6.5004e-04 - accuracy: 1.0000 - val\_loss: 0.0065 - val\_accuracy: 1.0000

Epoch 126/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9864e-04 - accuracy: 1.0000

Epoch 126: val\_loss did not improve from 0.00509

2/2 [==============================] - 0s 36ms/step - loss: 3.4683e-04 - accuracy: 1.0000 - val\_loss: 0.0058 - val\_accuracy: 1.0000

Epoch 127/200

1/2 [==============>...............] - ETA: 0s - loss: 6.2260e-04 - accuracy: 1.0000

Epoch 127: val\_loss improved from 0.00509 to 0.00503, saving model to weights.hdf5

2/2 [==============================] - 0s 98ms/step - loss: 7.6376e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 128/200

1/2 [==============>...............] - ETA: 0s - loss: 5.2827e-04 - accuracy: 1.0000

Epoch 128: val\_loss improved from 0.00503 to 0.00451, saving model to weights.hdf5

2/2 [==============================] - 0s 94ms/step - loss: 6.0019e-04 - accuracy: 1.0000 - val\_loss: 0.0045 - val\_accuracy: 1.0000

Epoch 129/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0022 - accuracy: 1.0000

Epoch 129: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 43ms/step - loss: 0.0016 - accuracy: 1.0000 - val\_loss: 0.0056 - val\_accuracy: 1.0000

Epoch 130/200

1/2 [==============>...............] - ETA: 0s - loss: 4.6514e-04 - accuracy: 1.0000

Epoch 130: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 39ms/step - loss: 4.0240e-04 - accuracy: 1.0000 - val\_loss: 0.0070 - val\_accuracy: 1.0000

Epoch 131/200

1/2 [==============>...............] - ETA: 0s - loss: 3.4492e-04 - accuracy: 1.0000

Epoch 131: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 36ms/step - loss: 3.4388e-04 - accuracy: 1.0000 - val\_loss: 0.0083 - val\_accuracy: 1.0000

Epoch 132/200

1/2 [==============>...............] - ETA: 0s - loss: 9.4108e-04 - accuracy: 1.0000

Epoch 132: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 40ms/step - loss: 9.0226e-04 - accuracy: 1.0000 - val\_loss: 0.0089 - val\_accuracy: 1.0000

Epoch 133/200

1/2 [==============>...............] - ETA: 0s - loss: 7.2979e-04 - accuracy: 1.0000

Epoch 133: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 40ms/step - loss: 6.7514e-04 - accuracy: 1.0000 - val\_loss: 0.0084 - val\_accuracy: 1.0000

Epoch 134/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 134: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 58ms/step - loss: 8.6678e-04 - accuracy: 1.0000 - val\_loss: 0.0069 - val\_accuracy: 1.0000

Epoch 135/200

1/2 [==============>...............] - ETA: 0s - loss: 3.8601e-04 - accuracy: 1.0000

Epoch 135: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 70ms/step - loss: 3.3836e-04 - accuracy: 1.0000 - val\_loss: 0.0059 - val\_accuracy: 1.0000

Epoch 136/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0016 - accuracy: 1.0000

Epoch 136: val\_loss did not improve from 0.00451

2/2 [==============================] - 0s 70ms/step - loss: 0.0013 - accuracy: 1.0000 - val\_loss: 0.0047 - val\_accuracy: 1.0000

Epoch 137/200

1/2 [==============>...............] - ETA: 0s - loss: 2.0681e-04 - accuracy: 1.0000

Epoch 137: val\_loss improved from 0.00451 to 0.00408, saving model to weights.hdf5

2/2 [==============================] - 0s 141ms/step - loss: 2.0090e-04 - accuracy: 1.0000 - val\_loss: 0.0041 - val\_accuracy: 1.0000

Epoch 138/200

1/2 [==============>...............] - ETA: 0s - loss: 4.0753e-04 - accuracy: 1.0000

Epoch 138: val\_loss improved from 0.00408 to 0.00383, saving model to weights.hdf5

2/2 [==============================] - 0s 126ms/step - loss: 3.7054e-04 - accuracy: 1.0000 - val\_loss: 0.0038 - val\_accuracy: 1.0000

Epoch 139/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9349e-04 - accuracy: 1.0000

Epoch 139: val\_loss improved from 0.00383 to 0.00365, saving model to weights.hdf5

2/2 [==============================] - 0s 133ms/step - loss: 2.9401e-04 - accuracy: 1.0000 - val\_loss: 0.0036 - val\_accuracy: 1.0000

Epoch 140/200

1/2 [==============>...............] - ETA: 0s - loss: 3.9548e-04 - accuracy: 1.0000

Epoch 140: val\_loss improved from 0.00365 to 0.00351, saving model to weights.hdf5

2/2 [==============================] - 0s 119ms/step - loss: 3.4396e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Epoch 141/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6816e-04 - accuracy: 1.0000

Epoch 141: val\_loss improved from 0.00351 to 0.00342, saving model to weights.hdf5

2/2 [==============================] - 0s 140ms/step - loss: 3.0320e-04 - accuracy: 1.0000 - val\_loss: 0.0034 - val\_accuracy: 1.0000

Epoch 142/200

1/2 [==============>...............] - ETA: 0s - loss: 2.5927e-04 - accuracy: 1.0000

Epoch 142: val\_loss improved from 0.00342 to 0.00342, saving model to weights.hdf5

2/2 [==============================] - 0s 121ms/step - loss: 2.3638e-04 - accuracy: 1.0000 - val\_loss: 0.0034 - val\_accuracy: 1.0000

Epoch 143/200

1/2 [==============>...............] - ETA: 0s - loss: 3.5851e-04 - accuracy: 1.0000

Epoch 143: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 75ms/step - loss: 4.0137e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Epoch 144/200

1/2 [==============>...............] - ETA: 0s - loss: 2.5829e-04 - accuracy: 1.0000

Epoch 144: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 68ms/step - loss: 2.3298e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Epoch 145/200

1/2 [==============>...............] - ETA: 0s - loss: 4.4411e-04 - accuracy: 1.0000

Epoch 145: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 71ms/step - loss: 3.6686e-04 - accuracy: 1.0000 - val\_loss: 0.0036 - val\_accuracy: 1.0000

Epoch 146/200

1/2 [==============>...............] - ETA: 0s - loss: 2.4448e-04 - accuracy: 1.0000

Epoch 146: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 85ms/step - loss: 2.3921e-04 - accuracy: 1.0000 - val\_loss: 0.0038 - val\_accuracy: 1.0000

Epoch 147/200

1/2 [==============>...............] - ETA: 0s - loss: 2.8441e-04 - accuracy: 1.0000

Epoch 147: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 63ms/step - loss: 3.4736e-04 - accuracy: 1.0000 - val\_loss: 0.0041 - val\_accuracy: 1.0000

Epoch 148/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2292e-04 - accuracy: 1.0000

Epoch 148: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 72ms/step - loss: 1.9303e-04 - accuracy: 1.0000 - val\_loss: 0.0047 - val\_accuracy: 1.0000

Epoch 149/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9572e-04 - accuracy: 1.0000

Epoch 149: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 69ms/step - loss: 2.7316e-04 - accuracy: 1.0000 - val\_loss: 0.0052 - val\_accuracy: 1.0000

Epoch 150/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0304e-04 - accuracy: 1.0000

Epoch 150: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 64ms/step - loss: 2.7636e-04 - accuracy: 1.0000 - val\_loss: 0.0057 - val\_accuracy: 1.0000

Epoch 151/200

1/2 [==============>...............] - ETA: 0s - loss: 4.3065e-04 - accuracy: 1.0000

Epoch 151: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 75ms/step - loss: 4.1572e-04 - accuracy: 1.0000 - val\_loss: 0.0060 - val\_accuracy: 1.0000

Epoch 152/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8654e-04 - accuracy: 1.0000

Epoch 152: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 65ms/step - loss: 1.9589e-04 - accuracy: 1.0000 - val\_loss: 0.0062 - val\_accuracy: 1.0000

Epoch 153/200

1/2 [==============>...............] - ETA: 0s - loss: 4.0880e-04 - accuracy: 1.0000

Epoch 153: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 72ms/step - loss: 3.4506e-04 - accuracy: 1.0000 - val\_loss: 0.0060 - val\_accuracy: 1.0000

Epoch 154/200

1/2 [==============>...............] - ETA: 0s - loss: 1.4616e-04 - accuracy: 1.0000

Epoch 154: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 67ms/step - loss: 2.7777e-04 - accuracy: 1.0000 - val\_loss: 0.0058 - val\_accuracy: 1.0000

Epoch 155/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1902e-04 - accuracy: 1.0000

Epoch 155: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 67ms/step - loss: 1.9229e-04 - accuracy: 1.0000 - val\_loss: 0.0056 - val\_accuracy: 1.0000

Epoch 156/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6668e-04 - accuracy: 1.0000

Epoch 156: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 72ms/step - loss: 1.6124e-04 - accuracy: 1.0000 - val\_loss: 0.0054 - val\_accuracy: 1.0000

Epoch 157/200

1/2 [==============>...............] - ETA: 0s - loss: 1.9134e-04 - accuracy: 1.0000

Epoch 157: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 69ms/step - loss: 1.8567e-04 - accuracy: 1.0000 - val\_loss: 0.0053 - val\_accuracy: 1.0000

Epoch 158/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2756e-04 - accuracy: 1.0000

Epoch 158: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 73ms/step - loss: 2.1148e-04 - accuracy: 1.0000 - val\_loss: 0.0052 - val\_accuracy: 1.0000

Epoch 159/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6510e-04 - accuracy: 1.0000

