```
ssh://root@103.254.67.181:10006/usr/bin/python -u /home/sunfengzhen/pycharm/dadi_typhoon/run.py
Using TensorFlow backend.
work mode train
train_size 176
txt_path dataset/Train/Track/Track.txt
type typhoon_seq <type 'numpy.ndarray'>
typhoon_seq.shape (176, 16, 5)
i_max_val 6.0
i_min_val 0.0
lat_max_val 485.0
lat_min_val 92.0
lon_max_val 1885.0
lon_min_val 1052.0
press_max_val 1010.0
press_min_val 888.0
wnd_max_val 72.0
wnd_min_val 10.0
trainX.shape: (166, 4, 5)
trainY.shape: (166, 4, 2)
validX.shape: (10, 4, 5)
validY.shape: (10, 4, 2)
trainX[0]
 [[0.33333333 0.56743003 0.74669868 0.32786885 0.59677419]
 [0.33333333 0.54452926 0.74909964 0.32786885 0.59677419]
 [0.33333333 0.5216285  0.74429772 0.32786885 0.59677419]
 [0.33333333 0.49363868 0.73829532 0.36885246 0.59677419]]
trainY[0]
: [[0.45292621 0.73109244]
 [0.40712468 0.72869148]
 [0.36132316 0.72869148]
 [0.32061069 0.7214886 ]]
hello world
#################model build#################
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
```

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LSTM_layer01 (LSTM)          (None, 4, 64)             17920
_________________________________________________________________
batch_normalization_1 (Batch (None, 4, 64)             256
_________________________________________________________________
LSTM_layer02 (LSTM)          (None, 4, 2)              536
_________________________________________________________________
batch_normalization_2 (Batch (None, 4, 2)              8
=================================================================
Total params: 18,720
Trainable params: 18,588
Non-trainable params: 132
_________________________________________________________________
model.input= Tensor("LSTM_layer01_input:0", shape=(?, 4, 5), dtype=float32)
model.input.name= LSTM_layer01_input:0
model.input.shape= (?, 4, 5)
model.output= Tensor("batch_normalization_2/cond/Merge:0", shape=(?, ?, 2), dtype=float32)
model.output.name= batch_normalization_2/cond/Merge:0
model.output.shape= (?, ?, 2)
################model train################
model.metrics_names =  ['loss', 'mean_squared_error']
Train on 166 samples, validate on 10 samples
Epoch 1/10000
2019-09-23 06:06:14.806662: I tensorflow/core/platform/cpu_feature_guard.cc:141] Your CPU supports instructions that this TensorFlow binary was not compiled to use: AVX2 FMA
2019-09-23 06:06:15.043934: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1432] Found device 0 with properties:
name: GeForce GTX 1080 Ti major: 6 minor: 1 memoryClockRate(GHz): 1.582
pciBusID: 0000:82:00.0
totalMemory: 10.92GiB freeMemory: 10.76GiB
2019-09-23 06:06:15.043981: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1511] Adding visible gpu devices: 0
2019-09-23 06:06:15.405051: I tensorflow/core/common_runtime/gpu/gpu_device.cc:982] Device interconnect StreamExecutor with
```

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strength 1 edge matrix:
2019-09-23 06:06:15.405121: I tensorflow/core/common_runtime/gpu/gpu_device.cc:988]      0
2019-09-23 06:06:15.405133: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1001] 0:   N
2019-09-23 06:06:15.405546: I tensorflow/core/common_runtime/gpu/gpu_device.cc:1115] Created TensorFlow device (/job:localhost/replica:0/task:0/device:GPU:0 with 10409 MB memory) -> physical GPU (device: 0, name: GeForce GTX 1080 Ti, pci bus id: 0000:82:00.0, compute capability: 6.1)
 - 3s - loss: 1.1483 - mean_squared_error: 1.1483 - val_loss: 2.6772 - val_mean_squared_error: 2.6772
epoch_end_callback epoch 0 lr 0.001
Epoch 2/10000
 - 1s - loss: 0.6761 - mean_squared_error: 0.6761 - val_loss: 0.8666 - val_mean_squared_error: 0.8666
epoch_end_callback epoch 1 lr 0.001
Epoch 3/10000
 - 1s - loss: 0.4519 - mean_squared_error: 0.4519 - val_loss: 0.9470 - val_mean_squared_error: 0.9470
epoch_end_callback epoch 2 lr 0.001
Epoch 4/10000
 - 1s - loss: 0.3824 - mean_squared_error: 0.3824 - val_loss: 0.9296 - val_mean_squared_error: 0.9296
epoch_end_callback epoch 3 lr 0.001
Epoch 5/10000
 - 1s - loss: 0.3466 - mean_squared_error: 0.3466 - val_loss: 0.4457 - val_mean_squared_error: 0.4457
epoch_end_callback epoch 4 lr 0.001
Epoch 6/10000
 - 1s - loss: 0.3146 - mean_squared_error: 0.3146 - val_loss: 0.4993 - val_mean_squared_error: 0.4993
epoch_end_callback epoch 5 lr 0.001
Epoch 7/10000
 - 1s - loss: 0.2782 - mean_squared_error: 0.2782 - val_loss: 0.3312 - val_mean_squared_error: 0.3312
epoch_end_callback epoch 6 lr 0.001
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Epoch 8/10000
 - 1s - loss: 0.2565 - mean_squared_error: 0.2565 - val_loss: 0.1571 - val_mean_squared_error: 0.1571
epoch_end_callback epoch 7 lr 0.001
Epoch 9/10000
 - 1s - loss: 0.2291 - mean_squared_error: 0.2291 - val_loss: 0.2045 - val_mean_squared_error: 0.2045
epoch_end_callback epoch 8 lr 0.001
Epoch 10/10000
 - 1s - loss: 0.2071 - mean_squared_error: 0.2071 - val_loss: 0.1662 - val_mean_squared_error: 0.1662

Epoch 00010: saving model to model/model_best.h5
epoch_end_callback epoch 9 lr 0.001
Epoch 11/10000
 - 1s - loss: 0.1852 - mean_squared_error: 0.1852 - val_loss: 0.1300 - val_mean_squared_error: 0.1300
epoch_end_callback epoch 10 lr 0.001
Epoch 12/10000
 - 1s - loss: 0.1648 - mean_squared_error: 0.1648 - val_loss: 0.1536 - val_mean_squared_error: 0.1536
epoch_end_callback epoch 11 lr 0.001
Epoch 13/10000
 - 1s - loss: 0.1500 - mean_squared_error: 0.1500 - val_loss: 0.1548 - val_mean_squared_error: 0.1548
epoch_end_callback epoch 12 lr 0.001
Epoch 14/10000
 - 1s - loss: 0.1325 - mean_squared_error: 0.1325 - val_loss: 0.1573 - val_mean_squared_error: 0.1573
epoch_end_callback epoch 13 lr 0.001
Epoch 15/10000
 - 1s - loss: 0.1193 - mean_squared_error: 0.1193 - val_loss: 0.1157 - val_mean_squared_error: 0.1157
epoch_end_callback epoch 14 lr 0.001
Epoch 16/10000
 - 1s - loss: 0.1076 - mean_squared_error: 0.1076 - val_loss: 0.5905 - val_mean_squared_error: 0.5905
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epoch_end_callback epoch 15 lr 0.001
Epoch 17/10000
 - 1s - loss: 0.0950 - mean_squared_error: 0.0950 - val_loss: 0.1123 - val_mean_squared_error: 0.1123
epoch_end_callback epoch 16 lr 0.001
Epoch 18/10000
 - 1s - loss: 0.0842 - mean_squared_error: 0.0842 - val_loss: 0.1006 - val_mean_squared_error: 0.1006
epoch_end_callback epoch 17 lr 0.001
Epoch 19/10000
 - 1s - loss: 0.0764 - mean_squared_error: 0.0764 - val_loss: 0.0783 - val_mean_squared_error: 0.0783
epoch_end_callback epoch 18 lr 0.001
Epoch 20/10000
 - 1s - loss: 0.0646 - mean_squared_error: 0.0646 - val_loss: 0.2765 - val_mean_squared_error: 0.2765

Epoch 00020: saving model to model/model_best.h5
epoch_end_callback epoch 19 lr 0.001
Epoch 21/10000
 - 1s - loss: 0.0585 - mean_squared_error: 0.0585 - val_loss: 0.0406 - val_mean_squared_error: 0.0406
epoch_end_callback epoch 20 lr 0.001
Epoch 22/10000
 - 1s - loss: 0.0498 - mean_squared_error: 0.0498 - val_loss: 0.0262 - val_mean_squared_error: 0.0262
epoch_end_callback epoch 21 lr 0.001
Epoch 23/10000
 - 1s - loss: 0.0435 - mean_squared_error: 0.0435 - val_loss: 0.0341 - val_mean_squared_error: 0.0341
epoch_end_callback epoch 22 lr 0.001
Epoch 24/10000
 - 1s - loss: 0.0384 - mean_squared_error: 0.0384 - val_loss: 0.0162 - val_mean_squared_error: 0.0162
epoch_end_callback epoch 23 lr 0.001
Epoch 25/10000
 - 1s - loss: 0.0329 - mean_squared_error: 0.0329 - val_loss: 0.
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0333 - val_mean_squared_error: 0.0333
epoch_end_callback epoch 24 lr 0.001
Epoch 26/10000
 - 1s - loss: 0.0297 - mean_squared_error: 0.0297 - val_loss: 0.
0111 - val_mean_squared_error: 0.0111
epoch_end_callback epoch 25 lr 0.001
Epoch 27/10000
 - 1s - loss: 0.0251 - mean_squared_error: 0.0251 - val_loss: 0.
1607 - val_mean_squared_error: 0.1607
epoch_end_callback epoch 26 lr 0.001
Epoch 28/10000
 - 1s - loss: 0.0216 - mean_squared_error: 0.0216 - val_loss: 0.
1099 - val_mean_squared_error: 0.1099
epoch_end_callback epoch 27 lr 0.001
Epoch 29/10000
 - 1s - loss: 0.0193 - mean_squared_error: 0.0193 - val_loss: 0.
0789 - val_mean_squared_error: 0.0789
epoch_end_callback epoch 28 lr 0.001
Epoch 30/10000
 - 1s - loss: 0.0179 - mean_squared_error: 0.0179 - val_loss: 0.
0132 - val_mean_squared_error: 0.0132

Epoch 00030: saving model to model/model_best.h5
epoch_end_callback epoch 29 lr 0.001
Epoch 31/10000
 - 1s - loss: 0.0154 - mean_squared_error: 0.0154 - val_loss: 0.
1036 - val_mean_squared_error: 0.1036
epoch_end_callback epoch 30 lr 0.001
Epoch 32/10000
 - 1s - loss: 0.0138 - mean_squared_error: 0.0138 - val_loss: 0.
0273 - val_mean_squared_error: 0.0273
epoch_end_callback epoch 31 lr 0.001
Epoch 33/10000
 - 1s - loss: 0.0122 - mean_squared_error: 0.0122 - val_loss: 0.
0103 - val_mean_squared_error: 0.0103
epoch_end_callback epoch 32 lr 0.001
Epoch 34/10000
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 - 1s - loss: 0.0117 - mean_squared_error: 0.0117 - val_loss: 0.0664 - val_mean_squared_error: 0.0664
epoch_end_callback epoch 33 lr 0.001
Epoch 35/10000
 - 1s - loss: 0.0114 - mean_squared_error: 0.0114 - val_loss: 0.0204 - val_mean_squared_error: 0.0204
epoch_end_callback epoch 34 lr 0.001
Epoch 36/10000
 - 1s - loss: 0.0102 - mean_squared_error: 0.0102 - val_loss: 0.0128 - val_mean_squared_error: 0.0128
epoch_end_callback epoch 35 lr 0.001
Epoch 37/10000
 - 1s - loss: 0.0103 - mean_squared_error: 0.0103 - val_loss: 0.0362 - val_mean_squared_error: 0.0362
epoch_end_callback epoch 36 lr 0.001
Epoch 38/10000
 - 1s - loss: 0.0101 - mean_squared_error: 0.0101 - val_loss: 0.0200 - val_mean_squared_error: 0.0200
epoch_end_callback epoch 37 lr 0.001
Epoch 39/10000
 - 1s - loss: 0.0098 - mean_squared_error: 0.0098 - val_loss: 0.0438 - val_mean_squared_error: 0.0438
epoch_end_callback epoch 38 lr 0.001
Epoch 40/10000
 - 1s - loss: 0.0095 - mean_squared_error: 0.0095 - val_loss: 0.0226 - val_mean_squared_error: 0.0226

Epoch 00040: saving model to model/model_best.h5
epoch_end_callback epoch 39 lr 0.001
Epoch 41/10000
 - 1s - loss: 0.0093 - mean_squared_error: 0.0093 - val_loss: 0.0377 - val_mean_squared_error: 0.0377
epoch_end_callback epoch 40 lr 0.001
Epoch 42/10000
 - 1s - loss: 0.0092 - mean_squared_error: 0.0092 - val_loss: 0.0231 - val_mean_squared_error: 0.0231
epoch_end_callback epoch 41 lr 0.001
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Epoch 43/10000
 - 1s - loss: 0.0089 - mean_squared_error: 0.0089 - val_loss: 0.0329 - val_mean_squared_error: 0.0329
epoch_end_callback epoch 42 lr 0.001
Epoch 44/10000
 - 1s - loss: 0.0091 - mean_squared_error: 0.0091 - val_loss: 0.0297 - val_mean_squared_error: 0.0297
epoch_end_callback epoch 43 lr 0.001
Epoch 45/10000
 - 1s - loss: 0.0090 - mean_squared_error: 0.0090 - val_loss: 0.0340 - val_mean_squared_error: 0.0340
epoch_end_callback epoch 44 lr 0.001
Epoch 46/10000
 - 1s - loss: 0.0090 - mean_squared_error: 0.0090 - val_loss: 0.0209 - val_mean_squared_error: 0.0209
epoch_end_callback epoch 45 lr 0.001
Epoch 47/10000
 - 1s - loss: 0.0085 - mean_squared_error: 0.0085 - val_loss: 0.0176 - val_mean_squared_error: 0.0176
epoch_end_callback epoch 46 lr 0.001
Epoch 48/10000
 - 1s - loss: 0.0086 - mean_squared_error: 0.0086 - val_loss: 0.0173 - val_mean_squared_error: 0.0173
epoch_end_callback epoch 47 lr 0.001
Epoch 49/10000
 - 1s - loss: 0.0084 - mean_squared_error: 0.0084 - val_loss: 0.0162 - val_mean_squared_error: 0.0162
epoch_end_callback epoch 48 lr 0.001
Epoch 50/10000
 - 1s - loss: 0.0084 - mean_squared_error: 0.0084 - val_loss: 0.0149 - val_mean_squared_error: 0.0149

Epoch 00050: saving model to model/model_best.h5
epoch_end_callback epoch 49 lr 0.001
Epoch 51/10000
 - 1s - loss: 0.0084 - mean_squared_error: 0.0084 - val_loss: 0.0187 - val_mean_squared_error: 0.0187
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epoch_end_callback epoch 50 lr 0.001
Epoch 52/10000
 - 1s - loss: 0.0082 - mean_squared_error: 0.0082 - val_loss: 0.0149 - val_mean_squared_error: 0.0149
epoch_end_callback epoch 51 lr 0.001
Epoch 53/10000
 - 1s - loss: 0.0080 - mean_squared_error: 0.0080 - val_loss: 0.0165 - val_mean_squared_error: 0.0165
epoch_end_callback epoch 52 lr 0.001
Epoch 54/10000
 - 1s - loss: 0.0080 - mean_squared_error: 0.0080 - val_loss: 0.0168 - val_mean_squared_error: 0.0168
epoch_end_callback epoch 53 lr 0.001
Epoch 55/10000
 - 1s - loss: 0.0079 - mean_squared_error: 0.0079 - val_loss: 0.0162 - val_mean_squared_error: 0.0162
epoch_end_callback epoch 54 lr 0.001
Epoch 56/10000
 - 1s - loss: 0.0079 - mean_squared_error: 0.0079 - val_loss: 0.0158 - val_mean_squared_error: 0.0158
epoch_end_callback epoch 55 lr 0.001
Epoch 57/10000
 - 1s - loss: 0.0078 - mean_squared_error: 0.0078 - val_loss: 0.0259 - val_mean_squared_error: 0.0259
epoch_end_callback epoch 56 lr 0.001
Epoch 58/10000
 - 1s - loss: 0.0077 - mean_squared_error: 0.0077 - val_loss: 0.0248 - val_mean_squared_error: 0.0248
epoch_end_callback epoch 57 lr 0.001
Epoch 59/10000
 - 1s - loss: 0.0077 - mean_squared_error: 0.0077 - val_loss: 0.0192 - val_mean_squared_error: 0.0192
epoch_end_callback epoch 58 lr 0.001
Epoch 60/10000
 - 1s - loss: 0.0076 - mean_squared_error: 0.0076 - val_loss: 0.0171 - val_mean_squared_error: 0.0171

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Epoch 00060: saving model to model/model_best.h5
epoch_end_callback epoch 59 lr 0.001
Epoch 61/10000
 - 1s - loss: 0.0076 - mean_squared_error: 0.0076 - val_loss: 0.0155 - val_mean_squared_error: 0.0155
epoch_end_callback epoch 60 lr 0.001
Epoch 62/10000
 - 1s - loss: 0.0076 - mean_squared_error: 0.0076 - val_loss: 0.0127 - val_mean_squared_error: 0.0127
epoch_end_callback epoch 61 lr 0.001
Epoch 63/10000
 - 1s - loss: 0.0075 - mean_squared_error: 0.0075 - val_loss: 0.0111 - val_mean_squared_error: 0.0111
epoch_end_callback epoch 62 lr 0.001
Epoch 64/10000
 - 1s - loss: 0.0075 - mean_squared_error: 0.0075 - val_loss: 0.0128 - val_mean_squared_error: 0.0128
epoch_end_callback epoch 63 lr 0.001
Epoch 65/10000
 - 1s - loss: 0.0074 - mean_squared_error: 0.0074 - val_loss: 0.0102 - val_mean_squared_error: 0.0102
epoch_end_callback epoch 64 lr 0.001
Epoch 66/10000
 - 1s - loss: 0.0074 - mean_squared_error: 0.0074 - val_loss: 0.0109 - val_mean_squared_error: 0.0109
epoch_end_callback epoch 65 lr 0.001
Epoch 67/10000
 - 1s - loss: 0.0073 - mean_squared_error: 0.0073 - val_loss: 0.0112 - val_mean_squared_error: 0.0112
epoch_end_callback epoch 66 lr 0.001
Epoch 68/10000
 - 1s - loss: 0.0073 - mean_squared_error: 0.0073 - val_loss: 0.0105 - val_mean_squared_error: 0.0105
epoch_end_callback epoch 67 lr 0.001
Epoch 69/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0097 - val_mean_squared_error: 0.0097
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epoch_end_callback epoch 68 lr 0.001
Epoch 70/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0087 - val_mean_squared_error: 0.0087

Epoch 00070: saving model to model/model_best.h5
epoch_end_callback epoch 69 lr 0.001
Epoch 71/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0085 - val_mean_squared_error: 0.0085
epoch_end_callback epoch 70 lr 0.001
Epoch 72/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0079 - val_mean_squared_error: 0.0079
epoch_end_callback epoch 71 lr 0.001
Epoch 73/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0075 - val_mean_squared_error: 0.0075
epoch_end_callback epoch 72 lr 0.001
Epoch 74/10000
 - 1s - loss: 0.0072 - mean_squared_error: 0.0072 - val_loss: 0.0077 - val_mean_squared_error: 0.0077
epoch_end_callback epoch 73 lr 0.001
Epoch 75/10000
 - 1s - loss: 0.0071 - mean_squared_error: 0.0071 - val_loss: 0.0079 - val_mean_squared_error: 0.0079
epoch_end_callback epoch 74 lr 0.001
Epoch 76/10000
 - 1s - loss: 0.0071 - mean_squared_error: 0.0071 - val_loss: 0.0085 - val_mean_squared_error: 0.0085
epoch_end_callback epoch 75 lr 0.001
Epoch 77/10000
 - 1s - loss: 0.0071 - mean_squared_error: 0.0071 - val_loss: 0.0079 - val_mean_squared_error: 0.0079
epoch_end_callback epoch 76 lr 0.001
Epoch 78/10000
 - 1s - loss: 0.0070 - mean_squared_error: 0.0070 - val_loss: 0.
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0080 - val_mean_squared_error: 0.0080
epoch_end_callback epoch 77 lr 0.001
Epoch 79/10000
 - 1s - loss: 0.0071 - mean_squared_error: 0.0071 - val_loss: 0.0076 - val_mean_squared_error: 0.0076
epoch_end_callback epoch 78 lr 0.001
Epoch 80/10000
 - 1s - loss: 0.0071 - mean_squared_error: 0.0071 - val_loss: 0.0070 - val_mean_squared_error: 0.0070

Epoch 00080: saving model to model/model_best.h5
epoch_end_callback epoch 79 lr 0.001
Epoch 81/10000
 - 1s - loss: 0.0070 - mean_squared_error: 0.0070 - val_loss: 0.0069 - val_mean_squared_error: 0.0069
epoch_end_callback epoch 80 lr 0.001
Epoch 82/10000
 - 1s - loss: 0.0070 - mean_squared_error: 0.0070 - val_loss: 0.0067 - val_mean_squared_error: 0.0067
epoch_end_callback epoch 81 lr 0.001
Epoch 83/10000
 - 1s - loss: 0.0070 - mean_squared_error: 0.0070 - val_loss: 0.0065 - val_mean_squared_error: 0.0065
epoch_end_callback epoch 82 lr 0.001
Epoch 84/10000
 - 1s - loss: 0.0070 - mean_squared_error: 0.0070 - val_loss: 0.0066 - val_mean_squared_error: 0.0066
epoch_end_callback epoch 83 lr 0.001
Epoch 85/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0063 - val_mean_squared_error: 0.0063
epoch_end_callback epoch 84 lr 0.001
Epoch 86/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 85 lr 0.001
Epoch 87/10000
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 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0059 - val_mean_squared_error: 0.0059
epoch_end_callback epoch 86 lr 0.001
Epoch 88/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0067 - val_mean_squared_error: 0.0067
epoch_end_callback epoch 87 lr 0.001
Epoch 89/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0056 - val_mean_squared_error: 0.0056
epoch_end_callback epoch 88 lr 0.001
Epoch 90/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0062 - val_mean_squared_error: 0.0062

Epoch 00090: saving model to model/model_best.h5
epoch_end_callback epoch 89 lr 0.001
Epoch 91/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 90 lr 0.001
Epoch 92/10000
 - 1s - loss: 0.0068 - mean_squared_error: 0.0068 - val_loss: 0.0062 - val_mean_squared_error: 0.0062
epoch_end_callback epoch 91 lr 0.001
Epoch 93/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0063 - val_mean_squared_error: 0.0063
epoch_end_callback epoch 92 lr 0.001
Epoch 94/10000
 - 1s - loss: 0.0069 - mean_squared_error: 0.0069 - val_loss: 0.0053 - val_mean_squared_error: 0.0053
epoch_end_callback epoch 93 lr 0.001
Epoch 95/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 94 lr 0.001
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Epoch 96/10000
 - 1s - loss: 0.0068 - mean_squared_error: 0.0068 - val_loss: 0.0064 - val_mean_squared_error: 0.0064
epoch_end_callback epoch 95 lr 0.001
Epoch 97/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0052 - val_mean_squared_error: 0.0052
epoch_end_callback epoch 96 lr 0.001
Epoch 98/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 97 lr 0.001
Epoch 99/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0048 - val_mean_squared_error: 0.0048
epoch_end_callback epoch 98 lr 0.001
Epoch 100/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0056 - val_mean_squared_error: 0.0056

Epoch 00100: saving model to model/model_best.h5
epoch_end_callback epoch 99 lr 0.001
Epoch 101/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0056 - val_mean_squared_error: 0.0056
epoch_end_callback epoch 100 lr 0.001
Epoch 102/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 101 lr 0.001
Epoch 103/10000
 - 1s - loss: 0.0067 - mean_squared_error: 0.0067 - val_loss: 0.0047 - val_mean_squared_error: 0.0047
epoch_end_callback epoch 102 lr 0.001
Epoch 104/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0061 - val_mean_squared_error: 0.0061
```

