```
1  ssh://root@103.254.67.181:10006/usr/bin/
   python -u /home/sunfengzhen/pycharm/
   keras_regress/boston01.py
2  Using TensorFlow backend.
3  ################load dataset
   ##############
4  the type of train data is  float64
5  the shape of train data is  (404, 13)
6  the shape of train target is  (404,)
7  the type of train target is  float64
8  train target[:10]: [15.2 42.3 50.  21.1
   17.7 18.5 11.3 15.6 15.6 14.4]
9  the shape of test data is  (102, 13)
10 the shape of test target is  (102,)
11 ################data proecess
   ##############
12 the shape of mean is  (13,)
13 the shape of std is  (13,)
14 ################model train
   ##############
15 train_data.shape[1] =  13
16 model.metrics_names =  ['loss', '
   mean_absolute_error']
17
```

Layer (type)	Output Shape	Param #
dense_1 (Dense)	(None, 128)	1792
dropout_1 (Dropout)	(None, 128)	0
dense_2 (Dense)	(None, 128)	16512
dropout_2 (Dropout)	(None, 128)	0
dense_3 (Dense)	(None, 1)	129

```
29 =========================
30 Total params: 18,433
31 Trainable params: 18,433
32 Non-trainable params: 0
33 _____
34 Train on 323 samples, validate on 81
   samples
35 Epoch 1/10000
36 2019-05-29 14:00:37.668239: I tensorflow
   /core/platform/cpu_feature_guard.cc:141
   ] Your CPU supports instructions that
   this TensorFlow binary was not compiled
   to use: AVX2 FMA
37 2019-05-29 14:00:37.902538: I tensorflow
   /core/common_runtime/gpu/gpu_device.cc:
   1432] Found device 0 with properties:
38 name: GeForce GTX 1080 Ti major: 6 minor
   : 1 memoryClockRate(GHz): 1.582
39 pciBusID: 0000:82:00.0
40 totalMemory: 10.92GiB freeMemory: 10.
   76GiB
41 2019-05-29 14:00:37.902592: I tensorflow
   /core/common_runtime/gpu/gpu_device.cc:
```

```
41  1511] Adding visible gpu devices: 0
42  2019-05-29 14:00:38.258665: I tensorflow
    /core/common_runtime/gpu/gpu_device.cc:
    982] Device interconnect StreamExecutor
    with strength 1 edge matrix:
43  2019-05-29 14:00:38.258731: I tensorflow
    /core/common_runtime/gpu/gpu_device.cc:
    988]      0
44  2019-05-29 14:00:38.258743: I tensorflow
    /core/common_runtime/gpu/gpu_device.cc:
    1001] 0:    N
45  2019-05-29 14:00:38.259046: 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)
46   - 1s - loss: 471.5940 -
    mean_absolute_error: 19.6536 - val_loss
    : 424.8124 - val_mean_absolute_error: 18
    .6245
47  Epoch 2/10000
```

```
48   - 0s - loss: 275.6189 -
mean_absolute_error: 14.3167 - val_loss
: 204.4962 - val_mean_absolute_error: 12
.0718
49 Epoch 3/10000
50   - 0s - loss: 119.4769 -
mean_absolute_error: 8.5255 - val_loss:
81.4873 - val_mean_absolute_error: 6.
6576
51 Epoch 4/10000
52   - 0s - loss: 74.9496 -
mean_absolute_error: 6.5919 - val_loss:
51.3152 - val_mean_absolute_error: 5.
1051
53 Epoch 5/10000
54   - 0s - loss: 52.9017 -
mean_absolute_error: 5.3775 - val_loss:
39.2213 - val_mean_absolute_error: 4.
4722
55 Epoch 6/10000
56   - 0s - loss: 41.8747 -
mean_absolute_error: 4.8004 - val_loss:
31.8489 - val_mean_absolute_error: 3.
9460
```

```
57  Epoch 7/10000
58   - 0s - loss: 40.8760 -
mean_absolute_error: 4.6790 - val_loss:
26.6481 - val_mean_absolute_error: 3.
5528
59  Epoch 8/10000
60   - 0s - loss: 43.8384 -
mean_absolute_error: 4.8038 - val_loss:
23.4272 - val_mean_absolute_error: 3.
5633
61  Epoch 9/10000
62   - 0s - loss: 42.5370 -
mean_absolute_error: 4.6766 - val_loss:
23.5720 - val_mean_absolute_error: 3.
4395
63  Epoch 10/10000
64   - 0s - loss: 34.4287 -
mean_absolute_error: 4.0822 - val_loss:
22.8763 - val_mean_absolute_error: 3.
5767
65
66  Epoch 00010: saving model to ./model/
model_best.h5
67  Epoch 11/10000
```