Epoch 159: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 58ms/step - loss: 2.0296e-04 - accuracy: 1.0000 - val\_loss: 0.0051 - val\_accuracy: 1.0000

Epoch 160/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1447e-04 - accuracy: 1.0000

Epoch 160: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 68ms/step - loss: 1.9756e-04 - accuracy: 1.0000 - val\_loss: 0.0051 - val\_accuracy: 1.0000

Epoch 161/200

1/2 [==============>...............] - ETA: 0s - loss: 1.7440e-04 - accuracy: 1.0000

Epoch 161: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 59ms/step - loss: 1.6325e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 162/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8436e-04 - accuracy: 1.0000

Epoch 162: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 59ms/step - loss: 1.7437e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 163/200

1/2 [==============>...............] - ETA: 0s - loss: 1.9413e-04 - accuracy: 1.0000

Epoch 163: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 40ms/step - loss: 1.8842e-04 - accuracy: 1.0000 - val\_loss: 0.0052 - val\_accuracy: 1.0000

Epoch 164/200

1/2 [==============>...............] - ETA: 0s - loss: 2.7955e-04 - accuracy: 1.0000

Epoch 164: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 39ms/step - loss: 2.4717e-04 - accuracy: 1.0000 - val\_loss: 0.0055 - val\_accuracy: 1.0000

Epoch 165/200

1/2 [==============>...............] - ETA: 0s - loss: 1.9443e-04 - accuracy: 1.0000

Epoch 165: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 39ms/step - loss: 2.0294e-04 - accuracy: 1.0000 - val\_loss: 0.0059 - val\_accuracy: 1.0000

Epoch 166/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1407e-04 - accuracy: 1.0000

Epoch 166: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 45ms/step - loss: 1.8334e-04 - accuracy: 1.0000 - val\_loss: 0.0061 - val\_accuracy: 1.0000

Epoch 167/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2742e-04 - accuracy: 1.0000

Epoch 167: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 41ms/step - loss: 1.3580e-04 - accuracy: 1.0000 - val\_loss: 0.0063 - val\_accuracy: 1.0000

Epoch 168/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8739e-04 - accuracy: 1.0000

Epoch 168: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 42ms/step - loss: 1.6853e-04 - accuracy: 1.0000 - val\_loss: 0.0063 - val\_accuracy: 1.0000

Epoch 169/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9725e-04 - accuracy: 1.0000

Epoch 169: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 41ms/step - loss: 2.5852e-04 - accuracy: 1.0000 - val\_loss: 0.0063 - val\_accuracy: 1.0000

Epoch 170/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2475e-04 - accuracy: 1.0000

Epoch 170: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 40ms/step - loss: 3.3542e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 171/200

1/2 [==============>...............] - ETA: 0s - loss: 1.5815e-04 - accuracy: 1.0000

Epoch 171: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 41ms/step - loss: 1.7283e-04 - accuracy: 1.0000 - val\_loss: 0.0040 - val\_accuracy: 1.0000

Epoch 172/200

1/2 [==============>...............] - ETA: 0s - loss: 1.4001e-04 - accuracy: 1.0000

Epoch 172: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 50ms/step - loss: 1.3112e-04 - accuracy: 1.0000 - val\_loss: 0.0040 - val\_accuracy: 1.0000

Epoch 173/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8081e-04 - accuracy: 1.0000

Epoch 173: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 41ms/step - loss: 1.6839e-04 - accuracy: 1.0000 - val\_loss: 0.0046 - val\_accuracy: 1.0000

Epoch 174/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6262e-04 - accuracy: 1.0000

Epoch 174: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 44ms/step - loss: 2.2030e-04 - accuracy: 1.0000 - val\_loss: 0.0051 - val\_accuracy: 1.0000

Epoch 175/200

1/2 [==============>...............] - ETA: 0s - loss: 2.0172e-04 - accuracy: 1.0000

Epoch 175: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 39ms/step - loss: 2.1327e-04 - accuracy: 1.0000 - val\_loss: 0.0054 - val\_accuracy: 1.0000

Epoch 176/200

1/2 [==============>...............] - ETA: 0s - loss: 1.5227e-04 - accuracy: 1.0000

Epoch 176: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 52ms/step - loss: 1.7682e-04 - accuracy: 1.0000 - val\_loss: 0.0053 - val\_accuracy: 1.0000

Epoch 177/200

1/2 [==============>...............] - ETA: 0s - loss: 2.0501e-04 - accuracy: 1.0000

Epoch 177: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 53ms/step - loss: 1.8673e-04 - accuracy: 1.0000 - val\_loss: 0.0051 - val\_accuracy: 1.0000

Epoch 178/200

1/2 [==============>...............] - ETA: 0s - loss: 3.9496e-04 - accuracy: 1.0000

Epoch 178: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 42ms/step - loss: 3.2363e-04 - accuracy: 1.0000 - val\_loss: 0.0042 - val\_accuracy: 1.0000

Epoch 179/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8674e-04 - accuracy: 1.0000

Epoch 179: val\_loss did not improve from 0.00342

2/2 [==============================] - 0s 37ms/step - loss: 1.9769e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Epoch 180/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6406e-04 - accuracy: 1.0000

Epoch 180: val\_loss improved from 0.00342 to 0.00305, saving model to weights.hdf5

2/2 [==============================] - 0s 93ms/step - loss: 1.7152e-04 - accuracy: 1.0000 - val\_loss: 0.0030 - val\_accuracy: 1.0000

Epoch 181/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2862e-04 - accuracy: 1.0000

Epoch 181: val\_loss improved from 0.00305 to 0.00288, saving model to weights.hdf5

2/2 [==============================] - 0s 88ms/step - loss: 1.5200e-04 - accuracy: 1.0000 - val\_loss: 0.0029 - val\_accuracy: 1.0000

Epoch 182/200

1/2 [==============>...............] - ETA: 0s - loss: 1.3923e-04 - accuracy: 1.0000

Epoch 182: val\_loss improved from 0.00288 to 0.00287, saving model to weights.hdf5

2/2 [==============================] - 0s 92ms/step - loss: 1.5530e-04 - accuracy: 1.0000 - val\_loss: 0.0029 - val\_accuracy: 1.0000

Epoch 183/200

1/2 [==============>...............] - ETA: 0s - loss: 1.0576e-04 - accuracy: 1.0000

Epoch 183: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 47ms/step - loss: 1.4775e-04 - accuracy: 1.0000 - val\_loss: 0.0030 - val\_accuracy: 1.0000

Epoch 184/200

1/2 [==============>...............] - ETA: 0s - loss: 1.0394e-04 - accuracy: 1.0000

Epoch 184: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 46ms/step - loss: 1.2599e-04 - accuracy: 1.0000 - val\_loss: 0.0032 - val\_accuracy: 1.0000

Epoch 185/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1769e-04 - accuracy: 1.0000

Epoch 185: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 57ms/step - loss: 2.0862e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Epoch 186/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2625e-04 - accuracy: 1.0000

Epoch 186: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 42ms/step - loss: 1.2164e-04 - accuracy: 1.0000 - val\_loss: 0.0039 - val\_accuracy: 1.0000

Epoch 187/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2161e-04 - accuracy: 1.0000

Epoch 187: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 40ms/step - loss: 1.9403e-04 - accuracy: 1.0000 - val\_loss: 0.0042 - val\_accuracy: 1.0000

Epoch 188/200

1/2 [==============>...............] - ETA: 0s - loss: 1.5604e-04 - accuracy: 1.0000

Epoch 188: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 44ms/step - loss: 1.4507e-04 - accuracy: 1.0000 - val\_loss: 0.0046 - val\_accuracy: 1.0000

Epoch 189/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2218e-04 - accuracy: 1.0000

Epoch 189: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 40ms/step - loss: 1.0559e-04 - accuracy: 1.0000 - val\_loss: 0.0048 - val\_accuracy: 1.0000

Epoch 190/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6234e-04 - accuracy: 1.0000

Epoch 190: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 44ms/step - loss: 1.6480e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 191/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2444e-04 - accuracy: 1.0000

Epoch 191: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 40ms/step - loss: 1.1826e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 192/200

1/2 [==============>...............] - ETA: 0s - loss: 1.3984e-04 - accuracy: 1.0000

Epoch 192: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 42ms/step - loss: 1.5169e-04 - accuracy: 1.0000 - val\_loss: 0.0050 - val\_accuracy: 1.0000

Epoch 193/200

1/2 [==============>...............] - ETA: 0s - loss: 9.8529e-05 - accuracy: 1.0000

Epoch 193: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 46ms/step - loss: 1.2216e-04 - accuracy: 1.0000 - val\_loss: 0.0048 - val\_accuracy: 1.0000

Epoch 194/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2863e-04 - accuracy: 1.0000

Epoch 194: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 42ms/step - loss: 1.2052e-04 - accuracy: 1.0000 - val\_loss: 0.0046 - val\_accuracy: 1.0000

Epoch 195/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8499e-04 - accuracy: 1.0000

Epoch 195: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 40ms/step - loss: 1.6846e-04 - accuracy: 1.0000 - val\_loss: 0.0044 - val\_accuracy: 1.0000

Epoch 196/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6395e-04 - accuracy: 1.0000

Epoch 196: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 47ms/step - loss: 1.4578e-04 - accuracy: 1.0000 - val\_loss: 0.0041 - val\_accuracy: 1.0000

Epoch 197/200

1/2 [==============>...............] - ETA: 0s - loss: 9.5068e-05 - accuracy: 1.0000

Epoch 197: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 45ms/step - loss: 1.1301e-04 - accuracy: 1.0000 - val\_loss: 0.0040 - val\_accuracy: 1.0000

