Epoch 1/150

97/97 [==============================] - 17s 128ms/step - loss: 0.1440 - val\_loss: 0.0082 - lr: 0.0010

Epoch 2/150

97/97 [==============================] - 12s 126ms/step - loss: 0.0401 - val\_loss: 0.0016 - lr: 0.0010

Epoch 3/150

97/97 [==============================] - 12s 127ms/step - loss: 0.0187 - val\_loss: 4.7416e-04 - lr: 0.0010

Epoch 4/150

97/97 [==============================] - 13s 135ms/step - loss: 0.0114 - val\_loss: 2.7840e-04 - lr: 0.0010

Epoch 5/150

97/97 [==============================] - 12s 129ms/step - loss: 0.0070 - val\_loss: 0.0014 - lr: 0.0010

Epoch 6/150

97/97 [==============================] - 12s 127ms/step - loss: 0.0051 - val\_loss: 1.7848e-04 - lr: 0.0010

Epoch 7/150

97/97 [==============================] - 13s 129ms/step - loss: 0.0041 - val\_loss: 2.5287e-04 - lr: 0.0010

Epoch 8/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0035 - val\_loss: 3.1753e-04 - lr: 0.0010

Epoch 9/150

97/97 [==============================] - 13s 132ms/step - loss: 0.0030 - val\_loss: 1.2963e-04 - lr: 0.0010

Epoch 10/150

97/97 [==============================] - 13s 133ms/step - loss: 0.0022 - val\_loss: 2.3123e-04 - lr: 0.0010

Epoch 11/150

97/97 [==============================] - 12s 126ms/step - loss: 0.0024 - val\_loss: 3.6580e-04 - lr: 0.0010

Epoch 12/150

97/97 [==============================] - 12s 127ms/step - loss: 0.0023 - val\_loss: 1.4997e-04 - lr: 0.0010

Epoch 13/150

97/97 [==============================] - 12s 128ms/step - loss: 0.0020 - val\_loss: 4.3901e-04 - lr: 0.0010

Epoch 14/150

97/97 [==============================] - ETA: 0s - loss: 0.0019

Epoch 14: ReduceLROnPlateau reducing learning rate to 0.0005000000237487257.

97/97 [==============================] - 12s 125ms/step - loss: 0.0019 - val\_loss: 2.9860e-04 - lr: 0.0010

Epoch 15/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0017 - val\_loss: 1.4788e-04 - lr: 5.0000e-04

Epoch 16/150

97/97 [==============================] - 12s 121ms/step - loss: 0.0015 - val\_loss: 1.0558e-04 - lr: 5.0000e-04

Epoch 17/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0014 - val\_loss: 9.5013e-05 - lr: 5.0000e-04

Epoch 18/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0016 - val\_loss: 1.0890e-04 - lr: 5.0000e-04

Epoch 19/150

97/97 [==============================] - ETA: 0s - loss: 0.0015

Epoch 19: ReduceLROnPlateau reducing learning rate to 0.0002500000118743628.

97/97 [==============================] - 12s 125ms/step - loss: 0.0015 - val\_loss: 9.6631e-05 - lr: 5.0000e-04

Epoch 20/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0011 - val\_loss: 7.8351e-05 - lr: 2.5000e-04

Epoch 21/150

97/97 [==============================] - 12s 121ms/step - loss: 0.0013 - val\_loss: 6.7399e-05 - lr: 2.5000e-04

Epoch 22/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0013 - val\_loss: 6.1084e-05 - lr: 2.5000e-04

Epoch 23/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0013 - val\_loss: 8.5742e-05 - lr: 2.5000e-04

Epoch 24/150

97/97 [==============================] - ETA: 0s - loss: 0.0013

Epoch 24: ReduceLROnPlateau reducing learning rate to 0.0001250000059371814.

97/97 [==============================] - 12s 122ms/step - loss: 0.0013 - val\_loss: 6.5739e-05 - lr: 2.5000e-04

Epoch 25/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0012 - val\_loss: 6.0857e-05 - lr: 1.2500e-04

Epoch 26/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0015 - val\_loss: 5.3429e-05 - lr: 1.2500e-04

Epoch 27/150

97/97 [==============================] - 12s 128ms/step - loss: 0.0011 - val\_loss: 1.0120e-04 - lr: 1.2500e-04

Epoch 28/150

97/97 [==============================] - 12s 124ms/step - loss: 0.0012 - val\_loss: 7.0274e-05 - lr: 1.2500e-04

Epoch 29/150

97/97 [==============================] - ETA: 0s - loss: 0.0013

Epoch 29: ReduceLROnPlateau reducing learning rate to 6.25000029685907e-05.