68   - 0s - loss: 37.6187 - mean_absolute_error: 4.4915 - val_loss: 21.0415 - val_mean_absolute_error: 3.3021

69 Epoch 12/10000

70   - 0s - loss: 34.1498 - mean_absolute_error: 4.1982 - val_loss: 19.5111 - val_mean_absolute_error: 3.2871

71 Epoch 13/10000

72   - 0s - loss: 38.8213 - mean_absolute_error: 4.3694 - val_loss: 19.0995 - val_mean_absolute_error: 3.2874

73 Epoch 14/10000

74   - 0s - loss: 33.3443 - mean_absolute_error: 4.1826 - val_loss: 20.4755 - val_mean_absolute_error: 3.3057

75 Epoch 15/10000

76   - 0s - loss: 34.1739 - mean_absolute_error: 4.4722 - val_loss: 18.1836 - val_mean_absolute_error: 3.1729

```
77  Epoch 16/10000
78   - 0s - loss: 31.9572 -
    mean_absolute_error: 4.0749 - val_loss
    : 16.8288 - val_mean_absolute_error: 3.
    1399
79  Epoch 17/10000
80   - 0s - loss: 36.6419 -
    mean_absolute_error: 4.4136 - val_loss
    : 16.2828 - val_mean_absolute_error: 3.
    1127
81  Epoch 18/10000
82   - 0s - loss: 31.0082 -
    mean_absolute_error: 4.0521 - val_loss
    : 16.7676 - val_mean_absolute_error: 3.
    1650
83  Epoch 19/10000
84   - 0s - loss: 31.0220 -
    mean_absolute_error: 4.0688 - val_loss
    : 19.9436 - val_mean_absolute_error: 3.
    2981
85  Epoch 20/10000
86   - 0s - loss: 32.7628 -
    mean_absolute_error: 4.2313 - val_loss
    : 15.9747 - val_mean_absolute_error: 3.
```

```
86  0693

87

88  Epoch 00020: saving model to ./model/
    model_best.h5
89  Epoch 21/10000
90   - 0s - loss: 34.8655 -
    mean_absolute_error: 4.3205 - val_loss
    : 14.9415 - val_mean_absolute_error: 3.
    0083
91  Epoch 22/10000
92   - 0s - loss: 32.1327 -
    mean_absolute_error: 4.1429 - val_loss
    : 16.9204 - val_mean_absolute_error: 3.
    1129
93  Epoch 23/10000
94   - 0s - loss: 32.6972 -
    mean_absolute_error: 4.2051 - val_loss
    : 15.9304 - val_mean_absolute_error: 3.
    1833
95  Epoch 24/10000
96   - 0s - loss: 31.4572 -
    mean_absolute_error: 4.0364 - val_loss
    : 13.8277 - val_mean_absolute_error: 2.
    8729
```

```
 97  Epoch 25/10000
 98   - 0s - loss: 29.8019 -
     mean_absolute_error: 4.0653 - val_loss
     : 14.2329 - val_mean_absolute_error: 2.
     9209
 99  Epoch 26/10000
100   - 0s - loss: 28.5796 -
     mean_absolute_error: 3.9193 - val_loss
     : 13.1368 - val_mean_absolute_error: 2.
     7698
101  Epoch 27/10000
102   - 0s - loss: 30.8099 -
     mean_absolute_error: 4.0459 - val_loss