Epoch 198/200

1/2 [==============>...............] - ETA: 0s - loss: 1.2282e-04 - accuracy: 1.0000

Epoch 198: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 41ms/step - loss: 1.1832e-04 - accuracy: 1.0000 - val\_loss: 0.0038 - val\_accuracy: 1.0000

Epoch 199/200

1/2 [==============>...............] - ETA: 0s - loss: 2.7758e-04 - accuracy: 1.0000

Epoch 199: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 42ms/step - loss: 2.3592e-04 - accuracy: 1.0000 - val\_loss: 0.0037 - val\_accuracy: 1.0000

Epoch 200/200

1/2 [==============>...............] - ETA: 0s - loss: 7.4101e-05 - accuracy: 1.0000

Epoch 200: val\_loss did not improve from 0.00287

2/2 [==============================] - 0s 41ms/step - loss: 1.2573e-04 - accuracy: 1.0000 - val\_loss: 0.0035 - val\_accuracy: 1.0000

Accuracy\_train = 100.0% Loss\_train = 0.0

Accuracy\_val = 100.0% Loss\_val = 0.0

Accuracy\_test = 98.28% Loss\_test = 0.04

2/2 [==============================] - 0s 11ms/step

precision recall f1-score support

0 1.00 1.00 1.00 2

1 1.00 1.00 1.00 2

2 1.00 1.00 1.00 2

3 1.00 1.00 1.00 2

4 1.00 1.00 1.00 2

5 1.00 1.00 1.00 2

6 1.00 1.00 1.00 2

7 1.00 1.00 1.00 2

8 1.00 1.00 1.00 2

9 1.00 1.00 1.00 2

10 1.00 1.00 1.00 2

11 1.00 1.00 1.00 2

12 1.00 1.00 1.00 2

13 1.00 0.50 0.67 2

14 1.00 1.00 1.00 2

15 1.00 1.00 1.00 2

16 1.00 1.00 1.00 2

17 1.00 1.00 1.00 2

18 1.00 1.00 1.00 2

19 1.00 1.00 1.00 2

20 0.67 1.00 0.80 2

21 1.00 1.00 1.00 2

22 1.00 1.00 1.00 2

23 1.00 1.00 1.00 2

24 1.00 1.00 1.00 2

25 1.00 1.00 1.00 2

26 1.00 1.00 1.00 2

27 1.00 1.00 1.00 2

28 1.00 1.00 1.00 2

accuracy 0.98 58

macro avg 0.99 0.98 0.98 58

weighted avg 0.99 0.98 0.98 58

A graph with blue and orange lines

Description automatically generated

A graph with numbers and lines

Description automatically generated

Before Shape Test Gesture\_label : (29,)

Before Shape Valid Gesture\_label : (29, 1)

Model: "sequential\_3"

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Layer (type) Output Shape Param #

=================================================================

conv1d\_3 (Conv1D) (None, 100, 32) 1632

conv1d\_4 (Conv1D) (None, 100, 64) 10304

conv1d\_5 (Conv1D) (None, 100, 128) 41088

max\_pooling1d\_1 (MaxPooling (None, 20, 128) 0

1D)

dropout\_1 (Dropout) (None, 20, 128) 0

flatten\_1 (Flatten) (None, 2560) 0

dense\_3 (Dense) (None, 256) 655616

dense\_4 (Dense) (None, 512) 131584

dense\_5 (Dense) (None, 29) 14877

=================================================================

Total params: 855,101

Trainable params: 855,101

Non-trainable params: 0

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Epoch 1/200

1/2 [==============>...............] - ETA: 3s - loss: 3.3773 - accuracy: 0.0156

Epoch 1: val\_loss improved from inf to 3.27729, saving model to weights.hdf5

2/2 [==============================] - 4s 456ms/step - loss: 3.3759 - accuracy: 0.0172 - val\_loss: 3.2773 - val\_accuracy: 0.1724

Epoch 2/200

1/2 [==============>...............] - ETA: 0s - loss: 3.2872 - accuracy: 0.0625

Epoch 2: val\_loss improved from 3.27729 to 3.12687, saving model to weights.hdf5

2/2 [==============================] - 0s 225ms/step - loss: 3.2763 - accuracy: 0.0690 - val\_loss: 3.1269 - val\_accuracy: 0.0690

Epoch 3/200

1/2 [==============>...............] - ETA: 0s - loss: 3.1195 - accuracy: 0.1797

Epoch 3: val\_loss improved from 3.12687 to 2.85947, saving model to weights.hdf5

2/2 [==============================] - 0s 258ms/step - loss: 3.1135 - accuracy: 0.1437 - val\_loss: 2.8595 - val\_accuracy: 0.1379

Epoch 4/200

1/2 [==============>...............] - ETA: 0s - loss: 2.8629 - accuracy: 0.1641

Epoch 4: val\_loss improved from 2.85947 to 2.52274, saving model to weights.hdf5

2/2 [==============================] - 0s 247ms/step - loss: 2.8303 - accuracy: 0.1667 - val\_loss: 2.5227 - val\_accuracy: 0.2069

Epoch 5/200

1/2 [==============>...............] - ETA: 0s - loss: 2.5183 - accuracy: 0.2734

Epoch 5: val\_loss improved from 2.52274 to 2.15892, saving model to weights.hdf5

2/2 [==============================] - 0s 220ms/step - loss: 2.5180 - accuracy: 0.2644 - val\_loss: 2.1589 - val\_accuracy: 0.5000

Epoch 6/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2010 - accuracy: 0.4062

Epoch 6: val\_loss improved from 2.15892 to 1.84385, saving model to weights.hdf5

2/2 [==============================] - 0s 220ms/step - loss: 2.1994 - accuracy: 0.3678 - val\_loss: 1.8439 - val\_accuracy: 0.4483

Epoch 7/200

1/2 [==============>...............] - ETA: 0s - loss: 1.8793 - accuracy: 0.4219

Epoch 7: val\_loss improved from 1.84385 to 1.63478, saving model to weights.hdf5

2/2 [==============================] - 0s 219ms/step - loss: 1.8823 - accuracy: 0.4080 - val\_loss: 1.6348 - val\_accuracy: 0.4655

Epoch 8/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6622 - accuracy: 0.4844

Epoch 8: val\_loss improved from 1.63478 to 1.37141, saving model to weights.hdf5

2/2 [==============================] - 0s 230ms/step - loss: 1.6651 - accuracy: 0.4655 - val\_loss: 1.3714 - val\_accuracy: 0.6034

Epoch 9/200

1/2 [==============>...............] - ETA: 0s - loss: 1.3761 - accuracy: 0.6172

Epoch 9: val\_loss improved from 1.37141 to 1.13096, saving model to weights.hdf5

2/2 [==============================] - 0s 219ms/step - loss: 1.3741 - accuracy: 0.5920 - val\_loss: 1.1310 - val\_accuracy: 0.6379

Epoch 10/200

1/2 [==============>...............] - ETA: 0s - loss: 1.1333 - accuracy: 0.6562

Epoch 10: val\_loss improved from 1.13096 to 0.98341, saving model to weights.hdf5

2/2 [==============================] - 0s 233ms/step - loss: 1.1210 - accuracy: 0.6552 - val\_loss: 0.9834 - val\_accuracy: 0.6034

Epoch 11/200

1/2 [==============>...............] - ETA: 0s - loss: 0.9756 - accuracy: 0.6641

Epoch 11: val\_loss improved from 0.98341 to 0.81677, saving model to weights.hdf5

2/2 [==============================] - 0s 221ms/step - loss: 0.9605 - accuracy: 0.6839 - val\_loss: 0.8168 - val\_accuracy: 0.7414

Epoch 12/200

1/2 [==============>...............] - ETA: 0s - loss: 0.7913 - accuracy: 0.7266

Epoch 12: val\_loss improved from 0.81677 to 0.64627, saving model to weights.hdf5

2/2 [==============================] - 0s 275ms/step - loss: 0.7947 - accuracy: 0.7299 - val\_loss: 0.6463 - val\_accuracy: 0.8448

Epoch 13/200

1/2 [==============>...............] - ETA: 0s - loss: 0.6247 - accuracy: 0.8438

Epoch 13: val\_loss improved from 0.64627 to 0.58790, saving model to weights.hdf5

2/2 [==============================] - 0s 157ms/step - loss: 0.6154 - accuracy: 0.8391 - val\_loss: 0.5879 - val\_accuracy: 0.7931

Epoch 14/200

1/2 [==============>...............] - ETA: 0s - loss: 0.5747 - accuracy: 0.7734

Epoch 14: val\_loss improved from 0.58790 to 0.52455, saving model to weights.hdf5

2/2 [==============================] - 0s 153ms/step - loss: 0.5385 - accuracy: 0.7989 - val\_loss: 0.5246 - val\_accuracy: 0.8276

Epoch 15/200

1/2 [==============>...............] - ETA: 0s - loss: 0.4341 - accuracy: 0.8203

Epoch 15: val\_loss improved from 0.52455 to 0.38796, saving model to weights.hdf5

2/2 [==============================] - 0s 152ms/step - loss: 0.4526 - accuracy: 0.7989 - val\_loss: 0.3880 - val\_accuracy: 0.9138

Epoch 16/200

1/2 [==============>...............] - ETA: 0s - loss: 0.3602 - accuracy: 0.8828

Epoch 16: val\_loss did not improve from 0.38796

2/2 [==============================] - 0s 67ms/step - loss: 0.3343 - accuracy: 0.9023 - val\_loss: 0.4399 - val\_accuracy: 0.8103

Epoch 17/200

1/2 [==============>...............] - ETA: 0s - loss: 0.3783 - accuracy: 0.8672

Epoch 17: val\_loss did not improve from 0.38796

2/2 [==============================] - 0s 67ms/step - loss: 0.3434 - accuracy: 0.8851 - val\_loss: 0.4071 - val\_accuracy: 0.8621