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epoch_end_callback epoch 103 lr 0.001
Epoch 105/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0050 - val_mean_squared_error: 0.0050
epoch_end_callback epoch 104 lr 0.001
Epoch 106/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 105 lr 0.001
Epoch 107/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0044 - val_mean_squared_error: 0.0044
epoch_end_callback epoch 106 lr 0.001
Epoch 108/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0061 - val_mean_squared_error: 0.0061
epoch_end_callback epoch 107 lr 0.001
Epoch 109/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0056 - val_mean_squared_error: 0.0056
epoch_end_callback epoch 108 lr 0.001
Epoch 110/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0050 - val_mean_squared_error: 0.0050

Epoch 00110: saving model to model/model_best.h5
epoch_end_callback epoch 109 lr 0.001
Epoch 111/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0059 - val_mean_squared_error: 0.0059
epoch_end_callback epoch 110 lr 0.001
Epoch 112/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0053 - val_mean_squared_error: 0.0053
epoch_end_callback epoch 111 lr 0.001
Epoch 113/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.
```

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0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 112 lr 0.001
Epoch 114/10000
 - 1s - loss: 0.0066 - mean_squared_error: 0.0066 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 113 lr 0.001
Epoch 115/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0067 - val_mean_squared_error: 0.0067
epoch_end_callback epoch 114 lr 0.001
Epoch 116/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0047 - val_mean_squared_error: 0.0047
epoch_end_callback epoch 115 lr 0.001
Epoch 117/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0068 - val_mean_squared_error: 0.0068
epoch_end_callback epoch 116 lr 0.001
Epoch 118/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0051 - val_mean_squared_error: 0.0051
epoch_end_callback epoch 117 lr 0.001
Epoch 119/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0063 - val_mean_squared_error: 0.0063
epoch_end_callback epoch 118 lr 0.001
Epoch 120/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0049 - val_mean_squared_error: 0.0049

Epoch 00120: saving model to model/model_best.h5
epoch_end_callback epoch 119 lr 0.001
Epoch 121/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0076 - val_mean_squared_error: 0.0076
epoch_end_callback epoch 120 lr 0.001
Epoch 122/10000
```

```
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0050 - val_mean_squared_error: 0.0050
epoch_end_callback epoch 121 lr 0.001
Epoch 123/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 122 lr 0.001
Epoch 124/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 123 lr 0.001
Epoch 125/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0085 - val_mean_squared_error: 0.0085
epoch_end_callback epoch 124 lr 0.001
Epoch 126/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0060 - val_mean_squared_error: 0.0060
epoch_end_callback epoch 125 lr 0.001
Epoch 127/10000
 - 1s - loss: 0.0065 - mean_squared_error: 0.0065 - val_loss: 0.0049 - val_mean_squared_error: 0.0049
epoch_end_callback epoch 126 lr 0.001
Epoch 128/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0088 - val_mean_squared_error: 0.0088
epoch_end_callback epoch 127 lr 0.001
Epoch 129/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0059 - val_mean_squared_error: 0.0059
epoch_end_callback epoch 128 lr 0.001
Epoch 130/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0047 - val_mean_squared_error: 0.0047

Epoch 00130: saving model to model/model_best.h5
epoch_end_callback epoch 129 lr 0.001
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```
Epoch 131/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0099 - val_mean_squared_error: 0.0099
epoch_end_callback epoch 130 lr 0.001
Epoch 132/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0053 - val_mean_squared_error: 0.0053
epoch_end_callback epoch 131 lr 0.001
Epoch 133/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0056 - val_mean_squared_error: 0.0056
epoch_end_callback epoch 132 lr 0.001
Epoch 134/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 133 lr 0.001
Epoch 135/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0099 - val_mean_squared_error: 0.0099
epoch_end_callback epoch 134 lr 0.001
Epoch 136/10000
 - 1s - loss: 0.0064 - mean_squared_error: 0.0064 - val_loss: 0.0049 - val_mean_squared_error: 0.0049
epoch_end_callback epoch 135 lr 0.001
Epoch 137/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0069 - val_mean_squared_error: 0.0069
epoch_end_callback epoch 136 lr 0.001
Epoch 138/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 137 lr 0.001
Epoch 139/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0100 - val_mean_squared_error: 0.0100
epoch_end_callback epoch 138 lr 0.001
Epoch 140/10000
```

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 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0050 - val_mean_squared_error: 0.0050

Epoch 00140: saving model to model/model_best.h5
epoch_end_callback epoch 139 lr 0.001
Epoch 141/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 140 lr 0.001
Epoch 142/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0076 - val_mean_squared_error: 0.0076
epoch_end_callback epoch 141 lr 0.001
Epoch 143/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0074 - val_mean_squared_error: 0.0074
epoch_end_callback epoch 142 lr 0.001
Epoch 144/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0045 - val_mean_squared_error: 0.0045
epoch_end_callback epoch 143 lr 0.001
Epoch 145/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0068 - val_mean_squared_error: 0.0068
epoch_end_callback epoch 144 lr 0.001
Epoch 146/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 145 lr 0.001
Epoch 147/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0101 - val_mean_squared_error: 0.0101
epoch_end_callback epoch 146 lr 0.001
Epoch 148/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0049 - val_mean_squared_error: 0.0049
epoch_end_callback epoch 147 lr 0.001
```

```
Epoch 149/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0062 - val_mean_squared_error: 0.0062
epoch_end_callback epoch 148 lr 0.001
Epoch 150/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0064 - val_mean_squared_error: 0.0064

Epoch 00150: saving model to model/model_best.h5
epoch_end_callback epoch 149 lr 0.001
Epoch 151/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0088 - val_mean_squared_error: 0.0088
epoch_end_callback epoch 150 lr 0.001
Epoch 152/10000
 - 1s - loss: 0.0063 - mean_squared_error: 0.0063 - val_loss: 0.0049 - val_mean_squared_error: 0.0049
epoch_end_callback epoch 151 lr 0.001
Epoch 153/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0075 - val_mean_squared_error: 0.0075
epoch_end_callback epoch 152 lr 0.001
Epoch 154/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0052 - val_mean_squared_error: 0.0052
epoch_end_callback epoch 153 lr 0.001
Epoch 155/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0077 - val_mean_squared_error: 0.0077
epoch_end_callback epoch 154 lr 0.001
Epoch 156/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0051 - val_mean_squared_error: 0.0051
epoch_end_callback epoch 155 lr 0.001
Epoch 157/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0079 - val_mean_squared_error: 0.0079
```

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epoch_end_callback epoch 156 lr 0.001
Epoch 158/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0050 - val_mean_squared_error: 0.0050
epoch_end_callback epoch 157 lr 0.001
Epoch 159/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0079 - val_mean_squared_error: 0.0079
epoch_end_callback epoch 158 lr 0.001
Epoch 160/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0050 - val_mean_squared_error: 0.0050

Epoch 00160: saving model to model/model_best.h5
epoch_end_callback epoch 159 lr 0.001
Epoch 161/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0078 - val_mean_squared_error: 0.0078
epoch_end_callback epoch 160 lr 0.001
Epoch 162/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0050 - val_mean_squared_error: 0.0050
epoch_end_callback epoch 161 lr 0.001
Epoch 163/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0083 - val_mean_squared_error: 0.0083
epoch_end_callback epoch 162 lr 0.001
Epoch 164/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0047 - val_mean_squared_error: 0.0047
epoch_end_callback epoch 163 lr 0.001
Epoch 165/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0081 - val_mean_squared_error: 0.0081
epoch_end_callback epoch 164 lr 0.001
Epoch 166/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.
```

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0049 - val_mean_squared_error: 0.0049
epoch_end_callback epoch 165 lr 0.001
Epoch 167/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0081 - val_mean_squared_error: 0.0081
epoch_end_callback epoch 166 lr 0.001
Epoch 168/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0051 - val_mean_squared_error: 0.0051
epoch_end_callback epoch 167 lr 0.001
Epoch 169/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0080 - val_mean_squared_error: 0.0080
epoch_end_callback epoch 168 lr 0.001
Epoch 170/10000
 - 1s - loss: 0.0062 - mean_squared_error: 0.0062 - val_loss: 0.0048 - val_mean_squared_error: 0.0048

Epoch 00170: saving model to model/model_best.h5
epoch_end_callback epoch 169 lr 0.001
Epoch 171/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0066 - val_mean_squared_error: 0.0066
epoch_end_callback epoch 170 lr 0.001
Epoch 172/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0057 - val_mean_squared_error: 0.0057
epoch_end_callback epoch 171 lr 0.001
Epoch 173/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0082 - val_mean_squared_error: 0.0082
epoch_end_callback epoch 172 lr 0.001
Epoch 174/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0048 - val_mean_squared_error: 0.0048
epoch_end_callback epoch 173 lr 0.001
Epoch 175/10000
```

```
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0060 - val_mean_squared_error: 0.0060
epoch_end_callback epoch 174 lr 0.001
Epoch 176/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 175 lr 0.001
Epoch 177/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 176 lr 0.001
Epoch 178/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0083 - val_mean_squared_error: 0.0083
epoch_end_callback epoch 177 lr 0.001
Epoch 179/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0051 - val_mean_squared_error: 0.0051
epoch_end_callback epoch 178 lr 0.001
Epoch 180/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0052 - val_mean_squared_error: 0.0052

Epoch 00180: saving model to model/model_best.h5
epoch_end_callback epoch 179 lr 0.001
Epoch 181/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0074 - val_mean_squared_error: 0.0074
epoch_end_callback epoch 180 lr 0.001
Epoch 182/10000
 - 1s - loss: 0.0061 - mean_squared_error: 0.0061 - val_loss: 0.0062 - val_mean_squared_error: 0.0062
epoch_end_callback epoch 181 lr 0.001
Epoch 183/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0050 - val_mean_squared_error: 0.0050
epoch_end_callback epoch 182 lr 0.001
```

```
Epoch 184/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0075 - val_mean_squared_error: 0.0075
epoch_end_callback epoch 183 lr 0.001
Epoch 185/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0054 - val_mean_squared_error: 0.0054
epoch_end_callback epoch 184 lr 0.001
Epoch 186/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0055 - val_mean_squared_error: 0.0055
epoch_end_callback epoch 185 lr 0.001
Epoch 187/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0065 - val_mean_squared_error: 0.0065
epoch_end_callback epoch 186 lr 0.001
Epoch 188/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 187 lr 0.001
Epoch 189/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0068 - val_mean_squared_error: 0.0068
epoch_end_callback epoch 188 lr 0.001
Epoch 190/10000
 - 1s - loss: 0.0060 - mean_squared_error: 0.0060 - val_loss: 0.0059 - val_mean_squared_error: 0.0059

Epoch 00190: saving model to model/model_best.h5
epoch_end_callback epoch 189 lr 0.001
Epoch 191/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0069 - val_mean_squared_error: 0.0069
epoch_end_callback epoch 190 lr 0.001
Epoch 192/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0060 - val_mean_squared_error: 0.0060
```