     : 13.1719 - val_mean_absolute_error: 2.
     8073
103  Epoch 28/10000
104   - 0s - loss: 28.9890 -
     mean_absolute_error: 3.7942 - val_loss
     : 12.8025 - val_mean_absolute_error: 2.
     7951
105  Epoch 29/10000
106   - 0s - loss: 28.4277 -
     mean_absolute_error: 3.9302 - val_loss
     : 13.1567 - val_mean_absolute_error: 2.
```

```
106  8275
107  Epoch 30/10000
108   - 0s - loss: 25.7120 -
     mean_absolute_error: 3.8284 - val_loss
     : 13.0361 - val_mean_absolute_error: 2.
     8116
109
110  Epoch 00030: saving model to ./model/
     model_best.h5
111  Epoch 31/10000
112   - 0s - loss: 30.8195 -
     mean_absolute_error: 3.9178 - val_loss
     : 12.3932 - val_mean_absolute_error: 2.
     7096
113  Epoch 32/10000
114   - 0s - loss: 28.4250 -
     mean_absolute_error: 4.0115 - val_loss
     : 12.9458 - val_mean_absolute_error: 2.
     8750
115  Epoch 33/10000
116   - 0s - loss: 25.1687 -
     mean_absolute_error: 3.7661 - val_loss
     : 12.4903 - val_mean_absolute_error: 2.
     7801
```

```
117  Epoch 34/10000
118   - 0s - loss: 27.5808 -
     mean_absolute_error: 3.8979 - val_loss
     : 12.7843 - val_mean_absolute_error: 2.
     8189
119  Epoch 35/10000
120   - 0s - loss: 28.4051 -
     mean_absolute_error: 3.8974 - val_loss
     : 12.9988 - val_mean_absolute_error: 2.
     8277
121  Epoch 36/10000
122   - 0s - loss: 25.5010 -
     mean_absolute_error: 3.7122 - val_loss
     : 12.9928 - val_mean_absolute_error: 2.
     8505
123  Epoch 37/10000
124   - 0s - loss: 25.9259 -
     mean_absolute_error: 3.8775 - val_loss
     : 12.5756 - val_mean_absolute_error: 2.
     6619
125  Epoch 38/10000
126   - 0s - loss: 31.4776 -
     mean_absolute_error: 3.9477 - val_loss
     : 12.1661 - val_mean_absolute_error: 2.
```

```
126  7163
127  Epoch 39/10000
128   - 0s - loss: 28.0169 -
     mean_absolute_error: 3.7668 - val_loss
     : 12.6532 - val_mean_absolute_error: 2.
     7592
129  Epoch 40/10000
130   - 0s - loss: 21.9334 -
     mean_absolute_error: 3.5675 - val_loss
     : 16.4930 - val_mean_absolute_error: 3.
     0841
131
132  Epoch 00040: saving model to ./model/
     model_best.h5
133  Epoch 41/10000
134   - 0s - loss: 27.4663 -
     mean_absolute_error: 4.0206 - val_loss
     : 12.8864 - val_mean_absolute_error: 2.
     7561
135  Epoch 42/10000
136   - 0s - loss: 25.3378 -
     mean_absolute_error: 3.7648 - val_loss
     : 14.3435 - val_mean_absolute_error: 2.
     9485
```