Epoch 18/200

1/2 [==============>...............] - ETA: 0s - loss: 0.2950 - accuracy: 0.9141

Epoch 18: val\_loss did not improve from 0.38796

2/2 [==============================] - 0s 66ms/step - loss: 0.2632 - accuracy: 0.9310 - val\_loss: 0.3972 - val\_accuracy: 0.8793

Epoch 19/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1892 - accuracy: 0.9375

Epoch 19: val\_loss improved from 0.38796 to 0.25260, saving model to weights.hdf5

2/2 [==============================] - 0s 144ms/step - loss: 0.1879 - accuracy: 0.9483 - val\_loss: 0.2526 - val\_accuracy: 0.9138

Epoch 20/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1860 - accuracy: 0.9531

Epoch 20: val\_loss did not improve from 0.25260

2/2 [==============================] - 0s 73ms/step - loss: 0.2076 - accuracy: 0.9425 - val\_loss: 0.2953 - val\_accuracy: 0.9138

Epoch 21/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1317 - accuracy: 0.9688

Epoch 21: val\_loss did not improve from 0.25260

2/2 [==============================] - 0s 69ms/step - loss: 0.1278 - accuracy: 0.9655 - val\_loss: 0.4343 - val\_accuracy: 0.8793

Epoch 22/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1871 - accuracy: 0.9375

Epoch 22: val\_loss improved from 0.25260 to 0.20163, saving model to weights.hdf5

2/2 [==============================] - 0s 143ms/step - loss: 0.1771 - accuracy: 0.9310 - val\_loss: 0.2016 - val\_accuracy: 0.9483

Epoch 23/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1171 - accuracy: 0.9766

Epoch 23: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 60ms/step - loss: 0.1528 - accuracy: 0.9598 - val\_loss: 0.3181 - val\_accuracy: 0.8966

Epoch 24/200

1/2 [==============>...............] - ETA: 0s - loss: 0.2096 - accuracy: 0.9375

Epoch 24: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 67ms/step - loss: 0.2056 - accuracy: 0.9368 - val\_loss: 0.5755 - val\_accuracy: 0.8621

Epoch 25/200

1/2 [==============>...............] - ETA: 0s - loss: 0.2221 - accuracy: 0.9062

Epoch 25: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 67ms/step - loss: 0.1875 - accuracy: 0.9195 - val\_loss: 0.2233 - val\_accuracy: 0.9310

Epoch 26/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0746 - accuracy: 0.9688

Epoch 26: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 51ms/step - loss: 0.1186 - accuracy: 0.9540 - val\_loss: 0.3108 - val\_accuracy: 0.9310

Epoch 27/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0942 - accuracy: 0.9609

Epoch 27: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 65ms/step - loss: 0.0879 - accuracy: 0.9655 - val\_loss: 0.3834 - val\_accuracy: 0.9138

Epoch 28/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1176 - accuracy: 0.9609

Epoch 28: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 71ms/step - loss: 0.1318 - accuracy: 0.9483 - val\_loss: 0.3353 - val\_accuracy: 0.8966

Epoch 29/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0710 - accuracy: 0.9844

Epoch 29: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 68ms/step - loss: 0.0740 - accuracy: 0.9770 - val\_loss: 0.3788 - val\_accuracy: 0.8966

Epoch 30/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1483 - accuracy: 0.9453

Epoch 30: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 64ms/step - loss: 0.2000 - accuracy: 0.9368 - val\_loss: 0.3710 - val\_accuracy: 0.8793

Epoch 31/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1852 - accuracy: 0.9453

Epoch 31: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 65ms/step - loss: 0.1808 - accuracy: 0.9483 - val\_loss: 0.2913 - val\_accuracy: 0.9138

Epoch 32/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1119 - accuracy: 0.9609

Epoch 32: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 74ms/step - loss: 0.1063 - accuracy: 0.9655 - val\_loss: 0.2152 - val\_accuracy: 0.9483

Epoch 33/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0704 - accuracy: 0.9766

Epoch 33: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 68ms/step - loss: 0.0652 - accuracy: 0.9828 - val\_loss: 0.2813 - val\_accuracy: 0.9310

Epoch 34/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1172 - accuracy: 0.9531

Epoch 34: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 77ms/step - loss: 0.1160 - accuracy: 0.9598 - val\_loss: 0.2134 - val\_accuracy: 0.9483

Epoch 35/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0547 - accuracy: 0.9922

Epoch 35: val\_loss did not improve from 0.20163

2/2 [==============================] - 0s 50ms/step - loss: 0.0543 - accuracy: 0.9885 - val\_loss: 0.2313 - val\_accuracy: 0.9138

Epoch 36/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1139 - accuracy: 0.9531

Epoch 36: val\_loss improved from 0.20163 to 0.18320, saving model to weights.hdf5

2/2 [==============================] - 0s 139ms/step - loss: 0.1048 - accuracy: 0.9655 - val\_loss: 0.1832 - val\_accuracy: 0.9483

Epoch 37/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0338 - accuracy: 0.9922

Epoch 37: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 68ms/step - loss: 0.0357 - accuracy: 0.9943 - val\_loss: 0.4229 - val\_accuracy: 0.8621

Epoch 38/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0661 - accuracy: 0.9922

Epoch 38: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 83ms/step - loss: 0.0554 - accuracy: 0.9943 - val\_loss: 0.5062 - val\_accuracy: 0.8966

Epoch 39/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0953 - accuracy: 0.9766

Epoch 39: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 67ms/step - loss: 0.0916 - accuracy: 0.9770 - val\_loss: 0.2112 - val\_accuracy: 0.9138

Epoch 40/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0308 - accuracy: 0.9922

Epoch 40: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 72ms/step - loss: 0.0261 - accuracy: 0.9943 - val\_loss: 0.2127 - val\_accuracy: 0.9483

Epoch 41/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0645 - accuracy: 0.9922

Epoch 41: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 67ms/step - loss: 0.0545 - accuracy: 0.9943 - val\_loss: 0.2896 - val\_accuracy: 0.9310

Epoch 42/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0473 - accuracy: 0.9844

Epoch 42: val\_loss did not improve from 0.18320

2/2 [==============================] - 0s 63ms/step - loss: 0.0446 - accuracy: 0.9828 - val\_loss: 0.1975 - val\_accuracy: 0.9483

Epoch 43/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0174 - accuracy: 1.0000

Epoch 43: val\_loss improved from 0.18320 to 0.12600, saving model to weights.hdf5

2/2 [==============================] - 0s 133ms/step - loss: 0.0195 - accuracy: 0.9943 - val\_loss: 0.1260 - val\_accuracy: 0.9655

Epoch 44/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0110 - accuracy: 1.0000

Epoch 44: val\_loss improved from 0.12600 to 0.08178, saving model to weights.hdf5

2/2 [==============================] - 0s 143ms/step - loss: 0.0148 - accuracy: 1.0000 - val\_loss: 0.0818 - val\_accuracy: 0.9655

Epoch 45/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0815 - accuracy: 0.9609

Epoch 45: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 67ms/step - loss: 0.0631 - accuracy: 0.9713 - val\_loss: 0.1477 - val\_accuracy: 0.9655

Epoch 46/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0088 - accuracy: 1.0000

Epoch 46: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 70ms/step - loss: 0.0076 - accuracy: 1.0000 - val\_loss: 0.3056 - val\_accuracy: 0.9310

Epoch 47/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0272 - accuracy: 0.9844

Epoch 47: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 76ms/step - loss: 0.0215 - accuracy: 0.9885 - val\_loss: 0.2125 - val\_accuracy: 0.9655

Epoch 48/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0089 - accuracy: 1.0000

Epoch 48: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 68ms/step - loss: 0.0080 - accuracy: 1.0000 - val\_loss: 0.1110 - val\_accuracy: 0.9655

Epoch 49/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0193 - accuracy: 0.9844

Epoch 49: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 71ms/step - loss: 0.0160 - accuracy: 0.9885 - val\_loss: 0.1498 - val\_accuracy: 0.9655

Epoch 50/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0091 - accuracy: 1.0000

Epoch 50: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 50ms/step - loss: 0.0080 - accuracy: 1.0000 - val\_loss: 0.2204 - val\_accuracy: 0.9655

Epoch 51/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0080 - accuracy: 1.0000

Epoch 51: val\_loss did not improve from 0.08178

2/2 [==============================] - 0s 75ms/step - loss: 0.0170 - accuracy: 0.9943 - val\_loss: 0.1154 - val\_accuracy: 0.9655

Epoch 52/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0106 - accuracy: 1.0000

Epoch 52: val\_loss improved from 0.08178 to 0.05694, saving model to weights.hdf5

2/2 [==============================] - 0s 142ms/step - loss: 0.0090 - accuracy: 1.0000 - val\_loss: 0.0569 - val\_accuracy: 0.9828

Epoch 53/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0099 - accuracy: 1.0000

Epoch 53: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 74ms/step - loss: 0.0688 - accuracy: 0.9828 - val\_loss: 0.3138 - val\_accuracy: 0.9483

Epoch 54/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0175 - accuracy: 0.9922

Epoch 54: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 68ms/step - loss: 0.1177 - accuracy: 0.9828 - val\_loss: 0.5707 - val\_accuracy: 0.9138

Epoch 55/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1874 - accuracy: 0.9609

Epoch 55: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 69ms/step - loss: 0.1395 - accuracy: 0.9713 - val\_loss: 0.0845 - val\_accuracy: 0.9483

Epoch 56/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0370 - accuracy: 0.9844