```
epoch_end_callback epoch 191 lr 0.001
Epoch 193/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0064 - val_mean_squared_error: 0.0064
epoch_end_callback epoch 192 lr 0.001
Epoch 194/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0059 - val_mean_squared_error: 0.0059
epoch_end_callback epoch 193 lr 0.001
Epoch 195/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0083 - val_mean_squared_error: 0.0083
epoch_end_callback epoch 194 lr 0.001
Epoch 196/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0065 - val_mean_squared_error: 0.0065
epoch_end_callback epoch 195 lr 0.001
Epoch 197/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 196 lr 0.001
Epoch 198/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0072 - val_mean_squared_error: 0.0072
epoch_end_callback epoch 197 lr 0.001
Epoch 199/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0076 - val_mean_squared_error: 0.0076
epoch_end_callback epoch 198 lr 0.001
Epoch 200/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0056 - val_mean_squared_error: 0.0056

Epoch 00200: saving model to model/model_best.h5
epoch_end_callback epoch 199 lr 0.001
Epoch 201/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.
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0066 - val_mean_squared_error: 0.0066
epoch_end_callback epoch 200 lr 0.001
Epoch 202/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0067 - val_mean_squared_error: 0.0067
epoch_end_callback epoch 201 lr 0.001
Epoch 203/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0058 - val_mean_squared_error: 0.0058
epoch_end_callback epoch 202 lr 0.001
Epoch 204/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0062 - val_mean_squared_error: 0.0062
epoch_end_callback epoch 203 lr 0.001
Epoch 205/10000
 - 1s - loss: 0.0059 - mean_squared_error: 0.0059 - val_loss: 0.0056 - val_mean_squared_error: 0.0056
epoch_end_callback epoch 204 lr 0.001
Epoch 206/10000
 - 1s - loss: 0.0058 - mean_squared_error: 0.0058 - val_loss: 0.0077 - val_mean_squared_error: 0.0077
epoch_end_callback epoch 205 lr 0.001
Epoch 207/10000
 - 1s - loss: 0.0058 - mean_squared_error: 0.0058 - val_loss: 0.0068 - val_mean_squared_error: 0.0068

Epoch 00207: ReduceLROnPlateau reducing learning rate to 0.00010000000475.
epoch_end_callback epoch 206 lr 0.001
Epoch 208/10000
 - 1s - loss: 0.0056 - mean_squared_error: 0.0056 - val_loss: 0.0045 - val_mean_squared_error: 0.0045
epoch_end_callback epoch 207 lr 0.000100000005
Epoch 209/10000
 - 1s - loss: 0.0055 - mean_squared_error: 0.0055 - val_loss: 0.0043 - val_mean_squared_error: 0.0043
epoch_end_callback epoch 208 lr 0.000100000005
```

```
Epoch 210/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0043 - val_mean_squared_error: 0.0043

Epoch 00210: saving model to model/model_best.h5
epoch_end_callback epoch 209 lr 0.000100000005
Epoch 211/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0043 - val_mean_squared_error: 0.0043
epoch_end_callback epoch 210 lr 0.000100000005
Epoch 212/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 211 lr 0.000100000005
Epoch 213/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 212 lr 0.000100000005
Epoch 214/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 213 lr 0.000100000005
Epoch 215/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 214 lr 0.000100000005
Epoch 216/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 215 lr 0.000100000005
Epoch 217/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0042 - val_mean_squared_error: 0.0042
epoch_end_callback epoch 216 lr 0.000100000005
Epoch 218/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
```

```
epoch_end_callback epoch 217 lr 0.000100000005
Epoch 219/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 218 lr 0.000100000005
Epoch 220/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041

Epoch 00220: saving model to model/model_best.h5
epoch_end_callback epoch 219 lr 0.000100000005
Epoch 221/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 220 lr 0.000100000005
Epoch 222/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 221 lr 0.000100000005
Epoch 223/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 222 lr 0.000100000005
Epoch 224/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 223 lr 0.000100000005
Epoch 225/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 224 lr 0.000100000005
Epoch 226/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 225 lr 0.000100000005
Epoch 227/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
```

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0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 226 lr 0.000100000005
Epoch 228/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 227 lr 0.000100000005
Epoch 229/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 228 lr 0.000100000005
Epoch 230/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0041 - val_mean_squared_error: 0.0041

Epoch 00230: saving model to model/model_best.h5
epoch_end_callback epoch 229 lr 0.000100000005
Epoch 231/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0041 - val_mean_squared_error: 0.0041
epoch_end_callback epoch 230 lr 0.000100000005
Epoch 232/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 231 lr 0.000100000005
Epoch 233/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 232 lr 0.000100000005
Epoch 234/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 233 lr 0.000100000005
Epoch 235/10000
 - 1s - loss: 0.0054 - mean_squared_error: 0.0054 - val_loss: 0.
0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 234 lr 0.000100000005
Epoch 236/10000
```

```
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 235 lr 0.000100000005
Epoch 237/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 236 lr 0.000100000005
Epoch 238/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 237 lr 0.000100000005
Epoch 239/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 238 lr 0.000100000005
Epoch 240/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040

Epoch 00240: saving model to model/model_best.h5
epoch_end_callback epoch 239 lr 0.000100000005
Epoch 241/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 240 lr 0.000100000005
Epoch 242/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 241 lr 0.000100000005
Epoch 243/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 242 lr 0.000100000005
Epoch 244/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 243 lr 0.000100000005
```

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Epoch 245/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 244 lr 0.000100000005
Epoch 246/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 245 lr 0.000100000005
Epoch 247/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 246 lr 0.000100000005
Epoch 248/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 247 lr 0.000100000005
Epoch 249/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 248 lr 0.000100000005
Epoch 250/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040

Epoch 00250: saving model to model/model_best.h5
epoch_end_callback epoch 249 lr 0.000100000005
Epoch 251/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 250 lr 0.000100000005
Epoch 252/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 251 lr 0.000100000005
Epoch 253/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
```

```
epoch_end_callback epoch 252 lr 0.000100000005
Epoch 254/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 253 lr 0.000100000005
Epoch 255/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 254 lr 0.000100000005
Epoch 256/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 255 lr 0.000100000005
Epoch 257/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 256 lr 0.000100000005
Epoch 258/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 257 lr 0.000100000005
Epoch 259/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040
epoch_end_callback epoch 258 lr 0.000100000005
Epoch 260/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0040 - val_mean_squared_error: 0.0040

Epoch 00260: saving model to model/model_best.h5
epoch_end_callback epoch 259 lr 0.000100000005
Epoch 261/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 260 lr 0.000100000005
Epoch 262/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
```

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0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 261 lr 0.000100000005
Epoch 263/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 262 lr 0.000100000005
Epoch 264/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 263 lr 0.000100000005
Epoch 265/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 264 lr 0.000100000005
Epoch 266/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 265 lr 0.000100000005
Epoch 267/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 266 lr 0.000100000005
Epoch 268/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 267 lr 0.000100000005
Epoch 269/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 268 lr 0.000100000005
Epoch 270/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
0039 - val_mean_squared_error: 0.0039

Epoch 00270: saving model to model/model_best.h5
epoch_end_callback epoch 269 lr 0.000100000005
Epoch 271/10000
```

```
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 270 lr 0.000100000005
Epoch 272/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 271 lr 0.000100000005
Epoch 273/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 272 lr 0.000100000005
Epoch 274/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 273 lr 0.000100000005
Epoch 275/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 274 lr 0.000100000005
Epoch 276/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 275 lr 0.000100000005
Epoch 277/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 276 lr 0.000100000005
Epoch 278/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 277 lr 0.000100000005
Epoch 279/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 278 lr 0.000100000005
Epoch 280/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.
```

```
0039 - val_mean_squared_error: 0.0039

Epoch 00280: saving model to model/model_best.h5
epoch_end_callback epoch 279 lr 0.000100000005
Epoch 281/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 280 lr 0.000100000005
Epoch 282/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 281 lr 0.000100000005
Epoch 283/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 282 lr 0.000100000005
Epoch 284/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 283 lr 0.000100000005
Epoch 285/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 284 lr 0.000100000005
Epoch 286/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 285 lr 0.000100000005
Epoch 287/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 286 lr 0.000100000005
Epoch 288/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 287 lr 0.000100000005
Epoch 289/10000
```

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 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 288 lr 0.000100000005
Epoch 290/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039

Epoch 00290: saving model to model/model_best.h5
epoch_end_callback epoch 289 lr 0.000100000005
Epoch 291/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 290 lr 0.000100000005
Epoch 292/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 291 lr 0.000100000005
Epoch 293/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 292 lr 0.000100000005
Epoch 294/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0039 - val_mean_squared_error: 0.0039
epoch_end_callback epoch 293 lr 0.000100000005
Epoch 295/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 294 lr 0.000100000005
Epoch 296/10000
 - 1s - loss: 0.0053 - mean_squared_error: 0.0053 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 295 lr 0.000100000005
Epoch 297/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 296 lr 0.000100000005
```

```
Epoch 298/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 297 lr 0.000100000005
Epoch 299/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 298 lr 0.000100000005
Epoch 300/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038

Epoch 00300: saving model to model/model_best.h5
epoch_end_callback epoch 299 lr 0.000100000005
Epoch 301/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 300 lr 0.000100000005
Epoch 302/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 301 lr 0.000100000005
Epoch 303/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 302 lr 0.000100000005
Epoch 304/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 303 lr 0.000100000005
Epoch 305/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 304 lr 0.000100000005
Epoch 306/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
```

```
epoch_end_callback epoch 305 lr 0.000100000005
Epoch 307/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 306 lr 0.000100000005
Epoch 308/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 307 lr 0.000100000005
Epoch 309/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 308 lr 0.000100000005
Epoch 310/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038

Epoch 00310: saving model to model/model_best.h5
epoch_end_callback epoch 309 lr 0.000100000005
Epoch 311/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 310 lr 0.000100000005
Epoch 312/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 311 lr 0.000100000005
Epoch 313/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 312 lr 0.000100000005
Epoch 314/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 313 lr 0.000100000005
Epoch 315/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
```

```
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 314 lr 0.000100000005
Epoch 316/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0038 - val_mean_squared_error: 0.0038
epoch_end_callback epoch 315 lr 0.000100000005
Epoch 317/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 316 lr 0.000100000005
Epoch 318/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 317 lr 0.000100000005
Epoch 319/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 318 lr 0.000100000005
Epoch 320/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037

Epoch 00320: saving model to model/model_best.h5
epoch_end_callback epoch 319 lr 0.000100000005
Epoch 321/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 320 lr 0.000100000005
Epoch 322/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 321 lr 0.000100000005
Epoch 323/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 322 lr 0.000100000005
Epoch 324/10000
```

```
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 323 lr 0.000100000005
Epoch 325/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 324 lr 0.000100000005
Epoch 326/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 325 lr 0.000100000005
Epoch 327/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 326 lr 0.000100000005
Epoch 328/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 327 lr 0.000100000005
Epoch 329/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 328 lr 0.000100000005
Epoch 330/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037

Epoch 00330: saving model to model/model_best.h5
epoch_end_callback epoch 329 lr 0.000100000005
Epoch 331/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 330 lr 0.000100000005
Epoch 332/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 331 lr 0.000100000005
```

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Epoch 333/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 332 lr 0.000100000005
Epoch 334/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 333 lr 0.000100000005
Epoch 335/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 334 lr 0.000100000005
Epoch 336/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 335 lr 0.000100000005
Epoch 337/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 336 lr 0.000100000005
Epoch 338/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 337 lr 0.000100000005
Epoch 339/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 338 lr 0.000100000005
Epoch 340/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037

Epoch 00340: saving model to model/model_best.h5
epoch_end_callback epoch 339 lr 0.000100000005
Epoch 341/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0037 - val_mean_squared_error: 0.0037
```

```
epoch_end_callback epoch 340 lr 0.000100000005
Epoch 342/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 341 lr 0.000100000005
Epoch 343/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 342 lr 0.000100000005
Epoch 344/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 343 lr 0.000100000005
Epoch 345/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 344 lr 0.000100000005
Epoch 346/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 345 lr 0.000100000005
Epoch 347/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 346 lr 0.000100000005
Epoch 348/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 347 lr 0.000100000005
Epoch 349/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0037 - val_mean_squared_error: 0.0037
epoch_end_callback epoch 348 lr 0.000100000005
Epoch 350/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
```

```
Epoch 00350: saving model to model/model_best.h5
epoch_end_callback epoch 349 lr 0.000100000005
Epoch 351/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 350 lr 0.000100000005
Epoch 352/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 351 lr 0.000100000005
Epoch 353/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 352 lr 0.000100000005
Epoch 354/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 353 lr 0.000100000005
Epoch 355/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 354 lr 0.000100000005
Epoch 356/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 355 lr 0.000100000005
Epoch 357/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 356 lr 0.000100000005
Epoch 358/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 357 lr 0.000100000005
Epoch 359/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0.0036 - val_mean_squared_error: 0.0036
```

```
epoch_end_callback epoch 358 lr 0.000100000005
Epoch 360/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036

Epoch 00360: saving model to model/model_best.h5
epoch_end_callback epoch 359 lr 0.000100000005
Epoch 361/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 360 lr 0.000100000005
Epoch 362/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 361 lr 0.000100000005
Epoch 363/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 362 lr 0.000100000005
Epoch 364/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 363 lr 0.000100000005
Epoch 365/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 364 lr 0.000100000005
Epoch 366/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 365 lr 0.000100000005
Epoch 367/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 366 lr 0.000100000005
Epoch 368/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
```

```
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 367 lr 0.000100000005
Epoch 369/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 368 lr 0.000100000005
Epoch 370/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036

Epoch 00370: saving model to model/model_best.h5
epoch_end_callback epoch 369 lr 0.000100000005
Epoch 371/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 370 lr 0.000100000005
Epoch 372/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0036 - val_mean_squared_error: 0.0036
epoch_end_callback epoch 371 lr 0.000100000005
Epoch 373/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 372 lr 0.000100000005
Epoch 374/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 373 lr 0.000100000005
Epoch 375/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 374 lr 0.000100000005
Epoch 376/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 375 lr 0.000100000005
Epoch 377/10000
```

```
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 376 lr 0.000100000005
Epoch 378/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 377 lr 0.000100000005
Epoch 379/10000
 - 1s - loss: 0.0052 - mean_squared_error: 0.0052 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 378 lr 0.000100000005
Epoch 380/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035

Epoch 00380: saving model to model/model_best.h5
epoch_end_callback epoch 379 lr 0.000100000005
Epoch 381/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 380 lr 0.000100000005
Epoch 382/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 381 lr 0.000100000005
Epoch 383/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 382 lr 0.000100000005
Epoch 384/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 383 lr 0.000100000005
Epoch 385/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 384 lr 0.000100000005
```

```
Epoch 386/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 385 lr 0.000100000005
Epoch 387/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 386 lr 0.000100000005
Epoch 388/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 387 lr 0.000100000005
Epoch 389/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 388 lr 0.000100000005
Epoch 390/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035

Epoch 00390: saving model to model/model_best.h5
epoch_end_callback epoch 389 lr 0.000100000005
Epoch 391/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 390 lr 0.000100000005
Epoch 392/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 391 lr 0.000100000005
Epoch 393/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 392 lr 0.000100000005
Epoch 394/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
```

```
epoch_end_callback epoch 393 lr 0.000100000005
Epoch 395/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 394 lr 0.000100000005
Epoch 396/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 395 lr 0.000100000005
Epoch 397/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 396 lr 0.000100000005
Epoch 398/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 397 lr 0.000100000005
Epoch 399/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 398 lr 0.000100000005
Epoch 400/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035

Epoch 00400: saving model to model/model_best.h5
epoch_end_callback epoch 399 lr 0.000100000005
Epoch 401/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 400 lr 0.000100000005
Epoch 402/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 401 lr 0.000100000005
Epoch 403/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
```

```
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 402 lr 0.000100000005
Epoch 404/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 403 lr 0.000100000005
Epoch 405/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 404 lr 0.000100000005
Epoch 406/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 405 lr 0.000100000005
Epoch 407/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 406 lr 0.000100000005
Epoch 408/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 407 lr 0.000100000005
Epoch 409/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 408 lr 0.000100000005
Epoch 410/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035

Epoch 00410: saving model to model/model_best.h5
epoch_end_callback epoch 409 lr 0.000100000005
Epoch 411/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 410 lr 0.000100000005
Epoch 412/10000
```

```
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 411 lr 0.000100000005
Epoch 413/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 412 lr 0.000100000005
Epoch 414/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 413 lr 0.000100000005
Epoch 415/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 414 lr 0.000100000005
Epoch 416/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 415 lr 0.000100000005
Epoch 417/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0035 - val_mean_squared_error: 0.0035
epoch_end_callback epoch 416 lr 0.000100000005
Epoch 418/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 417 lr 0.000100000005
Epoch 419/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 418 lr 0.000100000005
Epoch 420/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034

Epoch 00420: saving model to model/model_best.h5
epoch_end_callback epoch 419 lr 0.000100000005
```

```
Epoch 421/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 420 lr 0.000100000005
Epoch 422/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 421 lr 0.000100000005
Epoch 423/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 422 lr 0.000100000005
Epoch 424/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 423 lr 0.000100000005
Epoch 425/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 424 lr 0.000100000005
Epoch 426/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 425 lr 0.000100000005
Epoch 427/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 426 lr 0.000100000005
Epoch 428/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 427 lr 0.000100000005
Epoch 429/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 428 lr 0.000100000005
Epoch 430/10000
```

```
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034

Epoch 00430: saving model to model/model_best.h5
epoch_end_callback epoch 429 lr 0.000100000005
Epoch 431/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 430 lr 0.000100000005
Epoch 432/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 431 lr 0.000100000005
Epoch 433/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 432 lr 0.000100000005
Epoch 434/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 433 lr 0.000100000005
Epoch 435/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 434 lr 0.000100000005
Epoch 436/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 435 lr 0.000100000005
Epoch 437/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 436 lr 0.000100000005
Epoch 438/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 437 lr 0.000100000005
```

```
Epoch 439/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 438 lr 0.000100000005
Epoch 440/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034

Epoch 00440: saving model to model/model_best.h5
epoch_end_callback epoch 439 lr 0.000100000005
Epoch 441/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 440 lr 0.000100000005
Epoch 442/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 441 lr 0.000100000005
Epoch 443/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 442 lr 0.000100000005
Epoch 444/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 443 lr 0.000100000005
Epoch 445/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 444 lr 0.000100000005
Epoch 446/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 445 lr 0.000100000005
Epoch 447/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
```

```
epoch_end_callback epoch 446 lr 0.000100000005
Epoch 448/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 447 lr 0.000100000005
Epoch 449/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 448 lr 0.000100000005
Epoch 450/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034

Epoch 00450: saving model to model/model_best.h5
epoch_end_callback epoch 449 lr 0.000100000005
Epoch 451/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 450 lr 0.000100000005
Epoch 452/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 451 lr 0.000100000005
Epoch 453/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 452 lr 0.000100000005
Epoch 454/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 453 lr 0.000100000005
Epoch 455/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 454 lr 0.000100000005
Epoch 456/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
```