137 Epoch 43/10000
138 - 0s - loss: 28.9909 - mean_absolute_error: 3.9775 - val_loss: 13.3563 - val_mean_absolute_error: 2.8229
139 Epoch 44/10000
140 - 0s - loss: 28.7084 - mean_absolute_error: 3.8778 - val_loss: 12.4784 - val_mean_absolute_error: 2.6716
141 Epoch 45/10000
142 - 0s - loss: 27.1686 - mean_absolute_error: 3.8493 - val_loss: 13.3704 - val_mean_absolute_error: 2.8283
143 Epoch 46/10000
144 - 0s - loss: 28.0532 - mean_absolute_error: 3.8111 - val_loss: 13.1967 - val_mean_absolute_error: 2.7082
145 Epoch 47/10000
146 - 0s - loss: 24.3670 - mean_absolute_error: 3.7825 - val_loss: 12.2840 - val_mean_absolute_error: 2.

```
146  7379
147  Epoch 48/10000
148   - 0s - loss: 28.1813 -
     mean_absolute_error: 3.9727 - val_loss
     : 12.0798 - val_mean_absolute_error: 2.
     6893
149  Epoch 49/10000
150   - 0s - loss: 22.1476 -
     mean_absolute_error: 3.4863 - val_loss
     : 11.5010 - val_mean_absolute_error: 2.
     5914
151  Epoch 50/10000
152   - 0s - loss: 30.1649 -
     mean_absolute_error: 3.9167 - val_loss
     : 13.9417 - val_mean_absolute_error: 2.
     8967
153
154  Epoch 00050: saving model to ./model/
     model_best.h5
155  Epoch 51/10000
156   - 0s - loss: 28.0487 -
     mean_absolute_error: 3.9400 - val_loss
     : 12.1341 - val_mean_absolute_error: 2.
     7560
```

```
157  Epoch 52/10000
158   - 0s - loss: 28.7794 -
mean_absolute_error: 3.9412 - val_loss
: 11.6077 - val_mean_absolute_error: 2.
5994
159  Epoch 53/10000
160   - 0s - loss: 23.2483 -
mean_absolute_error: 3.5410 - val_loss
: 11.6106 - val_mean_absolute_error: 2.
5399
161  Epoch 54/10000
162   - 0s - loss: 25.7321 -
mean_absolute_error: 3.8223 - val_loss
: 12.7658 - val_mean_absolute_error: 2.
7503
163  Epoch 55/10000
164   - 0s - loss: 21.4908 -
mean_absolute_error: 3.4355 - val_loss
: 12.4427 - val_mean_absolute_error: 2.
7483
165  Epoch 56/10000
166   - 0s - loss: 23.3762 -
mean_absolute_error: 3.6141 - val_loss
: 12.0837 - val_mean_absolute_error: 2.
```

```
166  6965
167  Epoch 57/10000
168   - 0s - loss: 24.7240 -
     mean_absolute_error: 3.5883 - val_loss
     : 15.2005 - val_mean_absolute_error: 2.
     9362
169  Epoch 58/10000
170   - 0s - loss: 23.3871 -
     mean_absolute_error: 3.6005 - val_loss
     : 11.6170 - val_mean_absolute_error: 2.
     6311
171  Epoch 59/10000
172   - 0s - loss: 25.5047 -
     mean_absolute_error: 3.7460 - val_loss
     : 11.8313 - val_mean_absolute_error: 2.
     6525
173  Epoch 60/10000
174   - 0s - loss: 20.7486 -
     mean_absolute_error: 3.5079 - val_loss
     : 11.4871 - val_mean_absolute_error: 2.
     6220
175
176  Epoch 00060: saving model to ./model/
     model_best.h5
```