Epoch 56: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 58ms/step - loss: 0.0302 - accuracy: 0.9885 - val\_loss: 0.1704 - val\_accuracy: 0.9655

Epoch 57/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1960 - accuracy: 0.9609

Epoch 57: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 70ms/step - loss: 0.1519 - accuracy: 0.9655 - val\_loss: 0.0762 - val\_accuracy: 0.9828

Epoch 58/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0474 - accuracy: 0.9766

Epoch 58: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 72ms/step - loss: 0.0388 - accuracy: 0.9828 - val\_loss: 0.5209 - val\_accuracy: 0.8793

Epoch 59/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0763 - accuracy: 0.9531

Epoch 59: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 64ms/step - loss: 0.0712 - accuracy: 0.9598 - val\_loss: 0.3579 - val\_accuracy: 0.9310

Epoch 60/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0466 - accuracy: 0.9844

Epoch 60: val\_loss did not improve from 0.05694

2/2 [==============================] - 0s 62ms/step - loss: 0.0648 - accuracy: 0.9770 - val\_loss: 0.3084 - val\_accuracy: 0.9310

Epoch 61/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0834 - accuracy: 0.9844

Epoch 61: val\_loss improved from 0.05694 to 0.04425, saving model to weights.hdf5

2/2 [==============================] - 0s 134ms/step - loss: 0.0652 - accuracy: 0.9885 - val\_loss: 0.0442 - val\_accuracy: 0.9828

Epoch 62/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0893 - accuracy: 0.9688

Epoch 62: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 72ms/step - loss: 0.0785 - accuracy: 0.9713 - val\_loss: 0.2466 - val\_accuracy: 0.9310

Epoch 63/200

1/2 [==============>...............] - ETA: 0s - loss: 0.1391 - accuracy: 0.9375

Epoch 63: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 124ms/step - loss: 0.1057 - accuracy: 0.9540 - val\_loss: 0.1117 - val\_accuracy: 0.9655

Epoch 64/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0061 - accuracy: 1.0000

Epoch 64: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 153ms/step - loss: 0.0088 - accuracy: 1.0000 - val\_loss: 0.2138 - val\_accuracy: 0.9483

Epoch 65/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0306 - accuracy: 1.0000

Epoch 65: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 185ms/step - loss: 0.0398 - accuracy: 0.9943 - val\_loss: 0.1813 - val\_accuracy: 0.9655

Epoch 66/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0152 - accuracy: 0.9922

Epoch 66: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 150ms/step - loss: 0.0184 - accuracy: 0.9943 - val\_loss: 0.1128 - val\_accuracy: 0.9655

Epoch 67/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0090 - accuracy: 1.0000

Epoch 67: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 120ms/step - loss: 0.0086 - accuracy: 1.0000 - val\_loss: 0.0663 - val\_accuracy: 0.9655

Epoch 68/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0124 - accuracy: 1.0000

Epoch 68: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 130ms/step - loss: 0.0155 - accuracy: 1.0000 - val\_loss: 0.0673 - val\_accuracy: 0.9655

Epoch 69/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0170 - accuracy: 1.0000

Epoch 69: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 100ms/step - loss: 0.0162 - accuracy: 1.0000 - val\_loss: 0.1116 - val\_accuracy: 0.9483

Epoch 70/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0080 - accuracy: 1.0000

Epoch 70: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0073 - accuracy: 1.0000 - val\_loss: 0.1584 - val\_accuracy: 0.9483

Epoch 71/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0070 - accuracy: 1.0000

Epoch 71: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0062 - accuracy: 1.0000 - val\_loss: 0.1787 - val\_accuracy: 0.9483

Epoch 72/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0058 - accuracy: 1.0000

Epoch 72: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 35ms/step - loss: 0.0068 - accuracy: 1.0000 - val\_loss: 0.1959 - val\_accuracy: 0.9310

Epoch 73/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0183 - accuracy: 0.9922

Epoch 73: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0144 - accuracy: 0.9943 - val\_loss: 0.2100 - val\_accuracy: 0.9310

Epoch 74/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0050 - accuracy: 1.0000

Epoch 74: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 0.0048 - accuracy: 1.0000 - val\_loss: 0.2076 - val\_accuracy: 0.9483

Epoch 75/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0054 - accuracy: 1.0000

Epoch 75: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 43ms/step - loss: 0.0044 - accuracy: 1.0000 - val\_loss: 0.1778 - val\_accuracy: 0.9483

Epoch 76/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0029 - accuracy: 1.0000

Epoch 76: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0031 - accuracy: 1.0000 - val\_loss: 0.1508 - val\_accuracy: 0.9483

Epoch 77/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0037 - accuracy: 1.0000

Epoch 77: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 0.0033 - accuracy: 1.0000 - val\_loss: 0.1413 - val\_accuracy: 0.9483

Epoch 78/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0024 - accuracy: 1.0000

Epoch 78: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 0.0033 - accuracy: 1.0000 - val\_loss: 0.1366 - val\_accuracy: 0.9483

Epoch 79/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0033 - accuracy: 1.0000

Epoch 79: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 0.0029 - accuracy: 1.0000 - val\_loss: 0.1466 - val\_accuracy: 0.9483

Epoch 80/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0025 - accuracy: 1.0000

Epoch 80: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0028 - accuracy: 1.0000 - val\_loss: 0.1650 - val\_accuracy: 0.9483

Epoch 81/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0024 - accuracy: 1.0000

Epoch 81: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0021 - accuracy: 1.0000 - val\_loss: 0.1867 - val\_accuracy: 0.9483

Epoch 82/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0023 - accuracy: 1.0000

Epoch 82: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 34ms/step - loss: 0.0021 - accuracy: 1.0000 - val\_loss: 0.1962 - val\_accuracy: 0.9483

Epoch 83/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0015 - accuracy: 1.0000

Epoch 83: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 0.0025 - accuracy: 1.0000 - val\_loss: 0.1812 - val\_accuracy: 0.9483

Epoch 84/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0037 - accuracy: 1.0000

Epoch 84: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 61ms/step - loss: 0.0030 - accuracy: 1.0000 - val\_loss: 0.1364 - val\_accuracy: 0.9483

Epoch 85/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0014 - accuracy: 1.0000

Epoch 85: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 42ms/step - loss: 0.0020 - accuracy: 1.0000 - val\_loss: 0.1096 - val\_accuracy: 0.9483

Epoch 86/200

1/2 [==============>...............] - ETA: 0s - loss: 9.2675e-04 - accuracy: 1.0000

Epoch 86: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 41ms/step - loss: 0.0013 - accuracy: 1.0000 - val\_loss: 0.1002 - val\_accuracy: 0.9483

Epoch 87/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0012 - accuracy: 1.0000

Epoch 87: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 43ms/step - loss: 0.0015 - accuracy: 1.0000 - val\_loss: 0.0992 - val\_accuracy: 0.9483

Epoch 88/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0013 - accuracy: 1.0000

Epoch 88: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 0.0013 - accuracy: 1.0000 - val\_loss: 0.1074 - val\_accuracy: 0.9483

Epoch 89/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0023 - accuracy: 1.0000

Epoch 89: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 38ms/step - loss: 0.0020 - accuracy: 1.0000 - val\_loss: 0.1194 - val\_accuracy: 0.9483

Epoch 90/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0012 - accuracy: 1.0000

Epoch 90: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0010 - accuracy: 1.0000 - val\_loss: 0.1290 - val\_accuracy: 0.9483

Epoch 91/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0017 - accuracy: 1.0000

Epoch 91: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.1319 - val\_accuracy: 0.9483

Epoch 92/200

1/2 [==============>...............] - ETA: 0s - loss: 9.1949e-04 - accuracy: 1.0000

Epoch 92: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 41ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.1372 - val\_accuracy: 0.9483

Epoch 93/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0021 - accuracy: 1.0000

Epoch 93: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0019 - accuracy: 1.0000 - val\_loss: 0.1326 - val\_accuracy: 0.9483

Epoch 94/200

1/2 [==============>...............] - ETA: 0s - loss: 8.1197e-04 - accuracy: 1.0000

Epoch 94: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 9.8907e-04 - accuracy: 1.0000 - val\_loss: 0.1334 - val\_accuracy: 0.9483

Epoch 95/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 95: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.1416 - val\_accuracy: 0.9483

Epoch 96/200

1/2 [==============>...............] - ETA: 0s - loss: 5.3574e-04 - accuracy: 1.0000

Epoch 96: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 38ms/step - loss: 7.2620e-04 - accuracy: 1.0000 - val\_loss: 0.1523 - val\_accuracy: 0.9483

Epoch 97/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 97: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 38ms/step - loss: 0.0010 - accuracy: 1.0000 - val\_loss: 0.1606 - val\_accuracy: 0.9483

Epoch 98/200

1/2 [==============>...............] - ETA: 0s - loss: 8.1787e-04 - accuracy: 1.0000

Epoch 98: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 38ms/step - loss: 7.9397e-04 - accuracy: 1.0000 - val\_loss: 0.1639 - val\_accuracy: 0.9483

Epoch 99/200

1/2 [==============>...............] - ETA: 0s - loss: 7.7374e-04 - accuracy: 1.0000

Epoch 99: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 7.5918e-04 - accuracy: 1.0000 - val\_loss: 0.1657 - val\_accuracy: 0.9483

Epoch 100/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0025 - accuracy: 1.0000

Epoch 100: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 0.0021 - accuracy: 1.0000 - val\_loss: 0.1509 - val\_accuracy: 0.9483

Epoch 101/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0012 - accuracy: 1.0000

Epoch 101: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.1398 - val\_accuracy: 0.9483