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.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 455 lr 0.000100000005
Epoch 457/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0034 - val_mean_squared_error: 0.0034
epoch_end_callback epoch 456 lr 0.000100000005
Epoch 458/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 457 lr 0.000100000005
Epoch 459/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 458 lr 0.000100000005
Epoch 460/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033

Epoch 00460: saving model to model/model_best.h5
epoch_end_callback epoch 459 lr 0.000100000005
Epoch 461/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 460 lr 0.000100000005
Epoch 462/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 461 lr 0.000100000005
Epoch 463/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 462 lr 0.000100000005
Epoch 464/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 463 lr 0.000100000005
Epoch 465/10000
```

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 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 464 lr 0.000100000005
Epoch 466/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 465 lr 0.000100000005
Epoch 467/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 466 lr 0.000100000005
Epoch 468/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 467 lr 0.000100000005
Epoch 469/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 468 lr 0.000100000005
Epoch 470/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033

Epoch 00470: saving model to model/model_best.h5
epoch_end_callback epoch 469 lr 0.000100000005
Epoch 471/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 470 lr 0.000100000005
Epoch 472/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 471 lr 0.000100000005
Epoch 473/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 472 lr 0.000100000005
```

```
Epoch 474/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 473 lr 0.000100000005
Epoch 475/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 474 lr 0.000100000005
Epoch 476/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 475 lr 0.000100000005
Epoch 477/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 476 lr 0.000100000005
Epoch 478/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 477 lr 0.000100000005
Epoch 479/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 478 lr 0.000100000005
Epoch 480/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033

Epoch 00480: saving model to model/model_best.h5
epoch_end_callback epoch 479 lr 0.000100000005
Epoch 481/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 480 lr 0.000100000005
Epoch 482/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0
.0033 - val_mean_squared_error: 0.0033
```

```
epoch_end_callback epoch 481 lr 0.000100000005
Epoch 483/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 482 lr 0.000100000005
Epoch 484/10000
 - 1s - loss: 0.0051 - mean_squared_error: 0.0051 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 483 lr 0.000100000005
Epoch 485/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 484 lr 0.000100000005
Epoch 486/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 485 lr 0.000100000005
Epoch 487/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 486 lr 0.000100000005
Epoch 488/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0033 - val_mean_squared_error: 0.0033
epoch_end_callback epoch 487 lr 0.000100000005
Epoch 489/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 488 lr 0.000100000005
Epoch 490/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032

Epoch 00490: saving model to model/model_best.h5
epoch_end_callback epoch 489 lr 0.000100000005
Epoch 491/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
```

```
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 490 lr 0.000100000005
Epoch 492/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 491 lr 0.000100000005
Epoch 493/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 492 lr 0.000100000005
Epoch 494/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 493 lr 0.000100000005
Epoch 495/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 494 lr 0.000100000005
Epoch 496/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 495 lr 0.000100000005
Epoch 497/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 496 lr 0.000100000005
Epoch 498/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 497 lr 0.000100000005
Epoch 499/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 498 lr 0.000100000005
Epoch 500/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
```

```
Epoch 00500: saving model to model/model_best.h5
epoch_end_callback epoch 499 lr 0.000100000005
Epoch 501/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 500 lr 0.000100000005
Epoch 502/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 501 lr 0.000100000005
Epoch 503/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 502 lr 0.000100000005
Epoch 504/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 503 lr 0.000100000005
Epoch 505/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 504 lr 0.000100000005
Epoch 506/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 505 lr 0.000100000005
Epoch 507/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 506 lr 0.000100000005
Epoch 508/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 507 lr 0.000100000005
Epoch 509/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
```

```
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 508 lr 0.000100000005
Epoch 510/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032

Epoch 00510: saving model to model/model_best.h5
epoch_end_callback epoch 509 lr 0.000100000005
Epoch 511/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 510 lr 0.000100000005
Epoch 512/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 511 lr 0.000100000005
Epoch 513/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 512 lr 0.000100000005
Epoch 514/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 513 lr 0.000100000005
Epoch 515/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 514 lr 0.000100000005
Epoch 516/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 515 lr 0.000100000005
Epoch 517/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 516 lr 0.000100000005
Epoch 518/10000
```

```
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 517 lr 0.000100000005
Epoch 519/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 518 lr 0.000100000005
Epoch 520/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032

Epoch 00520: saving model to model/model_best.h5
epoch_end_callback epoch 519 lr 0.000100000005
Epoch 521/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 520 lr 0.000100000005
Epoch 522/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 521 lr 0.000100000005
Epoch 523/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0032 - val_mean_squared_error: 0.0032
epoch_end_callback epoch 522 lr 0.000100000005
Epoch 524/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 523 lr 0.000100000005
Epoch 525/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 524 lr 0.000100000005
Epoch 526/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 525 lr 0.000100000005
```

```
Epoch 527/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 526 lr 0.000100000005
Epoch 528/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 527 lr 0.000100000005
Epoch 529/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 528 lr 0.000100000005
Epoch 530/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031

Epoch 00530: saving model to model/model_best.h5
epoch_end_callback epoch 529 lr 0.000100000005
Epoch 531/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 530 lr 0.000100000005
Epoch 532/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 531 lr 0.000100000005
Epoch 533/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 532 lr 0.000100000005
Epoch 534/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 533 lr 0.000100000005
Epoch 535/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
```

```
epoch_end_callback epoch 534 lr 0.000100000005
Epoch 536/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 535 lr 0.000100000005
Epoch 537/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 536 lr 0.000100000005
Epoch 538/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 537 lr 0.000100000005
Epoch 539/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 538 lr 0.000100000005
Epoch 540/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031

Epoch 00540: saving model to model/model_best.h5
epoch_end_callback epoch 539 lr 0.000100000005
Epoch 541/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 540 lr 0.000100000005
Epoch 542/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 541 lr 0.000100000005
Epoch 543/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 542 lr 0.000100000005
Epoch 544/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
```

```
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 543 lr 0.000100000005
Epoch 545/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 544 lr 0.000100000005
Epoch 546/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 545 lr 0.000100000005
Epoch 547/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 546 lr 0.000100000005
Epoch 548/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 547 lr 0.000100000005
Epoch 549/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 548 lr 0.000100000005
Epoch 550/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031

Epoch 00550: saving model to model/model_best.h5
epoch_end_callback epoch 549 lr 0.000100000005
Epoch 551/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 550 lr 0.000100000005
Epoch 552/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 551 lr 0.000100000005
Epoch 553/10000
```

```
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 552 lr 0.000100000005
Epoch 554/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 553 lr 0.000100000005
Epoch 555/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 554 lr 0.000100000005
Epoch 556/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 555 lr 0.000100000005
Epoch 557/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 556 lr 0.000100000005
Epoch 558/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 557 lr 0.000100000005
Epoch 559/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 558 lr 0.000100000005
Epoch 560/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031

Epoch 00560: saving model to model/model_best.h5
epoch_end_callback epoch 559 lr 0.000100000005
Epoch 561/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 560 lr 0.000100000005
```

```
Epoch 562/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 561 lr 0.000100000005
Epoch 563/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 562 lr 0.000100000005
Epoch 564/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 563 lr 0.000100000005
Epoch 565/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0031 - val_mean_squared_error: 0.0031
epoch_end_callback epoch 564 lr 0.000100000005
Epoch 566/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 565 lr 0.000100000005
Epoch 567/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 566 lr 0.000100000005
Epoch 568/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 567 lr 0.000100000005
Epoch 569/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 568 lr 0.000100000005
Epoch 570/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030

Epoch 00570: saving model to model/model_best.h5
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epoch_end_callback epoch 569 lr 0.000100000005
Epoch 571/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 570 lr 0.000100000005
Epoch 572/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 571 lr 0.000100000005
Epoch 573/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 572 lr 0.000100000005
Epoch 574/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 573 lr 0.000100000005
Epoch 575/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 574 lr 0.000100000005
Epoch 576/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 575 lr 0.000100000005
Epoch 577/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 576 lr 0.000100000005
Epoch 578/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 577 lr 0.000100000005
Epoch 579/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 578 lr 0.000100000005
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Epoch 580/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030

Epoch 00580: saving model to model/model_best.h5
epoch_end_callback epoch 579 lr 0.000100000005
Epoch 581/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 580 lr 0.000100000005
Epoch 582/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 581 lr 0.000100000005
Epoch 583/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 582 lr 0.000100000005
Epoch 584/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 583 lr 0.000100000005
Epoch 585/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 584 lr 0.000100000005
Epoch 586/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 585 lr 0.000100000005
Epoch 587/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 586 lr 0.000100000005
Epoch 588/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
```

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epoch_end_callback epoch 587 lr 0.000100000005
Epoch 589/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 588 lr 0.000100000005
Epoch 590/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030

Epoch 00590: saving model to model/model_best.h5
epoch_end_callback epoch 589 lr 0.000100000005
Epoch 591/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 590 lr 0.000100000005
Epoch 592/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 591 lr 0.000100000005
Epoch 593/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 592 lr 0.000100000005
Epoch 594/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 593 lr 0.000100000005
Epoch 595/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 594 lr 0.000100000005
Epoch 596/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 595 lr 0.000100000005
Epoch 597/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
```

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.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 596 lr 0.000100000005
Epoch 598/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 597 lr 0.000100000005
Epoch 599/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 598 lr 0.000100000005
Epoch 600/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030

Epoch 00600: saving model to model/model_best.h5
epoch_end_callback epoch 599 lr 0.000100000005
Epoch 601/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 600 lr 0.000100000005
Epoch 602/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 601 lr 0.000100000005
Epoch 603/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 602 lr 0.000100000005
Epoch 604/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 603 lr 0.000100000005
Epoch 605/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 604 lr 0.000100000005
Epoch 606/10000
```

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 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 605 lr 0.000100000005
Epoch 607/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 606 lr 0.000100000005
Epoch 608/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 607 lr 0.000100000005
Epoch 609/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 608 lr 0.000100000005
Epoch 610/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030

Epoch 00610: saving model to model/model_best.h5
epoch_end_callback epoch 609 lr 0.000100000005
Epoch 611/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 610 lr 0.000100000005
Epoch 612/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0030 - val_mean_squared_error: 0.0030
epoch_end_callback epoch 611 lr 0.000100000005
Epoch 613/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 612 lr 0.000100000005
Epoch 614/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 613 lr 0.000100000005
```

```
Epoch 615/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 614 lr 0.000100000005
Epoch 616/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 615 lr 0.000100000005
Epoch 617/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 616 lr 0.000100000005
Epoch 618/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 617 lr 0.000100000005
Epoch 619/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 618 lr 0.000100000005
Epoch 620/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029

Epoch 00620: saving model to model/model_best.h5
epoch_end_callback epoch 619 lr 0.000100000005
Epoch 621/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 620 lr 0.000100000005
Epoch 622/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 621 lr 0.000100000005
Epoch 623/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
```

```
epoch_end_callback epoch 622 lr 0.000100000005
Epoch 624/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 623 lr 0.000100000005
Epoch 625/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 624 lr 0.000100000005
Epoch 626/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 625 lr 0.000100000005
Epoch 627/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 626 lr 0.000100000005
Epoch 628/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 627 lr 0.000100000005
Epoch 629/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 628 lr 0.000100000005
Epoch 630/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029

Epoch 00630: saving model to model/model_best.h5
epoch_end_callback epoch 629 lr 0.000100000005
Epoch 631/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 630 lr 0.000100000005
Epoch 632/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
```

```
2090 .0029 - val_mean_squared_error: 0.0029
2091 epoch_end_callback epoch 631 lr 0.000100000005
2092 Epoch 633/10000
2093  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2094 epoch_end_callback epoch 632 lr 0.000100000005
2095 Epoch 634/10000
2096  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2097 epoch_end_callback epoch 633 lr 0.000100000005
2098 Epoch 635/10000
2099  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2100 epoch_end_callback epoch 634 lr 0.000100000005
2101 Epoch 636/10000
2102  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2103 epoch_end_callback epoch 635 lr 0.000100000005
2104 Epoch 637/10000
2105  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2106 epoch_end_callback epoch 636 lr 0.000100000005
2107 Epoch 638/10000
2108  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2109 epoch_end_callback epoch 637 lr 0.000100000005
2110 Epoch 639/10000
2111  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2112 epoch_end_callback epoch 638 lr 0.000100000005
2113 Epoch 640/10000
2114  - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
     .0029 - val_mean_squared_error: 0.0029
2115
2116 Epoch 00640: saving model to model/model_best.h5
2117 epoch_end_callback epoch 639 lr 0.000100000005
2118 Epoch 641/10000
```

```
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 640 lr 0.000100000005
Epoch 642/10000
 - 1s - loss: 0.0050 - mean_squared_error: 0.0050 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 641 lr 0.000100000005
Epoch 643/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 642 lr 0.000100000005
Epoch 644/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 643 lr 0.000100000005
Epoch 645/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 644 lr 0.000100000005
Epoch 646/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 645 lr 0.000100000005
Epoch 647/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 646 lr 0.000100000005
Epoch 648/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 647 lr 0.000100000005
Epoch 649/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 648 lr 0.000100000005
Epoch 650/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
```

```
.0029 - val_mean_squared_error: 0.0029

Epoch 00650: saving model to model/model_best.h5
epoch_end_callback epoch 649 lr 0.000100000005
Epoch 651/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 650 lr 0.000100000005
Epoch 652/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 651 lr 0.000100000005
Epoch 653/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 652 lr 0.000100000005
Epoch 654/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 653 lr 0.000100000005
Epoch 655/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 654 lr 0.000100000005
Epoch 656/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 655 lr 0.000100000005
Epoch 657/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 656 lr 0.000100000005
Epoch 658/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 657 lr 0.000100000005
Epoch 659/10000
```

```
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 658 lr 0.000100000005
Epoch 660/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029

Epoch 00660: saving model to model/model_best.h5
epoch_end_callback epoch 659 lr 0.000100000005
Epoch 661/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 660 lr 0.000100000005
Epoch 662/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 661 lr 0.000100000005
Epoch 663/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 662 lr 0.000100000005
Epoch 664/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 663 lr 0.000100000005
Epoch 665/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 664 lr 0.000100000005
Epoch 666/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 665 lr 0.000100000005
Epoch 667/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 666 lr 0.000100000005
```

```
Epoch 668/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 667 lr 0.000100000005
Epoch 669/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 668 lr 0.000100000005
Epoch 670/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029

Epoch 00670: saving model to model/model_best.h5
epoch_end_callback epoch 669 lr 0.000100000005
Epoch 671/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 670 lr 0.000100000005
Epoch 672/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 671 lr 0.000100000005
Epoch 673/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 672 lr 0.000100000005
Epoch 674/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 673 lr 0.000100000005
Epoch 675/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0029 - val_mean_squared_error: 0.0029
epoch_end_callback epoch 674 lr 0.000100000005
Epoch 676/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
```

```
epoch_end_callback epoch 675 lr 0.000100000005
Epoch 677/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 676 lr 0.000100000005
Epoch 678/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 677 lr 0.000100000005
Epoch 679/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 678 lr 0.000100000005
Epoch 680/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00680: saving model to model/model_best.h5
epoch_end_callback epoch 679 lr 0.000100000005
Epoch 681/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 680 lr 0.000100000005
Epoch 682/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 681 lr 0.000100000005
Epoch 683/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 682 lr 0.000100000005
Epoch 684/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 683 lr 0.000100000005
Epoch 685/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
```

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.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 684 lr 0.000100000005
Epoch 686/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 685 lr 0.000100000005
Epoch 687/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 686 lr 0.000100000005
Epoch 688/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 687 lr 0.000100000005
Epoch 689/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 688 lr 0.000100000005
Epoch 690/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00690: saving model to model/model_best.h5
epoch_end_callback epoch 689 lr 0.000100000005
Epoch 691/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 690 lr 0.000100000005
Epoch 692/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 691 lr 0.000100000005
Epoch 693/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 692 lr 0.000100000005
Epoch 694/10000
```

```
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 693 lr 0.000100000005
Epoch 695/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 694 lr 0.000100000005
Epoch 696/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 695 lr 0.000100000005
Epoch 697/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 696 lr 0.000100000005
Epoch 698/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 697 lr 0.000100000005
Epoch 699/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 698 lr 0.000100000005
Epoch 700/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00700: saving model to model/model_best.h5
epoch_end_callback epoch 699 lr 0.000100000005
Epoch 701/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 700 lr 0.000100000005
Epoch 702/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 701 lr 0.000100000005
```

```
Epoch 703/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 702 lr 0.000100000005
Epoch 704/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 703 lr 0.000100000005
Epoch 705/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 704 lr 0.000100000005
Epoch 706/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 705 lr 0.000100000005
Epoch 707/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 706 lr 0.000100000005
Epoch 708/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 707 lr 0.000100000005
Epoch 709/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 708 lr 0.000100000005
Epoch 710/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00710: saving model to model/model_best.h5
epoch_end_callback epoch 709 lr 0.000100000005
Epoch 711/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
```