177 Epoch 61/10000
178 - 0s - loss: 26.6833 - mean_absolute_error: 3.7480 - val_loss: 12.8776 - val_mean_absolute_error: 2.7834
179 Epoch 62/10000
180 - 0s - loss: 28.3396 - mean_absolute_error: 3.9055 - val_loss: 15.0888 - val_mean_absolute_error: 3.0557
181 Epoch 63/10000
182 - 0s - loss: 21.2075 - mean_absolute_error: 3.3125 - val_loss: 11.2469 - val_mean_absolute_error: 2.6019
183 Epoch 64/10000
184 - 0s - loss: 23.9888 - mean_absolute_error: 3.7179 - val_loss: 11.3453 - val_mean_absolute_error: 2.5853
185 Epoch 65/10000
186 - 0s - loss: 20.5686 - mean_absolute_error: 3.5012 - val_loss: 11.7069 - val_mean_absolute_error: 2.

```
186  6577
187  Epoch 66/10000
188   - 0s - loss: 23.8273 -
     mean_absolute_error: 3.5042 - val_loss
     : 11.6670 - val_mean_absolute_error: 2.
     6916
189  Epoch 67/10000
190   - 0s - loss: 24.0044 -
     mean_absolute_error: 3.5902 - val_loss
     : 11.1305 - val_mean_absolute_error: 2.
     6533
191  Epoch 68/10000
192   - 0s - loss: 20.4250 -
     mean_absolute_error: 3.2636 - val_loss
     : 10.9020 - val_mean_absolute_error: 2.
     5366
193  Epoch 69/10000
194   - 0s - loss: 26.5373 -
     mean_absolute_error: 3.5960 - val_loss
     : 11.6026 - val_mean_absolute_error: 2.
     6777
195  Epoch 70/10000
196   - 0s - loss: 23.0669 -
     mean_absolute_error: 3.4336 - val_loss
```

```
196  : 13.3230 - val_mean_absolute_error: 2.
     7862

197

198  Epoch 00070: saving model to ./model/
     model_best.h5

199  Epoch 71/10000

200   - 0s - loss: 20.9660 -
     mean_absolute_error: 3.3728 - val_loss
     : 11.9626 - val_mean_absolute_error: 2.
     5940

201  Epoch 72/10000

202   - 0s - loss: 22.4514 -
     mean_absolute_error: 3.5683 - val_loss
     : 11.6738 - val_mean_absolute_error: 2.
     5898

203  Epoch 73/10000

204   - 0s - loss: 26.2873 -
     mean_absolute_error: 3.7544 - val_loss
     : 12.1893 - val_mean_absolute_error: 2.
     6892

205  Epoch 74/10000

206   - 0s - loss: 24.7445 -
     mean_absolute_error: 3.5811 - val_loss
     : 12.4293 - val_mean_absolute_error: 2.
```

```
206 6737
207 Epoch 75/10000
208  - 0s - loss: 20.6233 - mean_absolute_error: 3.3945 - val_loss: 11.8655 - val_mean_absolute_error: 2.6007
209 Epoch 76/10000
210  - 0s - loss: 25.0834 - mean_absolute_error: 3.6451 - val_loss: 12.6537 - val_mean_absolute_error: 2.8092
211 Epoch 77/10000
212  - 0s - loss: 27.0276 - mean_absolute_error: 3.8027 - val_loss: 11.8139 - val_mean_absolute_error: 2.6111
213 Epoch 78/10000
214  - 0s - loss: 24.7361 - mean_absolute_error: 3.5057 - val_loss: 12.5172 - val_mean_absolute_error: 2.6608
215 Epoch 79/10000
216  - 0s - loss: 21.9228 - mean_absolute_error: 3.4557 - val_loss
```

```
216  : 13.5209 - val_mean_absolute_error: 2.
     7557
217  Epoch 80/10000
218   - 0s - loss: 24.9090 -
     mean_absolute_error: 3.4498 - val_loss
     : 13.6664 - val_mean_absolute_error: 2.
     8444
219
220  Epoch 00080: saving model to ./model/
     model_best.h5
221  Epoch 81/10000
222   - 0s - loss: 22.5629 -
     mean_absolute_error: 3.3942 - val_loss
     : 12.1311 - val_mean_absolute_error: 2.
     6762
223  Epoch 82/10000
224   - 0s - loss: 24.8289 -
     mean_absolute_error: 3.7665 - val_loss
     : 12.4785 - val_mean_absolute_error: 2.
     7774
225  Epoch 83/10000
226   - 0s - loss: 20.5774 -
     mean_absolute_error: 3.3643 - val_loss
     : 11.9487 - val_mean_absolute_error: 2.
```