Epoch 102/200

1/2 [==============>...............] - ETA: 0s - loss: 6.2214e-04 - accuracy: 1.0000

Epoch 102: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0010 - accuracy: 1.0000 - val\_loss: 0.1296 - val\_accuracy: 0.9483

Epoch 103/200

1/2 [==============>...............] - ETA: 0s - loss: 6.4298e-04 - accuracy: 1.0000

Epoch 103: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 41ms/step - loss: 5.9282e-04 - accuracy: 1.0000 - val\_loss: 0.1226 - val\_accuracy: 0.9483

Epoch 104/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0011 - accuracy: 1.0000

Epoch 104: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 43ms/step - loss: 9.9224e-04 - accuracy: 1.0000 - val\_loss: 0.1181 - val\_accuracy: 0.9483

Epoch 105/200

1/2 [==============>...............] - ETA: 0s - loss: 6.7158e-04 - accuracy: 1.0000

Epoch 105: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 6.4080e-04 - accuracy: 1.0000 - val\_loss: 0.1129 - val\_accuracy: 0.9483

Epoch 106/200

1/2 [==============>...............] - ETA: 0s - loss: 6.1404e-04 - accuracy: 1.0000

Epoch 106: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 7.0737e-04 - accuracy: 1.0000 - val\_loss: 0.1119 - val\_accuracy: 0.9483

Epoch 107/200

1/2 [==============>...............] - ETA: 0s - loss: 7.8016e-04 - accuracy: 1.0000

Epoch 107: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 45ms/step - loss: 8.8820e-04 - accuracy: 1.0000 - val\_loss: 0.1107 - val\_accuracy: 0.9483

Epoch 108/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0017 - accuracy: 1.0000

Epoch 108: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.1197 - val\_accuracy: 0.9483

Epoch 109/200

1/2 [==============>...............] - ETA: 0s - loss: 6.0552e-04 - accuracy: 1.0000

Epoch 109: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 42ms/step - loss: 7.5187e-04 - accuracy: 1.0000 - val\_loss: 0.1309 - val\_accuracy: 0.9483

Epoch 110/200

1/2 [==============>...............] - ETA: 0s - loss: 6.1684e-04 - accuracy: 1.0000

Epoch 110: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.1569 - val\_accuracy: 0.9483

Epoch 111/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0018 - accuracy: 1.0000

Epoch 111: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 0.0015 - accuracy: 1.0000 - val\_loss: 0.1820 - val\_accuracy: 0.9483

Epoch 112/200

1/2 [==============>...............] - ETA: 0s - loss: 6.7380e-04 - accuracy: 1.0000

Epoch 112: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 9.9861e-04 - accuracy: 1.0000 - val\_loss: 0.1911 - val\_accuracy: 0.9483

Epoch 113/200

1/2 [==============>...............] - ETA: 0s - loss: 5.9423e-04 - accuracy: 1.0000

Epoch 113: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 44ms/step - loss: 9.9430e-04 - accuracy: 1.0000 - val\_loss: 0.1761 - val\_accuracy: 0.9483

Epoch 114/200

1/2 [==============>...............] - ETA: 0s - loss: 6.7645e-04 - accuracy: 1.0000

Epoch 114: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 5.8268e-04 - accuracy: 1.0000 - val\_loss: 0.1530 - val\_accuracy: 0.9483

Epoch 115/200

1/2 [==============>...............] - ETA: 0s - loss: 6.2828e-04 - accuracy: 1.0000

Epoch 115: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 43ms/step - loss: 8.3936e-04 - accuracy: 1.0000 - val\_loss: 0.1372 - val\_accuracy: 0.9483

Epoch 116/200

1/2 [==============>...............] - ETA: 0s - loss: 4.8537e-04 - accuracy: 1.0000

Epoch 116: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 5.0883e-04 - accuracy: 1.0000 - val\_loss: 0.1273 - val\_accuracy: 0.9483

Epoch 117/200

1/2 [==============>...............] - ETA: 0s - loss: 8.0101e-04 - accuracy: 1.0000

Epoch 117: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 7.3826e-04 - accuracy: 1.0000 - val\_loss: 0.1186 - val\_accuracy: 0.9483

Epoch 118/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0010 - accuracy: 1.0000

Epoch 118: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 35ms/step - loss: 9.0621e-04 - accuracy: 1.0000 - val\_loss: 0.1173 - val\_accuracy: 0.9483

Epoch 119/200

1/2 [==============>...............] - ETA: 0s - loss: 5.1041e-04 - accuracy: 1.0000

Epoch 119: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 42ms/step - loss: 4.7246e-04 - accuracy: 1.0000 - val\_loss: 0.1148 - val\_accuracy: 0.9483

Epoch 120/200

1/2 [==============>...............] - ETA: 0s - loss: 8.2654e-04 - accuracy: 1.0000

Epoch 120: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 38ms/step - loss: 6.9968e-04 - accuracy: 1.0000 - val\_loss: 0.1125 - val\_accuracy: 0.9483

Epoch 121/200

1/2 [==============>...............] - ETA: 0s - loss: 4.5711e-04 - accuracy: 1.0000

Epoch 121: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 36ms/step - loss: 5.5308e-04 - accuracy: 1.0000 - val\_loss: 0.1104 - val\_accuracy: 0.9483

Epoch 122/200

1/2 [==============>...............] - ETA: 0s - loss: 4.6753e-04 - accuracy: 1.0000

Epoch 122: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 46ms/step - loss: 6.0292e-04 - accuracy: 1.0000 - val\_loss: 0.1099 - val\_accuracy: 0.9483

Epoch 123/200

1/2 [==============>...............] - ETA: 0s - loss: 4.0008e-04 - accuracy: 1.0000

Epoch 123: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 39ms/step - loss: 5.9911e-04 - accuracy: 1.0000 - val\_loss: 0.1175 - val\_accuracy: 0.9483

Epoch 124/200

1/2 [==============>...............] - ETA: 0s - loss: 3.6146e-04 - accuracy: 1.0000

Epoch 124: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 4.0476e-04 - accuracy: 1.0000 - val\_loss: 0.1338 - val\_accuracy: 0.9483

Epoch 125/200

1/2 [==============>...............] - ETA: 0s - loss: 5.0214e-04 - accuracy: 1.0000

Epoch 125: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 45ms/step - loss: 4.8312e-04 - accuracy: 1.0000 - val\_loss: 0.1534 - val\_accuracy: 0.9483

Epoch 126/200

1/2 [==============>...............] - ETA: 0s - loss: 3.2475e-04 - accuracy: 1.0000

Epoch 126: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 42ms/step - loss: 4.2867e-04 - accuracy: 1.0000 - val\_loss: 0.1650 - val\_accuracy: 0.9483

Epoch 127/200

1/2 [==============>...............] - ETA: 0s - loss: 8.9236e-04 - accuracy: 1.0000

Epoch 127: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 7.0091e-04 - accuracy: 1.0000 - val\_loss: 0.1685 - val\_accuracy: 0.9483

Epoch 128/200

1/2 [==============>...............] - ETA: 0s - loss: 4.4464e-04 - accuracy: 1.0000

Epoch 128: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 40ms/step - loss: 4.4356e-04 - accuracy: 1.0000 - val\_loss: 0.1661 - val\_accuracy: 0.9483

Epoch 129/200

1/2 [==============>...............] - ETA: 0s - loss: 4.7009e-04 - accuracy: 1.0000

Epoch 129: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 43ms/step - loss: 7.1635e-04 - accuracy: 1.0000 - val\_loss: 0.1507 - val\_accuracy: 0.9483

Epoch 130/200

1/2 [==============>...............] - ETA: 0s - loss: 3.5130e-04 - accuracy: 1.0000

Epoch 130: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 42ms/step - loss: 3.2172e-04 - accuracy: 1.0000 - val\_loss: 0.1276 - val\_accuracy: 0.9483

Epoch 131/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0010 - accuracy: 1.0000

Epoch 131: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 37ms/step - loss: 8.5669e-04 - accuracy: 1.0000 - val\_loss: 0.1206 - val\_accuracy: 0.9483

Epoch 132/200

1/2 [==============>...............] - ETA: 0s - loss: 3.8607e-04 - accuracy: 1.0000

Epoch 132: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 59ms/step - loss: 5.5601e-04 - accuracy: 1.0000 - val\_loss: 0.1203 - val\_accuracy: 0.9483

Epoch 133/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9342e-04 - accuracy: 1.0000

Epoch 133: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 65ms/step - loss: 3.8246e-04 - accuracy: 1.0000 - val\_loss: 0.1285 - val\_accuracy: 0.9483

Epoch 134/200

1/2 [==============>...............] - ETA: 0s - loss: 5.4703e-04 - accuracy: 1.0000

Epoch 134: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 53ms/step - loss: 5.9385e-04 - accuracy: 1.0000 - val\_loss: 0.1420 - val\_accuracy: 0.9483

Epoch 135/200

1/2 [==============>...............] - ETA: 0s - loss: 6.7302e-04 - accuracy: 1.0000

Epoch 135: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 67ms/step - loss: 5.5776e-04 - accuracy: 1.0000 - val\_loss: 0.1635 - val\_accuracy: 0.9483

Epoch 136/200

1/2 [==============>...............] - ETA: 0s - loss: 5.1543e-04 - accuracy: 1.0000

Epoch 136: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 51ms/step - loss: 4.3622e-04 - accuracy: 1.0000 - val\_loss: 0.1820 - val\_accuracy: 0.9483

Epoch 137/200

1/2 [==============>...............] - ETA: 0s - loss: 5.7047e-04 - accuracy: 1.0000

Epoch 137: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 82ms/step - loss: 4.7586e-04 - accuracy: 1.0000 - val\_loss: 0.1958 - val\_accuracy: 0.9483