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epoch_end_callback epoch 710 lr 0.000100000005
Epoch 712/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 711 lr 0.000100000005
Epoch 713/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 712 lr 0.000100000005
Epoch 714/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 713 lr 0.000100000005
Epoch 715/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 714 lr 0.000100000005
Epoch 716/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 715 lr 0.000100000005
Epoch 717/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 716 lr 0.000100000005
Epoch 718/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 717 lr 0.000100000005
Epoch 719/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 718 lr 0.000100000005
Epoch 720/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
```

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Epoch 00720: saving model to model/model_best.h5
epoch_end_callback epoch 719 lr 0.000100000005
Epoch 721/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 720 lr 0.000100000005
Epoch 722/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 721 lr 0.000100000005
Epoch 723/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 722 lr 0.000100000005
Epoch 724/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 723 lr 0.000100000005
Epoch 725/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 724 lr 0.000100000005
Epoch 726/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 725 lr 0.000100000005
Epoch 727/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 726 lr 0.000100000005
Epoch 728/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 727 lr 0.000100000005
Epoch 729/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0028 - val_mean_squared_error: 0.0028
```

```
epoch_end_callback epoch 728 lr 0.000100000005
Epoch 730/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00730: saving model to model/model_best.h5
epoch_end_callback epoch 729 lr 0.000100000005
Epoch 731/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 730 lr 0.000100000005
Epoch 732/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 731 lr 0.000100000005
Epoch 733/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 732 lr 0.000100000005
Epoch 734/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 733 lr 0.000100000005
Epoch 735/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 734 lr 0.000100000005
Epoch 736/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 735 lr 0.000100000005
Epoch 737/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 736 lr 0.000100000005
Epoch 738/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
```

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.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 737 lr 0.000100000005
Epoch 739/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 738 lr 0.000100000005
Epoch 740/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00740: saving model to model/model_best.h5
epoch_end_callback epoch 739 lr 0.000100000005
Epoch 741/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 740 lr 0.000100000005
Epoch 742/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 741 lr 0.000100000005
Epoch 743/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 742 lr 0.000100000005
Epoch 744/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 743 lr 0.000100000005
Epoch 745/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 744 lr 0.000100000005
Epoch 746/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 745 lr 0.000100000005
Epoch 747/10000
```

```
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 746 lr 0.000100000005
Epoch 748/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 747 lr 0.000100000005
Epoch 749/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 748 lr 0.000100000005
Epoch 750/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028

Epoch 00750: saving model to model/model_best.h5
epoch_end_callback epoch 749 lr 0.000100000005
Epoch 751/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 750 lr 0.000100000005
Epoch 752/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 751 lr 0.000100000005
Epoch 753/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 752 lr 0.000100000005
Epoch 754/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 753 lr 0.000100000005
Epoch 755/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 754 lr 0.000100000005
```

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Epoch 756/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 755 lr 0.000100000005
Epoch 757/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 756 lr 0.000100000005
Epoch 758/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 757 lr 0.000100000005
Epoch 759/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 758 lr 0.000100000005
Epoch 760/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00760: saving model to model/model_best.h5
epoch_end_callback epoch 759 lr 0.000100000005
Epoch 761/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 760 lr 0.000100000005
Epoch 762/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 761 lr 0.000100000005
Epoch 763/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 762 lr 0.000100000005
Epoch 764/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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epoch_end_callback epoch 763 lr 0.000100000005
Epoch 765/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 764 lr 0.000100000005
Epoch 766/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 765 lr 0.000100000005
Epoch 767/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 766 lr 0.000100000005
Epoch 768/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 767 lr 0.000100000005
Epoch 769/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 768 lr 0.000100000005
Epoch 770/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 00770: saving model to model/model_best.h5
epoch_end_callback epoch 769 lr 0.000100000005
Epoch 771/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 770 lr 0.000100000005
Epoch 772/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 771 lr 0.000100000005
Epoch 773/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 772 lr 0.000100000005
Epoch 774/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 773 lr 0.000100000005
Epoch 775/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 774 lr 0.000100000005
Epoch 776/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 775 lr 0.000100000005
Epoch 777/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 776 lr 0.000100000005
Epoch 778/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 777 lr 0.000100000005
Epoch 779/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 778 lr 0.000100000005
Epoch 780/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00780: saving model to model/model_best.h5
epoch_end_callback epoch 779 lr 0.000100000005
Epoch 781/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 780 lr 0.000100000005
Epoch 782/10000
```

```
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 781 lr 0.000100000005
Epoch 783/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 782 lr 0.000100000005
Epoch 784/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 783 lr 0.000100000005
Epoch 785/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 784 lr 0.000100000005
Epoch 786/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 785 lr 0.000100000005
Epoch 787/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 786 lr 0.000100000005
Epoch 788/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 787 lr 0.000100000005
Epoch 789/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 788 lr 0.000100000005
Epoch 790/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00790: saving model to model/model_best.h5
epoch_end_callback epoch 789 lr 0.000100000005
```

```
Epoch 791/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 790 lr 0.000100000005
Epoch 792/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 791 lr 0.000100000005
Epoch 793/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 792 lr 0.000100000005
Epoch 794/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 793 lr 0.000100000005
Epoch 795/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 794 lr 0.000100000005
Epoch 796/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 795 lr 0.000100000005
Epoch 797/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 796 lr 0.000100000005
Epoch 798/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 797 lr 0.000100000005
Epoch 799/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 798 lr 0.000100000005
Epoch 800/10000
```

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 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00800: saving model to model/model_best.h5
epoch_end_callback epoch 799 lr 0.000100000005
Epoch 801/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 800 lr 0.000100000005
Epoch 802/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 801 lr 0.000100000005
Epoch 803/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 802 lr 0.000100000005
Epoch 804/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 803 lr 0.000100000005
Epoch 805/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 804 lr 0.000100000005
Epoch 806/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 805 lr 0.000100000005
Epoch 807/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 806 lr 0.000100000005
Epoch 808/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 807 lr 0.000100000005
```

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Epoch 809/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 808 lr 0.000100000005
Epoch 810/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00810: saving model to model/model_best.h5
epoch_end_callback epoch 809 lr 0.000100000005
Epoch 811/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 810 lr 0.000100000005
Epoch 812/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 811 lr 0.000100000005
Epoch 813/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 812 lr 0.000100000005
Epoch 814/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 813 lr 0.000100000005
Epoch 815/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 814 lr 0.000100000005
Epoch 816/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 815 lr 0.000100000005
Epoch 817/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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epoch_end_callback epoch 816 lr 0.000100000005
Epoch 818/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 817 lr 0.000100000005
Epoch 819/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 818 lr 0.000100000005
Epoch 820/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00820: saving model to model/model_best.h5
epoch_end_callback epoch 819 lr 0.000100000005
Epoch 821/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 820 lr 0.000100000005
Epoch 822/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 821 lr 0.000100000005
Epoch 823/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 822 lr 0.000100000005
Epoch 824/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00824: ReduceLROnPlateau reducing learning rate to 1.
0000000475e-05.
epoch_end_callback epoch 823 lr 0.000100000005
Epoch 825/10000
 - 1s - loss: 0.0049 - mean_squared_error: 0.0049 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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epoch_end_callback epoch 824 lr 1.0000001e-05
Epoch 826/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0028 - val_mean_squared_error: 0.0028
epoch_end_callback epoch 825 lr 1.0000001e-05
Epoch 827/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 826 lr 1.0000001e-05
Epoch 828/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 827 lr 1.0000001e-05
Epoch 829/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 828 lr 1.0000001e-05
Epoch 830/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00830: saving model to model/model_best.h5
epoch_end_callback epoch 829 lr 1.0000001e-05
Epoch 831/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 830 lr 1.0000001e-05
Epoch 832/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 831 lr 1.0000001e-05
Epoch 833/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 832 lr 1.0000001e-05
Epoch 834/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
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.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 833 lr 1.0000001e-05
Epoch 835/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 834 lr 1.0000001e-05
Epoch 836/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 835 lr 1.0000001e-05
Epoch 837/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 836 lr 1.0000001e-05
Epoch 838/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 837 lr 1.0000001e-05
Epoch 839/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 838 lr 1.0000001e-05
Epoch 840/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00840: saving model to model/model_best.h5
epoch_end_callback epoch 839 lr 1.0000001e-05
Epoch 841/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 840 lr 1.0000001e-05
Epoch 842/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 841 lr 1.0000001e-05
Epoch 843/10000
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 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 842 lr 1.0000001e-05
Epoch 844/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 843 lr 1.0000001e-05
Epoch 845/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 844 lr 1.0000001e-05
Epoch 846/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 845 lr 1.0000001e-05
Epoch 847/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 846 lr 1.0000001e-05
Epoch 848/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 847 lr 1.0000001e-05
Epoch 849/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 848 lr 1.0000001e-05
Epoch 850/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00850: saving model to model/model_best.h5
epoch_end_callback epoch 849 lr 1.0000001e-05
Epoch 851/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 850 lr 1.0000001e-05
```