226 6693
227 Epoch 84/10000
228   - 0s - loss: 22.3001 - mean_absolute_error: 3.4404 - val_loss: 11.9136 - val_mean_absolute_error: 2.6967
229 Epoch 85/10000
230   - 0s - loss: 18.9517 - mean_absolute_error: 3.2279 - val_loss: 12.4168 - val_mean_absolute_error: 2.7089
231 Epoch 86/10000
232   - 0s - loss: 20.7869 - mean_absolute_error: 3.2579 - val_loss: 12.9503 - val_mean_absolute_error: 2.7649
233 Epoch 87/10000
234   - 0s - loss: 22.1162 - mean_absolute_error: 3.3869 - val_loss: 11.9791 - val_mean_absolute_error: 2.5860
235 Epoch 88/10000
236   - 0s - loss: 22.5660 - mean_absolute_error: 3.4499 - val_loss

```
236 : 11.9730 - val_mean_absolute_error: 2.6196
237 Epoch 89/10000
238  - 0s - loss: 22.3339 - mean_absolute_error: 3.5834 - val_loss: 11.7838 - val_mean_absolute_error: 2.6415
239 Epoch 90/10000
240  - 0s - loss: 26.0073 - mean_absolute_error: 3.6826 - val_loss: 11.5779 - val_mean_absolute_error: 2.6563
241
242 Epoch 00090: saving model to ./model/model_best.h5
243 Epoch 91/10000
244  - 0s - loss: 19.6499 - mean_absolute_error: 3.2233 - val_loss: 12.1865 - val_mean_absolute_error: 2.6896
245 Epoch 92/10000
246  - 0s - loss: 21.8195 - mean_absolute_error: 3.3227 - val_loss: 12.1796 - val_mean_absolute_error: 2.
```

```
246  6399
247  Epoch 93/10000
248   - 0s - loss: 19.6122 -
     mean_absolute_error: 3.2208 - val_loss
     : 15.3679 - val_mean_absolute_error: 2.
     9777
249  Epoch 94/10000
250   - 0s - loss: 23.2611 -
     mean_absolute_error: 3.4962 - val_loss
     : 12.9478 - val_mean_absolute_error: 2.
     7309
251  Epoch 95/10000
252   - 0s - loss: 22.0983 -
     mean_absolute_error: 3.4693 - val_loss
     : 13.1296 - val_mean_absolute_error: 2.
     7515
253  Epoch 96/10000
254   - 0s - loss: 25.0859 -
     mean_absolute_error: 3.6200 - val_loss
     : 12.8214 - val_mean_absolute_error: 2.
     7381
255  Epoch 97/10000
256   - 0s - loss: 27.1598 -
     mean_absolute_error: 3.8038 - val_loss
```

```
256  : 13.2098 - val_mean_absolute_error: 2.
     8021
257  Epoch 98/10000
258   - 0s - loss: 20.5087 -
     mean_absolute_error: 3.2614 - val_loss
     : 12.1029 - val_mean_absolute_error: 2.
     6788
259  Epoch 99/10000
260   - 0s - loss: 20.8087 -
     mean_absolute_error: 3.2980 - val_loss
     : 12.0119 - val_mean_absolute_error: 2.
     6901
261  Epoch 100/10000
262   - 0s - loss: 22.6300 -
     mean_absolute_error: 3.4296 - val_loss
     : 12.1564 - val_mean_absolute_error: 2.
     6112
263
264  Epoch 00100: saving model to ./model/
     model_best.h5
265  Epoch 101/10000
266   - 0s - loss: 21.7879 -
     mean_absolute_error: 3.4555 - val_loss
     : 12.5125 - val_mean_absolute_error: 2.
```

```
266 6991
267 Epoch 102/10000
268  - 0s - loss: 21.3819 -
    mean_absolute_error: 3.4563 - val_loss
    : 12.9750 - val_mean_absolute_error: 2.
    6916
269 Epoch 103/10000
270  - 0s - loss: 21.8935 -
    mean_absolute_error: 3.4994 - val_loss
    : 12.8772 - val_mean_absolute_error: 2.
    7064
271 Epoch 104/10000
272  - 0s - loss: 20.8099 -
    mean_absolute_error: 3.3283 - val_loss
    : 12.6417 - val_mean_absolute_error: 2.
    6681
273 Epoch 105/10000
274  - 0s - loss: 19.2483 -
    mean_absolute_error: 3.2276 - val_loss
    : 13.0163 - val_mean_absolute_error: 2.
    8052
275 Epoch 106/10000
276  - 0s - loss: 19.3741 -
    mean_absolute_error: 3.1789 - val_loss
```

276 : 12.7423 - val_mean_absolute_error: 2.7343

277 Epoch 107/10000

278 - 0s - loss: 21.8305 - mean_absolute_error: 3.3781 - val_loss: 14.4094 - val_mean_absolute_error: 2.8930

279 Epoch 108/10000

280 - 0s - loss: 22.1373 - mean_absolute_error: 3.4011 - val_loss: 12.1810 - val_mean_absolute_error: 2.6822