Epoch 138/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0881e-04 - accuracy: 1.0000

Epoch 138: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 48ms/step - loss: 3.1691e-04 - accuracy: 1.0000 - val\_loss: 0.2033 - val\_accuracy: 0.9483

Epoch 139/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0047 - accuracy: 1.0000

Epoch 139: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 49ms/step - loss: 0.0036 - accuracy: 1.0000 - val\_loss: 0.1270 - val\_accuracy: 0.9483

Epoch 140/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9931e-04 - accuracy: 1.0000

Epoch 140: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 65ms/step - loss: 2.6967e-04 - accuracy: 1.0000 - val\_loss: 0.0745 - val\_accuracy: 0.9655

Epoch 141/200

1/2 [==============>...............] - ETA: 0s - loss: 3.6356e-04 - accuracy: 1.0000

Epoch 141: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 62ms/step - loss: 3.3428e-04 - accuracy: 1.0000 - val\_loss: 0.0466 - val\_accuracy: 0.9655

Epoch 142/200

1/2 [==============>...............] - ETA: 0s - loss: 3.6471e-04 - accuracy: 1.0000

Epoch 142: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 68ms/step - loss: 0.0029 - accuracy: 1.0000 - val\_loss: 0.0863 - val\_accuracy: 0.9483

Epoch 143/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0022 - accuracy: 1.0000

Epoch 143: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 58ms/step - loss: 0.0017 - accuracy: 1.0000 - val\_loss: 0.2510 - val\_accuracy: 0.9483

Epoch 144/200

1/2 [==============>...............] - ETA: 0s - loss: 5.9086e-04 - accuracy: 1.0000

Epoch 144: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 58ms/step - loss: 0.0018 - accuracy: 1.0000 - val\_loss: 0.3257 - val\_accuracy: 0.9483

Epoch 145/200

1/2 [==============>...............] - ETA: 0s - loss: 5.9847e-04 - accuracy: 1.0000

Epoch 145: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 66ms/step - loss: 0.0094 - accuracy: 0.9943 - val\_loss: 0.1157 - val\_accuracy: 0.9483

Epoch 146/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0731e-04 - accuracy: 1.0000

Epoch 146: val\_loss did not improve from 0.04425

2/2 [==============================] - 0s 75ms/step - loss: 3.4096e-04 - accuracy: 1.0000 - val\_loss: 0.0849 - val\_accuracy: 0.9828

Epoch 147/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0747 - accuracy: 0.9844

Epoch 147: val\_loss improved from 0.04425 to 0.03164, saving model to weights.hdf5

2/2 [==============================] - 0s 127ms/step - loss: 0.0594 - accuracy: 0.9828 - val\_loss: 0.0316 - val\_accuracy: 0.9828

Epoch 148/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0065 - accuracy: 0.9922

Epoch 148: val\_loss did not improve from 0.03164

2/2 [==============================] - 0s 56ms/step - loss: 0.0048 - accuracy: 0.9943 - val\_loss: 0.3159 - val\_accuracy: 0.9483

Epoch 149/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0033 - accuracy: 1.0000

Epoch 149: val\_loss did not improve from 0.03164

2/2 [==============================] - 0s 78ms/step - loss: 0.0052 - accuracy: 1.0000 - val\_loss: 0.4578 - val\_accuracy: 0.9310

Epoch 150/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0580 - accuracy: 0.9844

Epoch 150: val\_loss did not improve from 0.03164

2/2 [==============================] - 0s 60ms/step - loss: 0.0428 - accuracy: 0.9885 - val\_loss: 0.1878 - val\_accuracy: 0.9483

Epoch 151/200

1/2 [==============>...............] - ETA: 0s - loss: 8.6505e-04 - accuracy: 1.0000

Epoch 151: val\_loss improved from 0.03164 to 0.02371, saving model to weights.hdf5

2/2 [==============================] - 0s 144ms/step - loss: 7.7372e-04 - accuracy: 1.0000 - val\_loss: 0.0237 - val\_accuracy: 0.9828

Epoch 152/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0076 - accuracy: 0.9922

Epoch 152: val\_loss improved from 0.02371 to 0.02067, saving model to weights.hdf5

2/2 [==============================] - 0s 131ms/step - loss: 0.0059 - accuracy: 0.9943 - val\_loss: 0.0207 - val\_accuracy: 1.0000

Epoch 153/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0191 - accuracy: 0.9922

Epoch 153: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 88ms/step - loss: 0.0142 - accuracy: 0.9943 - val\_loss: 0.0320 - val\_accuracy: 0.9828

Epoch 154/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0017 - accuracy: 1.0000

Epoch 154: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 71ms/step - loss: 0.0015 - accuracy: 1.0000 - val\_loss: 0.0985 - val\_accuracy: 0.9483

Epoch 155/200

1/2 [==============>...............] - ETA: 0s - loss: 7.4436e-04 - accuracy: 1.0000

Epoch 155: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 66ms/step - loss: 6.7490e-04 - accuracy: 1.0000 - val\_loss: 0.1859 - val\_accuracy: 0.9483

Epoch 156/200

1/2 [==============>...............] - ETA: 0s - loss: 6.3442e-04 - accuracy: 1.0000

Epoch 156: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 68ms/step - loss: 5.3436e-04 - accuracy: 1.0000 - val\_loss: 0.2561 - val\_accuracy: 0.9483

Epoch 157/200

1/2 [==============>...............] - ETA: 0s - loss: 7.3280e-04 - accuracy: 1.0000

Epoch 157: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 76ms/step - loss: 0.0014 - accuracy: 1.0000 - val\_loss: 0.2783 - val\_accuracy: 0.9483

Epoch 158/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0014 - accuracy: 1.0000

Epoch 158: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 68ms/step - loss: 0.0011 - accuracy: 1.0000 - val\_loss: 0.2537 - val\_accuracy: 0.9483

Epoch 159/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0043 - accuracy: 1.0000

Epoch 159: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 65ms/step - loss: 0.0033 - accuracy: 1.0000 - val\_loss: 0.1736 - val\_accuracy: 0.9483

Epoch 160/200

1/2 [==============>...............] - ETA: 0s - loss: 6.4987e-04 - accuracy: 1.0000

Epoch 160: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 81ms/step - loss: 5.7919e-04 - accuracy: 1.0000 - val\_loss: 0.1126 - val\_accuracy: 0.9483

Epoch 161/200

1/2 [==============>...............] - ETA: 0s - loss: 6.4532e-04 - accuracy: 1.0000

Epoch 161: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 66ms/step - loss: 5.5242e-04 - accuracy: 1.0000 - val\_loss: 0.0743 - val\_accuracy: 0.9655

Epoch 162/200

1/2 [==============>...............] - ETA: 0s - loss: 5.8336e-04 - accuracy: 1.0000

Epoch 162: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 60ms/step - loss: 0.0019 - accuracy: 1.0000 - val\_loss: 0.0737 - val\_accuracy: 0.9655

Epoch 163/200

1/2 [==============>...............] - ETA: 0s - loss: 3.6745e-04 - accuracy: 1.0000

Epoch 163: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 69ms/step - loss: 4.9088e-04 - accuracy: 1.0000 - val\_loss: 0.1003 - val\_accuracy: 0.9655

Epoch 164/200

1/2 [==============>...............] - ETA: 0s - loss: 4.3722e-04 - accuracy: 1.0000

Epoch 164: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 42ms/step - loss: 4.5073e-04 - accuracy: 1.0000 - val\_loss: 0.1312 - val\_accuracy: 0.9483

Epoch 165/200

1/2 [==============>...............] - ETA: 0s - loss: 3.8281e-04 - accuracy: 1.0000

Epoch 165: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 41ms/step - loss: 3.8141e-04 - accuracy: 1.0000 - val\_loss: 0.1598 - val\_accuracy: 0.9483

Epoch 166/200

1/2 [==============>...............] - ETA: 0s - loss: 3.1796e-04 - accuracy: 1.0000

Epoch 166: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 40ms/step - loss: 3.4520e-04 - accuracy: 1.0000 - val\_loss: 0.1825 - val\_accuracy: 0.9483

Epoch 167/200

1/2 [==============>...............] - ETA: 0s - loss: 2.8495e-04 - accuracy: 1.0000

Epoch 167: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 44ms/step - loss: 2.9676e-04 - accuracy: 1.0000 - val\_loss: 0.1988 - val\_accuracy: 0.9483

Epoch 168/200

1/2 [==============>...............] - ETA: 0s - loss: 5.7124e-04 - accuracy: 1.0000

Epoch 168: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 39ms/step - loss: 5.0758e-04 - accuracy: 1.0000 - val\_loss: 0.2060 - val\_accuracy: 0.9483

Epoch 169/200

1/2 [==============>...............] - ETA: 0s - loss: 5.4454e-04 - accuracy: 1.0000

Epoch 169: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 36ms/step - loss: 4.7164e-04 - accuracy: 1.0000 - val\_loss: 0.2058 - val\_accuracy: 0.9483

Epoch 170/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1597e-04 - accuracy: 1.0000

Epoch 170: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 39ms/step - loss: 3.6049e-04 - accuracy: 1.0000 - val\_loss: 0.1991 - val\_accuracy: 0.9483

Epoch 171/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0203e-04 - accuracy: 1.0000

Epoch 171: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 36ms/step - loss: 0.0019 - accuracy: 1.0000 - val\_loss: 0.1281 - val\_accuracy: 0.9483

Epoch 172/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6732e-04 - accuracy: 1.0000

Epoch 172: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 37ms/step - loss: 2.6227e-04 - accuracy: 1.0000 - val\_loss: 0.0495 - val\_accuracy: 0.9828