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Epoch 852/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 851 lr 1.0000001e-05
Epoch 853/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 852 lr 1.0000001e-05
Epoch 854/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 853 lr 1.0000001e-05
Epoch 855/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 854 lr 1.0000001e-05
Epoch 856/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 855 lr 1.0000001e-05
Epoch 857/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 856 lr 1.0000001e-05
Epoch 858/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 857 lr 1.0000001e-05
Epoch 859/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 858 lr 1.0000001e-05
Epoch 860/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00860: saving model to model/model_best.h5
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epoch_end_callback epoch 859 lr 1.0000001e-05
Epoch 861/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 860 lr 1.0000001e-05
Epoch 862/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 861 lr 1.0000001e-05
Epoch 863/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 862 lr 1.0000001e-05
Epoch 864/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 863 lr 1.0000001e-05
Epoch 865/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 864 lr 1.0000001e-05
Epoch 866/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 865 lr 1.0000001e-05
Epoch 867/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 866 lr 1.0000001e-05
Epoch 868/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 867 lr 1.0000001e-05
Epoch 869/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 868 lr 1.0000001e-05
```

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Epoch 870/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00870: saving model to model/model_best.h5
epoch_end_callback epoch 869 lr 1.0000001e-05
Epoch 871/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 870 lr 1.0000001e-05
Epoch 872/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 871 lr 1.0000001e-05
Epoch 873/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 872 lr 1.0000001e-05
Epoch 874/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 873 lr 1.0000001e-05
Epoch 875/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 874 lr 1.0000001e-05
Epoch 876/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 875 lr 1.0000001e-05
Epoch 877/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 876 lr 1.0000001e-05
Epoch 878/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
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epoch_end_callback epoch 877 lr 1.0000001e-05
Epoch 879/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 878 lr 1.0000001e-05
Epoch 880/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 00880: saving model to model/model_best.h5
epoch_end_callback epoch 879 lr 1.0000001e-05
Epoch 881/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 880 lr 1.0000001e-05
Epoch 882/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 881 lr 1.0000001e-05
Epoch 883/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 882 lr 1.0000001e-05
Epoch 884/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 883 lr 1.0000001e-05
Epoch 885/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 884 lr 1.0000001e-05
Epoch 886/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 885 lr 1.0000001e-05
Epoch 887/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

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.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 886 lr 1.0000001e-05
Epoch 888/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 887 lr 1.0000001e-05
Epoch 889/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 888 lr 1.0000001e-05
Epoch 890/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00890: saving model to model/model_best.h5
epoch_end_callback epoch 889 lr 1.0000001e-05
Epoch 891/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 890 lr 1.0000001e-05
Epoch 892/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 891 lr 1.0000001e-05
Epoch 893/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 892 lr 1.0000001e-05
Epoch 894/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 893 lr 1.0000001e-05
Epoch 895/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 894 lr 1.0000001e-05
Epoch 896/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 895 lr 1.0000001e-05
Epoch 897/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 896 lr 1.0000001e-05
Epoch 898/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 897 lr 1.0000001e-05
Epoch 899/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 898 lr 1.0000001e-05
Epoch 900/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00900: saving model to model/model_best.h5
epoch_end_callback epoch 899 lr 1.0000001e-05
Epoch 901/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 900 lr 1.0000001e-05
Epoch 902/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 901 lr 1.0000001e-05
Epoch 903/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 902 lr 1.0000001e-05
Epoch 904/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 903 lr 1.0000001e-05
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Epoch 905/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 904 lr 1.0000001e-05
Epoch 906/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 905 lr 1.0000001e-05
Epoch 907/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 906 lr 1.0000001e-05
Epoch 908/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 907 lr 1.0000001e-05
Epoch 909/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 908 lr 1.0000001e-05
Epoch 910/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00910: saving model to model/model_best.h5
epoch_end_callback epoch 909 lr 1.0000001e-05
Epoch 911/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 910 lr 1.0000001e-05
Epoch 912/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 911 lr 1.0000001e-05
Epoch 913/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
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epoch_end_callback epoch 912 lr 1.0000001e-05
Epoch 914/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 913 lr 1.0000001e-05
Epoch 915/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 914 lr 1.0000001e-05
Epoch 916/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 915 lr 1.0000001e-05
Epoch 917/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 916 lr 1.0000001e-05
Epoch 918/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 917 lr 1.0000001e-05
Epoch 919/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 918 lr 1.0000001e-05
Epoch 920/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 00920: saving model to model/model_best.h5
epoch_end_callback epoch 919 lr 1.0000001e-05
Epoch 921/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 920 lr 1.0000001e-05
Epoch 922/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
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.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 921 lr 1.0000001e-05
Epoch 923/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 922 lr 1.0000001e-05
Epoch 924/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00924: ReduceLROnPlateau reducing learning rate to 1.
00000006569e-06.
epoch_end_callback epoch 923 lr 1.0000001e-05
Epoch 925/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 924 lr 1.0000001e-06
Epoch 926/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 925 lr 1.0000001e-06
Epoch 927/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 926 lr 1.0000001e-06
Epoch 928/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 927 lr 1.0000001e-06
Epoch 929/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 928 lr 1.0000001e-06
Epoch 930/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

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Epoch 00930: saving model to model/model_best.h5
epoch_end_callback epoch 929 lr 1.0000001e-06
Epoch 931/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 930 lr 1.0000001e-06
Epoch 932/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 931 lr 1.0000001e-06
Epoch 933/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 932 lr 1.0000001e-06
Epoch 934/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 933 lr 1.0000001e-06
Epoch 935/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 934 lr 1.0000001e-06
Epoch 936/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 935 lr 1.0000001e-06
Epoch 937/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 936 lr 1.0000001e-06
Epoch 938/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 937 lr 1.0000001e-06
Epoch 939/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
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epoch_end_callback epoch 938 lr 1.0000001e-06
Epoch 940/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00940: saving model to model/model_best.h5
epoch_end_callback epoch 939 lr 1.0000001e-06
Epoch 941/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 940 lr 1.0000001e-06
Epoch 942/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 941 lr 1.0000001e-06
Epoch 943/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 942 lr 1.0000001e-06
Epoch 944/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 943 lr 1.0000001e-06
Epoch 945/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 944 lr 1.0000001e-06
Epoch 946/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 945 lr 1.0000001e-06
Epoch 947/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 946 lr 1.0000001e-06
Epoch 948/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
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.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 947 lr 1.0000001e-06
Epoch 949/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 948 lr 1.0000001e-06
Epoch 950/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00950: saving model to model/model_best.h5
epoch_end_callback epoch 949 lr 1.0000001e-06
Epoch 951/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 950 lr 1.0000001e-06
Epoch 952/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 951 lr 1.0000001e-06
Epoch 953/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 952 lr 1.0000001e-06
Epoch 954/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 953 lr 1.0000001e-06
Epoch 955/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 954 lr 1.0000001e-06
Epoch 956/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 955 lr 1.0000001e-06
Epoch 957/10000
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 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 956 lr 1.0000001e-06
Epoch 958/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 957 lr 1.0000001e-06
Epoch 959/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 958 lr 1.0000001e-06
Epoch 960/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00960: saving model to model/model_best.h5
epoch_end_callback epoch 959 lr 1.0000001e-06
Epoch 961/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 960 lr 1.0000001e-06
Epoch 962/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 961 lr 1.0000001e-06
Epoch 963/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 962 lr 1.0000001e-06
Epoch 964/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 963 lr 1.0000001e-06
Epoch 965/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 964 lr 1.0000001e-06
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Epoch 966/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 965 lr 1.0000001e-06
Epoch 967/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 966 lr 1.0000001e-06
Epoch 968/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 967 lr 1.0000001e-06
Epoch 969/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 968 lr 1.0000001e-06
Epoch 970/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00970: saving model to model/model_best.h5
epoch_end_callback epoch 969 lr 1.0000001e-06
Epoch 971/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 970 lr 1.0000001e-06
Epoch 972/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 971 lr 1.0000001e-06
Epoch 973/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 972 lr 1.0000001e-06
Epoch 974/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
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epoch_end_callback epoch 973 lr 1.0000001e-06
Epoch 975/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 974 lr 1.0000001e-06
Epoch 976/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 975 lr 1.0000001e-06
Epoch 977/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 976 lr 1.0000001e-06
Epoch 978/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 977 lr 1.0000001e-06
Epoch 979/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 978 lr 1.0000001e-06
Epoch 980/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00980: saving model to model/model_best.h5
epoch_end_callback epoch 979 lr 1.0000001e-06
Epoch 981/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 980 lr 1.0000001e-06
Epoch 982/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 981 lr 1.0000001e-06
Epoch 983/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
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.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 982 lr 1.0000001e-06
Epoch 984/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 983 lr 1.0000001e-06
Epoch 985/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 984 lr 1.0000001e-06
Epoch 986/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 985 lr 1.0000001e-06
Epoch 987/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 986 lr 1.0000001e-06
Epoch 988/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 987 lr 1.0000001e-06
Epoch 989/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 988 lr 1.0000001e-06
Epoch 990/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 00990: saving model to model/model_best.h5
epoch_end_callback epoch 989 lr 1.0000001e-06
Epoch 991/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 990 lr 1.0000001e-06
Epoch 992/10000
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 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 991 lr 1.0000001e-06
Epoch 993/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 992 lr 1.0000001e-06
Epoch 994/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 993 lr 1.0000001e-06
Epoch 995/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 994 lr 1.0000001e-06
Epoch 996/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 995 lr 1.0000001e-06
Epoch 997/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 996 lr 1.0000001e-06
Epoch 998/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 997 lr 1.0000001e-06
Epoch 999/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 998 lr 1.0000001e-06
Epoch 1000/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01000: saving model to model/model_best.h5
epoch_end_callback epoch 999 lr 1.0000001e-06
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Epoch 1001/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1000 lr 1.0000001e-06
Epoch 1002/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1001 lr 1.0000001e-06
Epoch 1003/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1002 lr 1.0000001e-06
Epoch 1004/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1003 lr 1.0000001e-06
Epoch 1005/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1004 lr 1.0000001e-06
Epoch 1006/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1005 lr 1.0000001e-06
Epoch 1007/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1006 lr 1.0000001e-06
Epoch 1008/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1007 lr 1.0000001e-06
Epoch 1009/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1008 lr 1.0000001e-06
Epoch 1010/10000
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 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01010: saving model to model/model_best.h5
epoch_end_callback epoch 1009 lr 1.0000001e-06
Epoch 1011/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1010 lr 1.0000001e-06
Epoch 1012/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1011 lr 1.0000001e-06
Epoch 1013/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1012 lr 1.0000001e-06
Epoch 1014/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1013 lr 1.0000001e-06
Epoch 1015/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1014 lr 1.0000001e-06
Epoch 1016/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1015 lr 1.0000001e-06
Epoch 1017/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1016 lr 1.0000001e-06
Epoch 1018/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1017 lr 1.0000001e-06
```

```
Epoch 1019/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1018 lr 1.0000001e-06
Epoch 1020/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01020: saving model to model/model_best.h5
epoch_end_callback epoch 1019 lr 1.0000001e-06
Epoch 1021/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1020 lr 1.0000001e-06
Epoch 1022/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1021 lr 1.0000001e-06
Epoch 1023/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1022 lr 1.0000001e-06
Epoch 1024/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01024: ReduceLROnPlateau reducing learning rate to 1e-06.
epoch_end_callback epoch 1023 lr 1.0000001e-06
Epoch 1025/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1024 lr 1e-06
Epoch 1026/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1025 lr 1e-06
Epoch 1027/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1026 lr 1e-06
Epoch 1028/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1027 lr 1e-06
Epoch 1029/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1028 lr 1e-06
Epoch 1030/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01030: saving model to model/model_best.h5
epoch_end_callback epoch 1029 lr 1e-06
Epoch 1031/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1030 lr 1e-06
Epoch 1032/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1031 lr 1e-06
Epoch 1033/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1032 lr 1e-06
Epoch 1034/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1033 lr 1e-06
Epoch 1035/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1034 lr 1e-06
```

```
Epoch 1036/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1035 lr 1e-06
Epoch 1037/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1036 lr 1e-06
Epoch 1038/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1037 lr 1e-06
Epoch 1039/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1038 lr 1e-06
Epoch 1040/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01040: saving model to model/model_best.h5
epoch_end_callback epoch 1039 lr 1e-06
Epoch 1041/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1040 lr 1e-06
Epoch 1042/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1041 lr 1e-06
Epoch 1043/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1042 lr 1e-06
Epoch 1044/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1043 lr 1e-06
Epoch 1045/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1044 lr 1e-06
Epoch 1046/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1045 lr 1e-06
Epoch 1047/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1046 lr 1e-06
Epoch 1048/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1047 lr 1e-06
Epoch 1049/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1048 lr 1e-06
Epoch 1050/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01050: saving model to model/model_best.h5
epoch_end_callback epoch 1049 lr 1e-06
Epoch 1051/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1050 lr 1e-06
Epoch 1052/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1051 lr 1e-06
Epoch 1053/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1052 lr 1e-06
Epoch 1054/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1053 lr 1e-06
Epoch 1055/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1054 lr 1e-06
Epoch 1056/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1055 lr 1e-06
Epoch 1057/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1056 lr 1e-06
Epoch 1058/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1057 lr 1e-06
Epoch 1059/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1058 lr 1e-06
Epoch 1060/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01060: saving model to model/model_best.h5
epoch_end_callback epoch 1059 lr 1e-06
Epoch 1061/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1060 lr 1e-06
Epoch 1062/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1061 lr 1e-06
Epoch 1063/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1062 lr 1e-06
Epoch 1064/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1063 lr 1e-06
Epoch 1065/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1064 lr 1e-06
Epoch 1066/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1065 lr 1e-06
Epoch 1067/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1066 lr 1e-06
Epoch 1068/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1067 lr 1e-06
Epoch 1069/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1068 lr 1e-06
Epoch 1070/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01070: saving model to model/model_best.h5
epoch_end_callback epoch 1069 lr 1e-06
```

```
Epoch 1071/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1070 lr 1e-06
Epoch 1072/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1071 lr 1e-06
Epoch 1073/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1072 lr 1e-06
Epoch 1074/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1073 lr 1e-06
Epoch 1075/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1074 lr 1e-06
Epoch 1076/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1075 lr 1e-06
Epoch 1077/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1076 lr 1e-06
Epoch 1078/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1077 lr 1e-06
Epoch 1079/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1078 lr 1e-06
Epoch 1080/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01080: saving model to model/model_best.h5
epoch_end_callback epoch 1079 lr 1e-06
Epoch 1081/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1080 lr 1e-06
Epoch 1082/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1081 lr 1e-06
Epoch 1083/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1082 lr 1e-06
Epoch 1084/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1083 lr 1e-06
Epoch 1085/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1084 lr 1e-06
Epoch 1086/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1085 lr 1e-06
Epoch 1087/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1086 lr 1e-06
Epoch 1088/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1087 lr 1e-06
```

```
Epoch 1089/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1088 lr 1e-06
Epoch 1090/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01090: saving model to model/model_best.h5
epoch_end_callback epoch 1089 lr 1e-06
Epoch 1091/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1090 lr 1e-06
Epoch 1092/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1091 lr 1e-06
Epoch 1093/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1092 lr 1e-06
Epoch 1094/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1093 lr 1e-06
Epoch 1095/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1094 lr 1e-06
Epoch 1096/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1095 lr 1e-06
Epoch 1097/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1096 lr 1e-06
Epoch 1098/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1097 lr 1e-06
Epoch 1099/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1098 lr 1e-06
Epoch 1100/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01100: saving model to model/model_best.h5
epoch_end_callback epoch 1099 lr 1e-06
Epoch 1101/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1100 lr 1e-06
Epoch 1102/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1101 lr 1e-06
Epoch 1103/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1102 lr 1e-06
Epoch 1104/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1103 lr 1e-06
Epoch 1105/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1104 lr 1e-06
Epoch 1106/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1105 lr 1e-06
Epoch 1107/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1106 lr 1e-06
Epoch 1108/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1107 lr 1e-06
Epoch 1109/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1108 lr 1e-06
Epoch 1110/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01110: saving model to model/model_best.h5
epoch_end_callback epoch 1109 lr 1e-06
Epoch 1111/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1110 lr 1e-06
Epoch 1112/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1111 lr 1e-06
Epoch 1113/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1112 lr 1e-06
Epoch 1114/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1113 lr 1e-06
Epoch 1115/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1114 lr 1e-06
Epoch 1116/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1115 lr 1e-06
Epoch 1117/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1116 lr 1e-06
Epoch 1118/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1117 lr 1e-06
Epoch 1119/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1118 lr 1e-06
Epoch 1120/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01120: saving model to model/model_best.h5
epoch_end_callback epoch 1119 lr 1e-06
Epoch 1121/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1120 lr 1e-06
Epoch 1122/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1121 lr 1e-06
Epoch 1123/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1122 lr 1e-06
```

```
Epoch 1124/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1123 lr 1e-06
Epoch 1125/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1124 lr 1e-06
Epoch 1126/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1125 lr 1e-06
Epoch 1127/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1126 lr 1e-06
Epoch 1128/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1127 lr 1e-06
Epoch 1129/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1128 lr 1e-06
Epoch 1130/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01130: saving model to model/model_best.h5
epoch_end_callback epoch 1129 lr 1e-06
Epoch 1131/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1130 lr 1e-06
Epoch 1132/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1131 lr 1e-06
Epoch 1133/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1132 lr 1e-06
Epoch 1134/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1133 lr 1e-06
Epoch 1135/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1134 lr 1e-06
Epoch 1136/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1135 lr 1e-06
Epoch 1137/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1136 lr 1e-06
Epoch 1138/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1137 lr 1e-06
Epoch 1139/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1138 lr 1e-06
Epoch 1140/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01140: saving model to model/model_best.h5
epoch_end_callback epoch 1139 lr 1e-06
Epoch 1141/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1140 lr 1e-06
Epoch 1142/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1141 lr 1e-06
Epoch 1143/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1142 lr 1e-06
Epoch 1144/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1143 lr 1e-06
Epoch 1145/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1144 lr 1e-06
Epoch 1146/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1145 lr 1e-06
Epoch 1147/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1146 lr 1e-06
Epoch 1148/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1147 lr 1e-06
Epoch 1149/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1148 lr 1e-06
Epoch 1150/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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3753
3754 Epoch 01150: saving model to model/model_best.h5
3755 epoch_end_callback epoch 1149 lr 1e-06
3756 Epoch 1151/10000
3757  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3758 epoch_end_callback epoch 1150 lr 1e-06
3759 Epoch 1152/10000
3760  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3761 epoch_end_callback epoch 1151 lr 1e-06
3762 Epoch 1153/10000
3763  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3764 epoch_end_callback epoch 1152 lr 1e-06
3765 Epoch 1154/10000
3766  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3767 epoch_end_callback epoch 1153 lr 1e-06
3768 Epoch 1155/10000
3769  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3770 epoch_end_callback epoch 1154 lr 1e-06
3771 Epoch 1156/10000
3772  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3773 epoch_end_callback epoch 1155 lr 1e-06
3774 Epoch 1157/10000
3775  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3776 epoch_end_callback epoch 1156 lr 1e-06
3777 Epoch 1158/10000
3778  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
     .0027 - val_mean_squared_error: 0.0027
3779 epoch_end_callback epoch 1157 lr 1e-06
3780 Epoch 1159/10000
3781  - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1158 lr 1e-06
Epoch 1160/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01160: saving model to model/model_best.h5
epoch_end_callback epoch 1159 lr 1e-06
Epoch 1161/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1160 lr 1e-06
Epoch 1162/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1161 lr 1e-06
Epoch 1163/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1162 lr 1e-06
Epoch 1164/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1163 lr 1e-06
Epoch 1165/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1164 lr 1e-06
Epoch 1166/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1165 lr 1e-06
Epoch 1167/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1166 lr 1e-06
Epoch 1168/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1167 lr 1e-06
Epoch 1169/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1168 lr 1e-06
Epoch 1170/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01170: saving model to model/model_best.h5
epoch_end_callback epoch 1169 lr 1e-06
Epoch 1171/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1170 lr 1e-06
Epoch 1172/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1171 lr 1e-06
Epoch 1173/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1172 lr 1e-06
Epoch 1174/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1173 lr 1e-06