97/97 [==============================] - 12s 125ms/step - loss: 0.0013 - val\_loss: 5.4417e-05 - lr: 1.2500e-04

Epoch 30/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0011 - val\_loss: 5.5406e-05 - lr: 6.2500e-05

Epoch 31/150

97/97 [==============================] - 12s 124ms/step - loss: 0.0012 - val\_loss: 5.3148e-05 - lr: 6.2500e-05

Epoch 32/150

97/97 [==============================] - 12s 126ms/step - loss: 0.0012 - val\_loss: 8.6955e-05 - lr: 6.2500e-05

Epoch 33/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0012 - val\_loss: 5.6454e-05 - lr: 6.2500e-05

Epoch 34/150

97/97 [==============================] - ETA: 0s - loss: 0.0010

Epoch 34: ReduceLROnPlateau reducing learning rate to 3.125000148429535e-05.

97/97 [==============================] - 12s 124ms/step - loss: 0.0010 - val\_loss: 5.9968e-05 - lr: 6.2500e-05

Epoch 35/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0013 - val\_loss: 5.0168e-05 - lr: 3.1250e-05

Epoch 36/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0011 - val\_loss: 5.1736e-05 - lr: 3.1250e-05

Epoch 37/150

97/97 [==============================] - 12s 124ms/step - loss: 0.0010 - val\_loss: 4.9573e-05 - lr: 3.1250e-05

Epoch 38/150

97/97 [==============================] - 12s 128ms/step - loss: 0.0011 - val\_loss: 4.9917e-05 - lr: 3.1250e-05

Epoch 39/150

97/97 [==============================] - ETA: 0s - loss: 0.0011

Epoch 39: ReduceLROnPlateau reducing learning rate to 1.5625000742147677e-05.

97/97 [==============================] - 12s 127ms/step - loss: 0.0011 - val\_loss: 5.3446e-05 - lr: 3.1250e-05

Epoch 40/150

97/97 [==============================] - 12s 127ms/step - loss: 0.0011 - val\_loss: 5.0487e-05 - lr: 1.5625e-05

Epoch 41/150

97/97 [==============================] - 12s 127ms/step - loss: 0.0012 - val\_loss: 4.9643e-05 - lr: 1.5625e-05

Epoch 42/150

97/97 [==============================] - 12s 125ms/step - loss: 0.0011 - val\_loss: 5.2976e-05 - lr: 1.5625e-05

Epoch 43/150

97/97 [==============================] - 12s 126ms/step - loss: 0.0011 - val\_loss: 5.0444e-05 - lr: 1.5625e-05

Epoch 44/150

97/97 [==============================] - ETA: 0s - loss: 0.0011

Epoch 44: ReduceLROnPlateau reducing learning rate to 7.812500371073838e-06.

97/97 [==============================] - 13s 130ms/step - loss: 0.0011 - val\_loss: 5.1195e-05 - lr: 1.5625e-05

Epoch 45/150

97/97 [==============================] - 12s 126ms/step - loss: 0.0012 - val\_loss: 4.9365e-05 - lr: 7.8125e-06

Epoch 46/150

97/97 [==============================] - 12s 123ms/step - loss: 0.0011 - val\_loss: 5.2309e-05 - lr: 7.8125e-06

Epoch 47/150

97/97 [==============================] - 12s 119ms/step - loss: 0.0010 - val\_loss: 5.0392e-05 - lr: 7.8125e-06

Epoch 48/150

97/97 [==============================] - 12s 120ms/step - loss: 0.0012 - val\_loss: 4.9550e-05 - lr: 7.8125e-06

Epoch 49/150

97/97 [==============================] - ETA: 0s - loss: 0.0010

Epoch 49: ReduceLROnPlateau reducing learning rate to 3.906250185536919e-06.

97/97 [==============================] - 12s 120ms/step - loss: 0.0010 - val\_loss: 5.0967e-05 - lr: 7.8125e-06

Epoch 50/150

97/97 [==============================] - 11s 117ms/step - loss: 0.0011 - val\_loss: 5.1961e-05 - lr: 3.9063e-06

Epoch 51/150

97/97 [==============================] - 11s 117ms/step - loss: 0.0012 - val\_loss: 5.1988e-05 - lr: 3.9063e-06

Epoch 52/150

97/97 [==============================] - 12s 119ms/step - loss: 0.0012 - val\_loss: 5.0294e-05 - lr: 3.9063e-06

Epoch 53/150

97/97 [==============================] - 11s 117ms/step - loss: 9.3994e-04 - val\_loss: 5.1360e-05 - lr: 3.9063e-06

Epoch 54/150

97/97 [==============================] - ETA: 0s - loss: 0.0011

Epoch 54: ReduceLROnPlateau reducing learning rate to 1.9531250927684596e-06.

97/97 [==============================] - 11s 117ms/step - loss: 0.0011 - val\_loss: 5.0738e-05 - lr: 3.9063e-06

Epoch 55/150

97/97 [==============================] - 12s 119ms/step - loss: 0.0010 - val\_loss: 5.0288e-05 - lr: 1.9531e-06

48/48 [==============================] - 2s 16ms/step

Root Mean Squared Error (RMSE): 5.60