Epoch 173/200

1/2 [==============>...............] - ETA: 0s - loss: 9.2842e-04 - accuracy: 1.0000

Epoch 173: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 40ms/step - loss: 7.6013e-04 - accuracy: 1.0000 - val\_loss: 0.0273 - val\_accuracy: 0.9828

Epoch 174/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0047 - accuracy: 1.0000

Epoch 174: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 46ms/step - loss: 0.0036 - accuracy: 1.0000 - val\_loss: 0.0279 - val\_accuracy: 0.9828

Epoch 175/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0065 - accuracy: 0.9922

Epoch 175: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 40ms/step - loss: 0.0048 - accuracy: 0.9943 - val\_loss: 0.0645 - val\_accuracy: 0.9655

Epoch 176/200

1/2 [==============>...............] - ETA: 0s - loss: 3.9148e-04 - accuracy: 1.0000

Epoch 176: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 39ms/step - loss: 3.3063e-04 - accuracy: 1.0000 - val\_loss: 0.1346 - val\_accuracy: 0.9483

Epoch 177/200

1/2 [==============>...............] - ETA: 0s - loss: 2.9431e-04 - accuracy: 1.0000

Epoch 177: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 51ms/step - loss: 3.0626e-04 - accuracy: 1.0000 - val\_loss: 0.2065 - val\_accuracy: 0.9483

Epoch 178/200

1/2 [==============>...............] - ETA: 0s - loss: 4.2991e-04 - accuracy: 1.0000

Epoch 178: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 37ms/step - loss: 4.2245e-04 - accuracy: 1.0000 - val\_loss: 0.2610 - val\_accuracy: 0.9483

Epoch 179/200

1/2 [==============>...............] - ETA: 0s - loss: 0.0058 - accuracy: 0.9922

Epoch 179: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 50ms/step - loss: 0.0046 - accuracy: 0.9943 - val\_loss: 0.2078 - val\_accuracy: 0.9483

Epoch 180/200

1/2 [==============>...............] - ETA: 0s - loss: 3.6092e-04 - accuracy: 1.0000

Epoch 180: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 39ms/step - loss: 3.4483e-04 - accuracy: 1.0000 - val\_loss: 0.1576 - val\_accuracy: 0.9483

Epoch 181/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0610e-04 - accuracy: 1.0000

Epoch 181: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 42ms/step - loss: 3.2069e-04 - accuracy: 1.0000 - val\_loss: 0.1188 - val\_accuracy: 0.9483

Epoch 182/200

1/2 [==============>...............] - ETA: 0s - loss: 3.0930e-04 - accuracy: 1.0000

Epoch 182: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 38ms/step - loss: 3.0673e-04 - accuracy: 1.0000 - val\_loss: 0.0912 - val\_accuracy: 0.9483

Epoch 183/200

1/2 [==============>...............] - ETA: 0s - loss: 3.5325e-04 - accuracy: 1.0000

Epoch 183: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 38ms/step - loss: 3.5401e-04 - accuracy: 1.0000 - val\_loss: 0.0765 - val\_accuracy: 0.9655

Epoch 184/200

1/2 [==============>...............] - ETA: 0s - loss: 4.3635e-04 - accuracy: 1.0000

Epoch 184: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 44ms/step - loss: 4.3193e-04 - accuracy: 1.0000 - val\_loss: 0.0732 - val\_accuracy: 0.9655

Epoch 185/200

1/2 [==============>...............] - ETA: 0s - loss: 3.2548e-04 - accuracy: 1.0000

Epoch 185: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 43ms/step - loss: 3.0323e-04 - accuracy: 1.0000 - val\_loss: 0.0735 - val\_accuracy: 0.9655

Epoch 186/200

1/2 [==============>...............] - ETA: 0s - loss: 2.8448e-04 - accuracy: 1.0000

Epoch 186: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 45ms/step - loss: 2.8159e-04 - accuracy: 1.0000 - val\_loss: 0.0755 - val\_accuracy: 0.9655

Epoch 187/200

1/2 [==============>...............] - ETA: 0s - loss: 3.5939e-04 - accuracy: 1.0000

Epoch 187: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 63ms/step - loss: 3.5439e-04 - accuracy: 1.0000 - val\_loss: 0.0786 - val\_accuracy: 0.9655

Epoch 188/200

1/2 [==============>...............] - ETA: 0s - loss: 4.8874e-04 - accuracy: 1.0000

Epoch 188: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 57ms/step - loss: 4.2733e-04 - accuracy: 1.0000 - val\_loss: 0.0826 - val\_accuracy: 0.9655

Epoch 189/200

1/2 [==============>...............] - ETA: 0s - loss: 3.1699e-04 - accuracy: 1.0000

Epoch 189: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 39ms/step - loss: 3.1505e-04 - accuracy: 1.0000 - val\_loss: 0.0872 - val\_accuracy: 0.9655

Epoch 190/200

1/2 [==============>...............] - ETA: 0s - loss: 4.2702e-04 - accuracy: 1.0000

Epoch 190: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 60ms/step - loss: 3.6416e-04 - accuracy: 1.0000 - val\_loss: 0.0917 - val\_accuracy: 0.9655

Epoch 191/200

1/2 [==============>...............] - ETA: 0s - loss: 2.5986e-04 - accuracy: 1.0000

Epoch 191: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 42ms/step - loss: 2.7240e-04 - accuracy: 1.0000 - val\_loss: 0.0961 - val\_accuracy: 0.9655

Epoch 192/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6866e-04 - accuracy: 1.0000

Epoch 192: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 42ms/step - loss: 2.7064e-04 - accuracy: 1.0000 - val\_loss: 0.1013 - val\_accuracy: 0.9655

Epoch 193/200

1/2 [==============>...............] - ETA: 0s - loss: 5.2094e-04 - accuracy: 1.0000

Epoch 193: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 44ms/step - loss: 4.3316e-04 - accuracy: 1.0000 - val\_loss: 0.1098 - val\_accuracy: 0.9483

Epoch 194/200

1/2 [==============>...............] - ETA: 0s - loss: 2.2132e-04 - accuracy: 1.0000

Epoch 194: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 44ms/step - loss: 2.2351e-04 - accuracy: 1.0000 - val\_loss: 0.1176 - val\_accuracy: 0.9483

Epoch 195/200

1/2 [==============>...............] - ETA: 0s - loss: 2.5655e-04 - accuracy: 1.0000

Epoch 195: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 43ms/step - loss: 2.1478e-04 - accuracy: 1.0000 - val\_loss: 0.1244 - val\_accuracy: 0.9483

Epoch 196/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1650e-04 - accuracy: 1.0000

Epoch 196: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 40ms/step - loss: 2.0255e-04 - accuracy: 1.0000 - val\_loss: 0.1308 - val\_accuracy: 0.9483

Epoch 197/200

1/2 [==============>...............] - ETA: 0s - loss: 2.3459e-04 - accuracy: 1.0000

Epoch 197: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 40ms/step - loss: 2.0949e-04 - accuracy: 1.0000 - val\_loss: 0.1364 - val\_accuracy: 0.9483

Epoch 198/200

1/2 [==============>...............] - ETA: 0s - loss: 1.6454e-04 - accuracy: 1.0000

Epoch 198: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 43ms/step - loss: 1.8513e-04 - accuracy: 1.0000 - val\_loss: 0.1405 - val\_accuracy: 0.9483

Epoch 199/200

1/2 [==============>...............] - ETA: 0s - loss: 2.6666e-04 - accuracy: 1.0000

Epoch 199: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 43ms/step - loss: 2.2873e-04 - accuracy: 1.0000 - val\_loss: 0.1441 - val\_accuracy: 0.9483

Epoch 200/200

1/2 [==============>...............] - ETA: 0s - loss: 2.1833e-04 - accuracy: 1.0000

Epoch 200: val\_loss did not improve from 0.02067

2/2 [==============================] - 0s 45ms/step - loss: 2.1277e-04 - accuracy: 1.0000 - val\_loss: 0.1464 - val\_accuracy: 0.9483

Accuracy\_train = 99.43% Loss\_train = 0.01

Accuracy\_val = 100.0% Loss\_val = 0.02

Accuracy\_test = 98.28% Loss\_test = 0.07

2/2 [==============================] - 0s 5ms/step

precision recall f1-score support

0 1.00 1.00 1.00 2

1 1.00 1.00 1.00 2

2 1.00 1.00 1.00 2

3 1.00 1.00 1.00 2

4 1.00 1.00 1.00 2

5 1.00 1.00 1.00 2

6 1.00 1.00 1.00 2

7 1.00 1.00 1.00 2

8 1.00 1.00 1.00 2

9 1.00 1.00 1.00 2

10 1.00 1.00 1.00 2

11 1.00 1.00 1.00 2

12 1.00 1.00 1.00 2

13 1.00 0.50 0.67 2

14 1.00 1.00 1.00 2

15 1.00 1.00 1.00 2

16 1.00 1.00 1.00 2

17 1.00 1.00 1.00 2

18 1.00 1.00 1.00 2

19 1.00 1.00 1.00 2

20 0.67 1.00 0.80 2

21 1.00 1.00 1.00 2

22 1.00 1.00 1.00 2

23 1.00 1.00 1.00 2

24 1.00 1.00 1.00 2

25 1.00 1.00 1.00 2

26 1.00 1.00 1.00 2

27 1.00 1.00 1.00 2

28 1.00 1.00 1.00 2

accuracy 0.98 58

macro avg 0.99 0.98 0.98 58

weighted avg 0.99 0.98 0.98 58

A graph with blue and orange lines

Description automatically generated

A graph with blue lines and numbers

Description automatically generated