Epoch 1175/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1174 lr 1e-06
Epoch 1176/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1175 lr 1e-06
```

```
Epoch 1177/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1176 lr 1e-06
Epoch 1178/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1177 lr 1e-06
Epoch 1179/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1178 lr 1e-06
Epoch 1180/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01180: saving model to model/model_best.h5
epoch_end_callback epoch 1179 lr 1e-06
Epoch 1181/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1180 lr 1e-06
Epoch 1182/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1181 lr 1e-06
Epoch 1183/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1182 lr 1e-06
Epoch 1184/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1183 lr 1e-06
Epoch 1185/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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epoch_end_callback epoch 1184 lr 1e-06
Epoch 1186/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1185 lr 1e-06
Epoch 1187/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1186 lr 1e-06
Epoch 1188/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1187 lr 1e-06
Epoch 1189/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1188 lr 1e-06
Epoch 1190/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01190: saving model to model/model_best.h5
epoch_end_callback epoch 1189 lr 1e-06
Epoch 1191/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1190 lr 1e-06
Epoch 1192/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1191 lr 1e-06
Epoch 1193/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1192 lr 1e-06
Epoch 1194/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1193 lr 1e-06
Epoch 1195/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1194 lr 1e-06
Epoch 1196/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1195 lr 1e-06
Epoch 1197/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1196 lr 1e-06
Epoch 1198/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1197 lr 1e-06
Epoch 1199/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1198 lr 1e-06
Epoch 1200/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01200: saving model to model/model_best.h5
epoch_end_callback epoch 1199 lr 1e-06
Epoch 1201/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1200 lr 1e-06
Epoch 1202/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1201 lr 1e-06
Epoch 1203/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1202 lr 1e-06
Epoch 1204/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1203 lr 1e-06
Epoch 1205/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1204 lr 1e-06
Epoch 1206/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1205 lr 1e-06
Epoch 1207/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1206 lr 1e-06
Epoch 1208/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1207 lr 1e-06
Epoch 1209/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1208 lr 1e-06
Epoch 1210/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01210: saving model to model/model_best.h5
epoch_end_callback epoch 1209 lr 1e-06
Epoch 1211/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1210 lr 1e-06
```

```
Epoch 1212/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1211 lr 1e-06
Epoch 1213/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1212 lr 1e-06
Epoch 1214/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1213 lr 1e-06
Epoch 1215/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1214 lr 1e-06
Epoch 1216/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1215 lr 1e-06
Epoch 1217/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1216 lr 1e-06
Epoch 1218/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1217 lr 1e-06
Epoch 1219/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1218 lr 1e-06
Epoch 1220/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01220: saving model to model/model_best.h5
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```
epoch_end_callback epoch 1219 lr 1e-06
Epoch 1221/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1220 lr 1e-06
Epoch 1222/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1221 lr 1e-06
Epoch 1223/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1222 lr 1e-06
Epoch 1224/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1223 lr 1e-06
Epoch 1225/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1224 lr 1e-06
Epoch 1226/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1225 lr 1e-06
Epoch 1227/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1226 lr 1e-06
Epoch 1228/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1227 lr 1e-06
Epoch 1229/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1228 lr 1e-06
```

```
Epoch 1230/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01230: saving model to model/model_best.h5
epoch_end_callback epoch 1229 lr 1e-06
Epoch 1231/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1230 lr 1e-06
Epoch 1232/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1231 lr 1e-06
Epoch 1233/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1232 lr 1e-06
Epoch 1234/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1233 lr 1e-06
Epoch 1235/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1234 lr 1e-06
Epoch 1236/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1235 lr 1e-06
Epoch 1237/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1236 lr 1e-06
Epoch 1238/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1237 lr 1e-06
Epoch 1239/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1238 lr 1e-06
Epoch 1240/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01240: saving model to model/model_best.h5
epoch_end_callback epoch 1239 lr 1e-06
Epoch 1241/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1240 lr 1e-06
Epoch 1242/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1241 lr 1e-06
Epoch 1243/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1242 lr 1e-06
Epoch 1244/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1243 lr 1e-06
Epoch 1245/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1244 lr 1e-06
Epoch 1246/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1245 lr 1e-06
Epoch 1247/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1246 lr 1e-06
Epoch 1248/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1247 lr 1e-06
Epoch 1249/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1248 lr 1e-06
Epoch 1250/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01250: saving model to model/model_best.h5
epoch_end_callback epoch 1249 lr 1e-06
Epoch 1251/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1250 lr 1e-06
Epoch 1252/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1251 lr 1e-06
Epoch 1253/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1252 lr 1e-06
Epoch 1254/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1253 lr 1e-06
Epoch 1255/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1254 lr 1e-06
Epoch 1256/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1255 lr 1e-06
Epoch 1257/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1256 lr 1e-06
Epoch 1258/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1257 lr 1e-06
Epoch 1259/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1258 lr 1e-06
Epoch 1260/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01260: saving model to model/model_best.h5
epoch_end_callback epoch 1259 lr 1e-06
Epoch 1261/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1260 lr 1e-06
Epoch 1262/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1261 lr 1e-06
Epoch 1263/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1262 lr 1e-06
Epoch 1264/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1263 lr 1e-06
```

```
Epoch 1265/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1264 lr 1e-06
Epoch 1266/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1265 lr 1e-06
Epoch 1267/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1266 lr 1e-06
Epoch 1268/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1267 lr 1e-06
Epoch 1269/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1268 lr 1e-06
Epoch 1270/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01270: saving model to model/model_best.h5
epoch_end_callback epoch 1269 lr 1e-06
Epoch 1271/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1270 lr 1e-06
Epoch 1272/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1271 lr 1e-06
Epoch 1273/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1272 lr 1e-06
Epoch 1274/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1273 lr 1e-06
Epoch 1275/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1274 lr 1e-06
Epoch 1276/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1275 lr 1e-06
Epoch 1277/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1276 lr 1e-06
Epoch 1278/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1277 lr 1e-06
Epoch 1279/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1278 lr 1e-06
Epoch 1280/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01280: saving model to model/model_best.h5
epoch_end_callback epoch 1279 lr 1e-06
Epoch 1281/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1280 lr 1e-06
Epoch 1282/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1281 lr 1e-06
Epoch 1283/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1282 lr 1e-06
Epoch 1284/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1283 lr 1e-06
Epoch 1285/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1284 lr 1e-06
Epoch 1286/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1285 lr 1e-06
Epoch 1287/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1286 lr 1e-06
Epoch 1288/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1287 lr 1e-06
Epoch 1289/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1288 lr 1e-06
Epoch 1290/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01290: saving model to model/model_best.h5
epoch_end_callback epoch 1289 lr 1e-06
Epoch 1291/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1290 lr 1e-06
Epoch 1292/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1291 lr 1e-06
Epoch 1293/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1292 lr 1e-06
Epoch 1294/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1293 lr 1e-06
Epoch 1295/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1294 lr 1e-06
Epoch 1296/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1295 lr 1e-06
Epoch 1297/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1296 lr 1e-06
Epoch 1298/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1297 lr 1e-06
Epoch 1299/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1298 lr 1e-06
Epoch 1300/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027

Epoch 01300: saving model to model/model_best.h5
epoch_end_callback epoch 1299 lr 1e-06
Epoch 1301/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1300 lr 1e-06
Epoch 1302/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1301 lr 1e-06
Epoch 1303/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1302 lr 1e-06
Epoch 1304/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1303 lr 1e-06
Epoch 1305/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1304 lr 1e-06
Epoch 1306/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1305 lr 1e-06
Epoch 1307/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1306 lr 1e-06
Epoch 1308/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1307 lr 1e-06
Epoch 1309/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1308 lr 1e-06
Epoch 1310/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01310: saving model to model/model_best.h5
epoch_end_callback epoch 1309 lr 1e-06
Epoch 1311/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1310 lr 1e-06
Epoch 1312/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1311 lr 1e-06
Epoch 1313/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1312 lr 1e-06
Epoch 1314/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1313 lr 1e-06
Epoch 1315/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1314 lr 1e-06
Epoch 1316/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1315 lr 1e-06
Epoch 1317/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1316 lr 1e-06
```

```
Epoch 1318/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1317 lr 1e-06
Epoch 1319/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1318 lr 1e-06
Epoch 1320/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01320: saving model to model/model_best.h5
epoch_end_callback epoch 1319 lr 1e-06
Epoch 1321/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1320 lr 1e-06
Epoch 1322/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1321 lr 1e-06
Epoch 1323/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1322 lr 1e-06
Epoch 1324/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1323 lr 1e-06
Epoch 1325/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1324 lr 1e-06
Epoch 1326/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1325 lr 1e-06
Epoch 1327/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1326 lr 1e-06
Epoch 1328/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1327 lr 1e-06
Epoch 1329/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1328 lr 1e-06
Epoch 1330/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01330: saving model to model/model_best.h5
epoch_end_callback epoch 1329 lr 1e-06
Epoch 1331/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1330 lr 1e-06
Epoch 1332/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1331 lr 1e-06
Epoch 1333/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1332 lr 1e-06
Epoch 1334/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1333 lr 1e-06
Epoch 1335/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1334 lr 1e-06
Epoch 1336/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1335 lr 1e-06
Epoch 1337/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1336 lr 1e-06
Epoch 1338/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1337 lr 1e-06
Epoch 1339/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1338 lr 1e-06
Epoch 1340/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01340: saving model to model/model_best.h5
epoch_end_callback epoch 1339 lr 1e-06
Epoch 1341/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1340 lr 1e-06
Epoch 1342/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1341 lr 1e-06
Epoch 1343/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1342 lr 1e-06
Epoch 1344/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1343 lr 1e-06
Epoch 1345/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1344 lr 1e-06
Epoch 1346/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1345 lr 1e-06
Epoch 1347/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1346 lr 1e-06
Epoch 1348/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1347 lr 1e-06
Epoch 1349/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1348 lr 1e-06
Epoch 1350/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01350: saving model to model/model_best.h5
epoch_end_callback epoch 1349 lr 1e-06
Epoch 1351/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1350 lr 1e-06
Epoch 1352/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1351 lr 1e-06
```

```
Epoch 1353/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1352 lr 1e-06
Epoch 1354/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1353 lr 1e-06
Epoch 1355/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1354 lr 1e-06
Epoch 1356/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1355 lr 1e-06
Epoch 1357/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1356 lr 1e-06
Epoch 1358/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1357 lr 1e-06
Epoch 1359/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1358 lr 1e-06
Epoch 1360/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01360: saving model to model/model_best.h5
epoch_end_callback epoch 1359 lr 1e-06
Epoch 1361/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1360 lr 1e-06
Epoch 1362/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1361 lr 1e-06
Epoch 1363/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1362 lr 1e-06
Epoch 1364/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1363 lr 1e-06
Epoch 1365/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1364 lr 1e-06
Epoch 1366/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1365 lr 1e-06
Epoch 1367/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1366 lr 1e-06
Epoch 1368/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1367 lr 1e-06
Epoch 1369/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1368 lr 1e-06
Epoch 1370/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
Epoch 01370: saving model to model/model_best.h5
epoch_end_callback epoch 1369 lr 1e-06
Epoch 1371/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1370 lr 1e-06
Epoch 1372/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1371 lr 1e-06
Epoch 1373/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1372 lr 1e-06
Epoch 1374/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1373 lr 1e-06
Epoch 1375/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1374 lr 1e-06
Epoch 1376/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1375 lr 1e-06
Epoch 1377/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1376 lr 1e-06
Epoch 1378/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1377 lr 1e-06
Epoch 1379/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1378 lr 1e-06
Epoch 1380/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01380: saving model to model/model_best.h5
epoch_end_callback epoch 1379 lr 1e-06
Epoch 1381/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1380 lr 1e-06
Epoch 1382/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1381 lr 1e-06
Epoch 1383/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1382 lr 1e-06
Epoch 1384/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1383 lr 1e-06
Epoch 1385/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1384 lr 1e-06
Epoch 1386/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1385 lr 1e-06
Epoch 1387/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1386 lr 1e-06
Epoch 1388/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1387 lr 1e-06
Epoch 1389/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1388 lr 1e-06
Epoch 1390/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01390: saving model to model/model_best.h5
epoch_end_callback epoch 1389 lr 1e-06
Epoch 1391/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1390 lr 1e-06
Epoch 1392/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1391 lr 1e-06
Epoch 1393/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1392 lr 1e-06
Epoch 1394/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1393 lr 1e-06
Epoch 1395/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1394 lr 1e-06
Epoch 1396/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1395 lr 1e-06
Epoch 1397/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1396 lr 1e-06
Epoch 1398/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1397 lr 1e-06
Epoch 1399/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1398 lr 1e-06
Epoch 1400/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01400: saving model to model/model_best.h5
epoch_end_callback epoch 1399 lr 1e-06
Epoch 1401/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1400 lr 1e-06
Epoch 1402/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1401 lr 1e-06
Epoch 1403/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1402 lr 1e-06
Epoch 1404/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1403 lr 1e-06
Epoch 1405/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1404 lr 1e-06
```

```
Epoch 1406/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1405 lr 1e-06
Epoch 1407/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1406 lr 1e-06
Epoch 1408/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1407 lr 1e-06
Epoch 1409/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1408 lr 1e-06
Epoch 1410/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01410: saving model to model/model_best.h5
epoch_end_callback epoch 1409 lr 1e-06
Epoch 1411/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1410 lr 1e-06
Epoch 1412/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1411 lr 1e-06
Epoch 1413/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1412 lr 1e-06
Epoch 1414/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1413 lr 1e-06
Epoch 1415/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1414 lr 1e-06
Epoch 1416/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1415 lr 1e-06
Epoch 1417/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1416 lr 1e-06
Epoch 1418/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1417 lr 1e-06
Epoch 1419/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1418 lr 1e-06
Epoch 1420/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01420: saving model to model/model_best.h5
epoch_end_callback epoch 1419 lr 1e-06
Epoch 1421/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1420 lr 1e-06
Epoch 1422/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1421 lr 1e-06
Epoch 1423/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1422 lr 1e-06
Epoch 1424/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1423 lr 1e-06
Epoch 1425/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1424 lr 1e-06
Epoch 1426/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1425 lr 1e-06
Epoch 1427/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1426 lr 1e-06
Epoch 1428/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1427 lr 1e-06
Epoch 1429/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1428 lr 1e-06
Epoch 1430/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01430: saving model to model/model_best.h5
epoch_end_callback epoch 1429 lr 1e-06
Epoch 1431/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1430 lr 1e-06
Epoch 1432/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1431 lr 1e-06
Epoch 1433/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1432 lr 1e-06
Epoch 1434/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1433 lr 1e-06
Epoch 1435/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1434 lr 1e-06
Epoch 1436/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1435 lr 1e-06
Epoch 1437/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1436 lr 1e-06
Epoch 1438/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1437 lr 1e-06
Epoch 1439/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1438 lr 1e-06
Epoch 1440/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01440: saving model to model/model_best.h5
epoch_end_callback epoch 1439 lr 1e-06
```

```
Epoch 1441/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1440 lr 1e-06
Epoch 1442/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1441 lr 1e-06
Epoch 1443/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1442 lr 1e-06
Epoch 1444/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1443 lr 1e-06
Epoch 1445/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1444 lr 1e-06
Epoch 1446/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1445 lr 1e-06
Epoch 1447/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1446 lr 1e-06
Epoch 1448/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1447 lr 1e-06
Epoch 1449/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1448 lr 1e-06
Epoch 1450/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01450: saving model to model/model_best.h5
epoch_end_callback epoch 1449 lr 1e-06
Epoch 1451/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1450 lr 1e-06
Epoch 1452/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1451 lr 1e-06
Epoch 1453/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1452 lr 1e-06
Epoch 1454/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1453 lr 1e-06
Epoch 1455/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1454 lr 1e-06
Epoch 1456/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1455 lr 1e-06
Epoch 1457/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1456 lr 1e-06
Epoch 1458/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1457 lr 1e-06
```

```
Epoch 1459/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1458 lr 1e-06
Epoch 1460/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01460: saving model to model/model_best.h5
epoch_end_callback epoch 1459 lr 1e-06
Epoch 1461/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1460 lr 1e-06
Epoch 1462/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1461 lr 1e-06
Epoch 1463/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1462 lr 1e-06
Epoch 1464/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1463 lr 1e-06
Epoch 1465/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1464 lr 1e-06
Epoch 1466/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1465 lr 1e-06
Epoch 1467/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1466 lr 1e-06
Epoch 1468/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1467 lr 1e-06
Epoch 1469/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1468 lr 1e-06
Epoch 1470/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01470: saving model to model/model_best.h5
epoch_end_callback epoch 1469 lr 1e-06
Epoch 1471/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1470 lr 1e-06
Epoch 1472/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1471 lr 1e-06
Epoch 1473/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1472 lr 1e-06
Epoch 1474/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1473 lr 1e-06
Epoch 1475/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1474 lr 1e-06
Epoch 1476/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1475 lr 1e-06
Epoch 1477/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1476 lr 1e-06
Epoch 1478/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1477 lr 1e-06
Epoch 1479/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1478 lr 1e-06
Epoch 1480/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01480: saving model to model/model_best.h5
epoch_end_callback epoch 1479 lr 1e-06
Epoch 1481/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1480 lr 1e-06
Epoch 1482/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1481 lr 1e-06
Epoch 1483/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1482 lr 1e-06
Epoch 1484/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1483 lr 1e-06
Epoch 1485/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1484 lr 1e-06
Epoch 1486/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1485 lr 1e-06
Epoch 1487/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1486 lr 1e-06
Epoch 1488/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1487 lr 1e-06
Epoch 1489/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1488 lr 1e-06
Epoch 1490/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01490: saving model to model/model_best.h5
epoch_end_callback epoch 1489 lr 1e-06
Epoch 1491/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1490 lr 1e-06
Epoch 1492/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1491 lr 1e-06
Epoch 1493/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1492 lr 1e-06
```

```
Epoch 1494/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1493 lr 1e-06
Epoch 1495/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1494 lr 1e-06
Epoch 1496/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1495 lr 1e-06
Epoch 1497/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1496 lr 1e-06
Epoch 1498/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1497 lr 1e-06
Epoch 1499/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1498 lr 1e-06
Epoch 1500/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01500: saving model to model/model_best.h5
epoch_end_callback epoch 1499 lr 1e-06
Epoch 1501/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1500 lr 1e-06
Epoch 1502/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1501 lr 1e-06
Epoch 1503/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1502 lr 1e-06
Epoch 1504/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1503 lr 1e-06
Epoch 1505/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1504 lr 1e-06
Epoch 1506/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1505 lr 1e-06
Epoch 1507/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1506 lr 1e-06
Epoch 1508/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1507 lr 1e-06
Epoch 1509/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1508 lr 1e-06
Epoch 1510/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01510: saving model to model/model_best.h5
epoch_end_callback epoch 1509 lr 1e-06
Epoch 1511/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1510 lr 1e-06
Epoch 1512/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1511 lr 1e-06
Epoch 1513/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1512 lr 1e-06
Epoch 1514/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1513 lr 1e-06
Epoch 1515/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1514 lr 1e-06
Epoch 1516/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1515 lr 1e-06
Epoch 1517/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1516 lr 1e-06
Epoch 1518/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1517 lr 1e-06
Epoch 1519/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1518 lr 1e-06
Epoch 1520/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

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Epoch 01520: saving model to model/model_best.h5
epoch_end_callback epoch 1519 lr 1e-06
Epoch 1521/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1520 lr 1e-06
Epoch 1522/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1521 lr 1e-06
Epoch 1523/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1522 lr 1e-06
Epoch 1524/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1523 lr 1e-06
Epoch 1525/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1524 lr 1e-06
Epoch 1526/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1525 lr 1e-06
Epoch 1527/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1526 lr 1e-06
Epoch 1528/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1527 lr 1e-06
Epoch 1529/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1528 lr 1e-06
Epoch 1530/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01530: saving model to model/model_best.h5
epoch_end_callback epoch 1529 lr 1e-06
Epoch 1531/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1530 lr 1e-06