281 Epoch 109/10000

282 - 0s - loss: 19.8754 - mean_absolute_error: 3.2471 - val_loss: 12.9833 - val_mean_absolute_error: 2.6792

283 Epoch 110/10000

284 - 0s - loss: 20.1972 - mean_absolute_error: 3.3304 - val_loss: 14.6482 - val_mean_absolute_error: 2.9202

285

286 Epoch 00110: saving model to ./model/

286 model_best.h5
287 Epoch 111/10000
288 - 0s - loss: 19.9537 - mean_absolute_error: 3.2709 - val_loss: 12.8034 - val_mean_absolute_error: 2.6954
289 Epoch 112/10000
290 - 0s - loss: 23.2327 - mean_absolute_error: 3.4464 - val_loss: 12.9079 - val_mean_absolute_error: 2.7288
291 Epoch 113/10000
292 - 0s - loss: 21.1614 - mean_absolute_error: 3.4013 - val_loss: 12.6860 - val_mean_absolute_error: 2.7012
293 Epoch 114/10000
294 - 0s - loss: 21.2141 - mean_absolute_error: 3.3952 - val_loss: 11.7858 - val_mean_absolute_error: 2.5550
295 Epoch 115/10000
296 - 0s - loss: 21.1013 - mean_absolute_error: 3.3249 - val_loss

```
296  : 12.1557 - val_mean_absolute_error: 2.
     6807
297  Epoch 116/10000
298   - 0s - loss: 20.1505 -
     mean_absolute_error: 3.2884 - val_loss
     : 11.8172 - val_mean_absolute_error: 2.
     5400
299  Epoch 117/10000
300   - 0s - loss: 23.0681 -
     mean_absolute_error: 3.4684 - val_loss
     : 11.9033 - val_mean_absolute_error: 2.
     6188
301  Epoch 118/10000
302   - 0s - loss: 23.9615 -
     mean_absolute_error: 3.5159 - val_loss
     : 11.9365 - val_mean_absolute_error: 2.
     5642
303  Epoch 119/10000
304   - 0s - loss: 21.0665 -
     mean_absolute_error: 3.3009 - val_loss
     : 12.1050 - val_mean_absolute_error: 2.
     5789
305  Epoch 120/10000
306   - 0s - loss: 18.8578 -
```

```
306  mean_absolute_error: 3.2933 - val_loss
     : 13.5045 - val_mean_absolute_error: 2.
     8033

307

308  Epoch 00120: saving model to ./model/
     model_best.h5

309  Epoch 121/10000

310   - 0s - loss: 18.3800 -
     mean_absolute_error: 3.1549 - val_loss
     : 12.7283 - val_mean_absolute_error: 2.
     6751

311  Epoch 122/10000

312   - 0s - loss: 20.1642 -
     mean_absolute_error: 3.3292 - val_loss
     : 13.7817 - val_mean_absolute_error: 2.
     7882

313  Epoch 123/10000

314   - 0s - loss: 20.2001 -
     mean_absolute_error: 3.3436 - val_loss
     : 12.7668 - val_mean_absolute_error: 2.
     6365

315  Epoch 124/10000

316   - 0s - loss: 21.6772 -
     mean_absolute_error: 3.3193 - val_loss
```

316 : 12.2673 - val_mean_absolute_error: 2.7031

317 Epoch 125/10000

318 - 0s - loss: 21.0685 - mean_absolute_error: 3.2309 - val_loss: 12.8740 - val_mean_absolute_error: 2.7249

319 Epoch 126/10000

320 - 0s - loss: 19.7185 - mean_absolute_error: 3.1243 - val_loss: 13.5857 - val_mean_absolute_error: 2.6985

321 Epoch 127/10000

322 - 0s - loss: 20.4672 - mean_absolute_error: 3.3461 - val_loss: 16.5940 - val_mean_absolute_error: 3.1308

323 Epoch 128/10000

324 - 0s - loss: 21.2011 - mean_absolute_error: 3.3216 - val_loss: 12.6382 - val_mean_absolute_error: 2.6998