Epoch 1532/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1531 lr 1e-06
Epoch 1533/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1532 lr 1e-06
Epoch 1534/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1533 lr 1e-06
Epoch 1535/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1534 lr 1e-06
Epoch 1536/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1535 lr 1e-06
Epoch 1537/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1536 lr 1e-06
Epoch 1538/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1537 lr 1e-06
Epoch 1539/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1538 lr 1e-06
Epoch 1540/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01540: saving model to model/model_best.h5
epoch_end_callback epoch 1539 lr 1e-06
Epoch 1541/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1540 lr 1e-06
Epoch 1542/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1541 lr 1e-06
Epoch 1543/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1542 lr 1e-06
Epoch 1544/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1543 lr 1e-06
Epoch 1545/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1544 lr 1e-06
Epoch 1546/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1545 lr 1e-06
```

```
Epoch 1547/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1546 lr 1e-06
Epoch 1548/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1547 lr 1e-06
Epoch 1549/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1548 lr 1e-06
Epoch 1550/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01550: saving model to model/model_best.h5
epoch_end_callback epoch 1549 lr 1e-06
Epoch 1551/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1550 lr 1e-06
Epoch 1552/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1551 lr 1e-06
Epoch 1553/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1552 lr 1e-06
Epoch 1554/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1553 lr 1e-06
Epoch 1555/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1554 lr 1e-06
Epoch 1556/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1555 lr 1e-06
Epoch 1557/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1556 lr 1e-06
Epoch 1558/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1557 lr 1e-06
Epoch 1559/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1558 lr 1e-06
Epoch 1560/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01560: saving model to model/model_best.h5
epoch_end_callback epoch 1559 lr 1e-06
Epoch 1561/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1560 lr 1e-06
Epoch 1562/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1561 lr 1e-06
Epoch 1563/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1562 lr 1e-06
Epoch 1564/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1563 lr 1e-06
Epoch 1565/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1564 lr 1e-06
Epoch 1566/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1565 lr 1e-06
Epoch 1567/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1566 lr 1e-06
Epoch 1568/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1567 lr 1e-06
Epoch 1569/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1568 lr 1e-06
Epoch 1570/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01570: saving model to model/model_best.h5
epoch_end_callback epoch 1569 lr 1e-06
Epoch 1571/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1570 lr 1e-06
Epoch 1572/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1571 lr 1e-06
Epoch 1573/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1572 lr 1e-06
Epoch 1574/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1573 lr 1e-06
Epoch 1575/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1574 lr 1e-06
Epoch 1576/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1575 lr 1e-06
Epoch 1577/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1576 lr 1e-06
Epoch 1578/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1577 lr 1e-06
Epoch 1579/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1578 lr 1e-06
Epoch 1580/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01580: saving model to model/model_best.h5
epoch_end_callback epoch 1579 lr 1e-06
Epoch 1581/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1580 lr 1e-06
```

```
Epoch 1582/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1581 lr 1e-06
Epoch 1583/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1582 lr 1e-06
Epoch 1584/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1583 lr 1e-06
Epoch 1585/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1584 lr 1e-06
Epoch 1586/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1585 lr 1e-06
Epoch 1587/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1586 lr 1e-06
Epoch 1588/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1587 lr 1e-06
Epoch 1589/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1588 lr 1e-06
Epoch 1590/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01590: saving model to model/model_best.h5
```

```
epoch_end_callback epoch 1589 lr 1e-06
Epoch 1591/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1590 lr 1e-06
Epoch 1592/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1591 lr 1e-06
Epoch 1593/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1592 lr 1e-06
Epoch 1594/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1593 lr 1e-06
Epoch 1595/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1594 lr 1e-06
Epoch 1596/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1595 lr 1e-06
Epoch 1597/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1596 lr 1e-06
Epoch 1598/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1597 lr 1e-06
Epoch 1599/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1598 lr 1e-06
```

```
Epoch 1600/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01600: saving model to model/model_best.h5
epoch_end_callback epoch 1599 lr 1e-06
Epoch 1601/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1600 lr 1e-06
Epoch 1602/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1601 lr 1e-06
Epoch 1603/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1602 lr 1e-06
Epoch 1604/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1603 lr 1e-06
Epoch 1605/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1604 lr 1e-06
Epoch 1606/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1605 lr 1e-06
Epoch 1607/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1606 lr 1e-06
Epoch 1608/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1607 lr 1e-06
Epoch 1609/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1608 lr 1e-06
Epoch 1610/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01610: saving model to model/model_best.h5
epoch_end_callback epoch 1609 lr 1e-06
Epoch 1611/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1610 lr 1e-06
Epoch 1612/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1611 lr 1e-06
Epoch 1613/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1612 lr 1e-06
Epoch 1614/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1613 lr 1e-06
Epoch 1615/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1614 lr 1e-06
Epoch 1616/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1615 lr 1e-06
Epoch 1617/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1616 lr 1e-06
Epoch 1618/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1617 lr 1e-06
Epoch 1619/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1618 lr 1e-06
Epoch 1620/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01620: saving model to model/model_best.h5
epoch_end_callback epoch 1619 lr 1e-06
Epoch 1621/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1620 lr 1e-06
Epoch 1622/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1621 lr 1e-06
Epoch 1623/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1622 lr 1e-06
Epoch 1624/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1623 lr 1e-06
Epoch 1625/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1624 lr 1e-06
Epoch 1626/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1625 lr 1e-06
Epoch 1627/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1626 lr 1e-06
Epoch 1628/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1627 lr 1e-06
Epoch 1629/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1628 lr 1e-06
Epoch 1630/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01630: saving model to model/model_best.h5
epoch_end_callback epoch 1629 lr 1e-06
Epoch 1631/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1630 lr 1e-06
Epoch 1632/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1631 lr 1e-06
Epoch 1633/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1632 lr 1e-06
Epoch 1634/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1633 lr 1e-06
```

```
Epoch 1635/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1634 lr 1e-06
Epoch 1636/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1635 lr 1e-06
Epoch 1637/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1636 lr 1e-06
Epoch 1638/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1637 lr 1e-06
Epoch 1639/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1638 lr 1e-06
Epoch 1640/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01640: saving model to model/model_best.h5
epoch_end_callback epoch 1639 lr 1e-06
Epoch 1641/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1640 lr 1e-06
Epoch 1642/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1641 lr 1e-06
Epoch 1643/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1642 lr 1e-06
Epoch 1644/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1643 lr 1e-06
Epoch 1645/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1644 lr 1e-06
Epoch 1646/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1645 lr 1e-06
Epoch 1647/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1646 lr 1e-06
Epoch 1648/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1647 lr 1e-06
Epoch 1649/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1648 lr 1e-06
Epoch 1650/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01650: saving model to model/model_best.h5
epoch_end_callback epoch 1649 lr 1e-06
Epoch 1651/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1650 lr 1e-06
Epoch 1652/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1651 lr 1e-06
Epoch 1653/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1652 lr 1e-06
Epoch 1654/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1653 lr 1e-06
Epoch 1655/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1654 lr 1e-06
Epoch 1656/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1655 lr 1e-06
Epoch 1657/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1656 lr 1e-06
Epoch 1658/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1657 lr 1e-06
Epoch 1659/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1658 lr 1e-06
Epoch 1660/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01660: saving model to model/model_best.h5
epoch_end_callback epoch 1659 lr 1e-06
Epoch 1661/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1660 lr 1e-06
Epoch 1662/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1661 lr 1e-06
Epoch 1663/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1662 lr 1e-06
Epoch 1664/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1663 lr 1e-06
Epoch 1665/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1664 lr 1e-06
Epoch 1666/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1665 lr 1e-06
Epoch 1667/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1666 lr 1e-06
Epoch 1668/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1667 lr 1e-06
Epoch 1669/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1668 lr 1e-06
Epoch 1670/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027

Epoch 01670: saving model to model/model_best.h5
epoch_end_callback epoch 1669 lr 1e-06
Epoch 1671/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1670 lr 1e-06
Epoch 1672/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1671 lr 1e-06
Epoch 1673/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1672 lr 1e-06
Epoch 1674/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1673 lr 1e-06
Epoch 1675/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1674 lr 1e-06
Epoch 1676/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1675 lr 1e-06
Epoch 1677/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1676 lr 1e-06
Epoch 1678/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1677 lr 1e-06
Epoch 1679/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1678 lr 1e-06
Epoch 1680/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01680: saving model to model/model_best.h5
epoch_end_callback epoch 1679 lr 1e-06
Epoch 1681/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1680 lr 1e-06
Epoch 1682/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1681 lr 1e-06
Epoch 1683/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1682 lr 1e-06
Epoch 1684/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1683 lr 1e-06
Epoch 1685/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1684 lr 1e-06
Epoch 1686/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1685 lr 1e-06
Epoch 1687/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1686 lr 1e-06
```

```
Epoch 1688/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1687 lr 1e-06
Epoch 1689/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1688 lr 1e-06
Epoch 1690/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01690: saving model to model/model_best.h5
epoch_end_callback epoch 1689 lr 1e-06
Epoch 1691/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1690 lr 1e-06
Epoch 1692/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1691 lr 1e-06
Epoch 1693/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1692 lr 1e-06
Epoch 1694/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1693 lr 1e-06
Epoch 1695/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1694 lr 1e-06
Epoch 1696/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1695 lr 1e-06
Epoch 1697/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1696 lr 1e-06
Epoch 1698/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1697 lr 1e-06
Epoch 1699/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1698 lr 1e-06
Epoch 1700/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01700: saving model to model/model_best.h5
epoch_end_callback epoch 1699 lr 1e-06
Epoch 1701/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1700 lr 1e-06
Epoch 1702/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1701 lr 1e-06
Epoch 1703/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1702 lr 1e-06
Epoch 1704/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1703 lr 1e-06
Epoch 1705/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1704 lr 1e-06
Epoch 1706/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1705 lr 1e-06
Epoch 1707/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1706 lr 1e-06
Epoch 1708/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1707 lr 1e-06
Epoch 1709/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1708 lr 1e-06
Epoch 1710/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01710: saving model to model/model_best.h5
epoch_end_callback epoch 1709 lr 1e-06
Epoch 1711/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1710 lr 1e-06
Epoch 1712/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1711 lr 1e-06
Epoch 1713/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1712 lr 1e-06
Epoch 1714/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1713 lr 1e-06
Epoch 1715/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1714 lr 1e-06
Epoch 1716/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1715 lr 1e-06
Epoch 1717/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1716 lr 1e-06
Epoch 1718/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1717 lr 1e-06
Epoch 1719/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1718 lr 1e-06
Epoch 1720/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01720: saving model to model/model_best.h5
epoch_end_callback epoch 1719 lr 1e-06
Epoch 1721/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1720 lr 1e-06
Epoch 1722/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1721 lr 1e-06
```

```
Epoch 1723/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1722 lr 1e-06
Epoch 1724/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1723 lr 1e-06
Epoch 1725/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1724 lr 1e-06
Epoch 1726/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1725 lr 1e-06
Epoch 1727/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1726 lr 1e-06
Epoch 1728/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1727 lr 1e-06
Epoch 1729/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1728 lr 1e-06
Epoch 1730/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01730: saving model to model/model_best.h5
epoch_end_callback epoch 1729 lr 1e-06
Epoch 1731/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1730 lr 1e-06
Epoch 1732/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1731 lr 1e-06
Epoch 1733/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1732 lr 1e-06
Epoch 1734/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1733 lr 1e-06
Epoch 1735/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1734 lr 1e-06
Epoch 1736/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1735 lr 1e-06
Epoch 1737/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1736 lr 1e-06
Epoch 1738/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1737 lr 1e-06
Epoch 1739/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1738 lr 1e-06
Epoch 1740/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
Epoch 01740: saving model to model/model_best.h5
epoch_end_callback epoch 1739 lr 1e-06
Epoch 1741/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1740 lr 1e-06
Epoch 1742/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1741 lr 1e-06
Epoch 1743/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1742 lr 1e-06
Epoch 1744/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1743 lr 1e-06
Epoch 1745/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1744 lr 1e-06
Epoch 1746/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1745 lr 1e-06
Epoch 1747/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1746 lr 1e-06
Epoch 1748/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1747 lr 1e-06
Epoch 1749/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1748 lr 1e-06
Epoch 1750/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01750: saving model to model/model_best.h5
epoch_end_callback epoch 1749 lr 1e-06
Epoch 1751/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1750 lr 1e-06
Epoch 1752/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1751 lr 1e-06
Epoch 1753/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1752 lr 1e-06
Epoch 1754/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1753 lr 1e-06
Epoch 1755/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1754 lr 1e-06
Epoch 1756/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1755 lr 1e-06
Epoch 1757/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1756 lr 1e-06
Epoch 1758/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1757 lr 1e-06
Epoch 1759/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1758 lr 1e-06
Epoch 1760/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01760: saving model to model/model_best.h5
epoch_end_callback epoch 1759 lr 1e-06
Epoch 1761/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1760 lr 1e-06
Epoch 1762/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1761 lr 1e-06
Epoch 1763/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1762 lr 1e-06
Epoch 1764/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1763 lr 1e-06
Epoch 1765/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1764 lr 1e-06
Epoch 1766/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1765 lr 1e-06
Epoch 1767/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1766 lr 1e-06
Epoch 1768/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1767 lr 1e-06
Epoch 1769/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1768 lr 1e-06
Epoch 1770/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01770: saving model to model/model_best.h5
epoch_end_callback epoch 1769 lr 1e-06
Epoch 1771/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1770 lr 1e-06
Epoch 1772/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1771 lr 1e-06
Epoch 1773/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1772 lr 1e-06
Epoch 1774/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1773 lr 1e-06
Epoch 1775/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1774 lr 1e-06
```

```
Epoch 1776/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1775 lr 1e-06
Epoch 1777/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1776 lr 1e-06
Epoch 1778/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1777 lr 1e-06
Epoch 1779/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1778 lr 1e-06
Epoch 1780/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01780: saving model to model/model_best.h5
epoch_end_callback epoch 1779 lr 1e-06
Epoch 1781/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1780 lr 1e-06
Epoch 1782/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1781 lr 1e-06
Epoch 1783/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1782 lr 1e-06
Epoch 1784/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1783 lr 1e-06
Epoch 1785/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1784 lr 1e-06
Epoch 1786/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1785 lr 1e-06
Epoch 1787/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1786 lr 1e-06
Epoch 1788/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1787 lr 1e-06
Epoch 1789/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1788 lr 1e-06
Epoch 1790/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01790: saving model to model/model_best.h5
epoch_end_callback epoch 1789 lr 1e-06
Epoch 1791/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1790 lr 1e-06
Epoch 1792/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1791 lr 1e-06
Epoch 1793/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1792 lr 1e-06
Epoch 1794/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1793 lr 1e-06
Epoch 1795/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1794 lr 1e-06
Epoch 1796/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1795 lr 1e-06
Epoch 1797/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1796 lr 1e-06
Epoch 1798/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1797 lr 1e-06
Epoch 1799/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1798 lr 1e-06
Epoch 1800/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01800: saving model to model/model_best.h5
epoch_end_callback epoch 1799 lr 1e-06
Epoch 1801/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1800 lr 1e-06
Epoch 1802/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1801 lr 1e-06
Epoch 1803/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1802 lr 1e-06
Epoch 1804/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1803 lr 1e-06
Epoch 1805/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1804 lr 1e-06
Epoch 1806/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1805 lr 1e-06
Epoch 1807/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1806 lr 1e-06
Epoch 1808/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1807 lr 1e-06
Epoch 1809/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1808 lr 1e-06
Epoch 1810/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01810: saving model to model/model_best.h5
epoch_end_callback epoch 1809 lr 1e-06
```

```
Epoch 1811/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1810 lr 1e-06
Epoch 1812/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1811 lr 1e-06
Epoch 1813/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1812 lr 1e-06
Epoch 1814/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1813 lr 1e-06
Epoch 1815/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1814 lr 1e-06
Epoch 1816/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1815 lr 1e-06
Epoch 1817/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1816 lr 1e-06
Epoch 1818/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1817 lr 1e-06
Epoch 1819/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1818 lr 1e-06
Epoch 1820/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01820: saving model to model/model_best.h5
epoch_end_callback epoch 1819 lr 1e-06
Epoch 1821/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1820 lr 1e-06
Epoch 1822/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1821 lr 1e-06
Epoch 1823/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1822 lr 1e-06
Epoch 1824/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1823 lr 1e-06
Epoch 1825/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1824 lr 1e-06
Epoch 1826/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1825 lr 1e-06
Epoch 1827/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1826 lr 1e-06
Epoch 1828/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1827 lr 1e-06
```

```
Epoch 1829/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1828 lr 1e-06
Epoch 1830/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01830: saving model to model/model_best.h5
epoch_end_callback epoch 1829 lr 1e-06
Epoch 1831/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1830 lr 1e-06
Epoch 1832/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1831 lr 1e-06
Epoch 1833/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1832 lr 1e-06
Epoch 1834/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1833 lr 1e-06
Epoch 1835/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1834 lr 1e-06
Epoch 1836/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1835 lr 1e-06
Epoch 1837/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1836 lr 1e-06
Epoch 1838/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1837 lr 1e-06
Epoch 1839/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1838 lr 1e-06
Epoch 1840/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01840: saving model to model/model_best.h5
epoch_end_callback epoch 1839 lr 1e-06
Epoch 1841/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1840 lr 1e-06
Epoch 1842/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1841 lr 1e-06
Epoch 1843/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1842 lr 1e-06
Epoch 1844/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1843 lr 1e-06
Epoch 1845/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1844 lr 1e-06
Epoch 1846/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1845 lr 1e-06
Epoch 1847/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1846 lr 1e-06
Epoch 1848/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1847 lr 1e-06
Epoch 1849/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1848 lr 1e-06
Epoch 1850/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01850: saving model to model/model_best.h5
epoch_end_callback epoch 1849 lr 1e-06
Epoch 1851/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1850 lr 1e-06
Epoch 1852/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1851 lr 1e-06
Epoch 1853/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1852 lr 1e-06
Epoch 1854/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1853 lr 1e-06
Epoch 1855/10000
```

```
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1854 lr 1e-06
Epoch 1856/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1855 lr 1e-06
Epoch 1857/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1856 lr 1e-06
Epoch 1858/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1857 lr 1e-06
Epoch 1859/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1858 lr 1e-06
Epoch 1860/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01860: saving model to model/model_best.h5
epoch_end_callback epoch 1859 lr 1e-06
Epoch 1861/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1860 lr 1e-06
Epoch 1862/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1861 lr 1e-06
Epoch 1863/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1862 lr 1e-06
```

```
Epoch 1864/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1863 lr 1e-06
Epoch 1865/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1864 lr 1e-06
Epoch 1866/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1865 lr 1e-06
Epoch 1867/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1866 lr 1e-06
Epoch 1868/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1867 lr 1e-06
Epoch 1869/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1868 lr 1e-06
Epoch 1870/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027

Epoch 01870: saving model to model/model_best.h5
epoch_end_callback epoch 1869 lr 1e-06
Epoch 1871/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1870 lr 1e-06
Epoch 1872/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
```

```
epoch_end_callback epoch 1871 lr 1e-06
Epoch 1873/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1872 lr 1e-06
Epoch 1874/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1873 lr 1e-06
Epoch 1875/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1874 lr 1e-06
Epoch 1876/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1875 lr 1e-06
Epoch 1877/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1876 lr 1e-06
Epoch 1878/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1877 lr 1e-06
Epoch 1879/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1878 lr 1e-06
Epoch 1880/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0.0027 - val_mean_squared_error: 0.0027

Epoch 01880: saving model to model/model_best.h5
epoch_end_callback epoch 1879 lr 1e-06
Epoch 1881/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
```

```
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1880 lr 1e-06
Epoch 1882/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1881 lr 1e-06
Epoch 1883/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1882 lr 1e-06
Epoch 1884/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1883 lr 1e-06
Epoch 1885/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1884 lr 1e-06
Epoch 1886/10000
 - 1s - loss: 0.0048 - mean_squared_error: 0.0048 - val_loss: 0
.0027 - val_mean_squared_error: 0.0027
epoch_end_callback epoch 1885 lr 1e-06
Epoch 01886: early stopping
################show result################
history.png has been saved!

Process finished with exit code 0

```