325 Epoch 129/10000

326 - 0s - loss: 20.2822 -

326 mean_absolute_error: 3.2669 - val_loss: 12.2984 - val_mean_absolute_error: 2.7008

327 Epoch 130/10000

328 - 0s - loss: 21.7544 - mean_absolute_error: 3.3061 - val_loss: 12.6237 - val_mean_absolute_error: 2.6247

329

330 Epoch 00130: saving model to ./model/model_best.h5

331 Epoch 131/10000

332 - 0s - loss: 18.0724 - mean_absolute_error: 3.1351 - val_loss: 13.2900 - val_mean_absolute_error: 2.7366

333 Epoch 132/10000

334 - 0s - loss: 22.0091 - mean_absolute_error: 3.3903 - val_loss: 12.7819 - val_mean_absolute_error: 2.5938

335 Epoch 133/10000

336 - 0s - loss: 18.9877 - mean_absolute_error: 3.1729 - val_loss

336 : 12.2557 - val_mean_absolute_error: 2.5954

337 Epoch 134/10000

338 - 0s - loss: 22.2989 - mean_absolute_error: 3.4734 - val_loss: 11.8620 - val_mean_absolute_error: 2.6152

339 Epoch 135/10000

340 - 0s - loss: 18.8819 - mean_absolute_error: 3.0934 - val_loss: 12.4550 - val_mean_absolute_error: 2.5957

341 Epoch 136/10000

342 - 0s - loss: 19.7813 - mean_absolute_error: 3.1976 - val_loss: 11.8638 - val_mean_absolute_error: 2.5167

343 Epoch 137/10000

344 - 0s - loss: 15.9166 - mean_absolute_error: 2.9841 - val_loss: 13.6102 - val_mean_absolute_error: 2.7853

345 Epoch 138/10000

346 - 0s - loss: 21.9529 -

346 mean_absolute_error: 3.3388 - val_loss: 13.6934 - val_mean_absolute_error: 2.7167

347 Epoch 139/10000

348 - 0s - loss: 18.8445 - mean_absolute_error: 3.2091 - val_loss: 15.5024 - val_mean_absolute_error: 3.0503

349 Epoch 140/10000

350 - 0s - loss: 18.7841 - mean_absolute_error: 3.2160 - val_loss: 12.4627 - val_mean_absolute_error: 2.6630

351

352 Epoch 00140: saving model to ./model/model_best.h5

353 Epoch 141/10000

354 - 0s - loss: 18.5380 - mean_absolute_error: 3.2212 - val_loss: 12.2907 - val_mean_absolute_error: 2.6243

355 Epoch 142/10000

356 - 0s - loss: 20.6895 - mean_absolute_error: 3.2053 - val_loss

356 : 12.5218 - val_mean_absolute_error: 2.5857

357 Epoch 143/10000

358 - 0s - loss: 20.9871 - mean_absolute_error: 3.2372 - val_loss: 13.2518 - val_mean_absolute_error: 2.7107

359 Epoch 144/10000

360 - 0s - loss: 18.9100 - mean_absolute_error: 3.1137 - val_loss: 13.0870 - val_mean_absolute_error: 2.6157

361 Epoch 145/10000

362 - 0s - loss: 20.0072 - mean_absolute_error: 3.2605 - val_loss: 12.1918 - val_mean_absolute_error: 2.6474

363 Epoch 146/10000

364 - 0s - loss: 22.9800 - mean_absolute_error: 3.3811 - val_loss: 12.4903 - val_mean_absolute_error: 2.5777

365 Epoch 147/10000

366 - 0s - loss: 17.5006 -

```
366  mean_absolute_error: 3.0892 - val_loss
     : 12.9034 - val_mean_absolute_error: 2.
     6570
367  Epoch 148/10000
368   - 0s - loss: 22.3944 -
     mean_absolute_error: 3.3560 - val_loss
     : 12.6303 - val_mean_absolute_error: 2.
     5786
369  Epoch 149/10000
370   - 0s - loss: 17.2608 -
     mean_absolute_error: 2.9074 - val_loss
     : 11.9831 - val_mean_absolute_error: 2.
     6280
371  Epoch 150/10000
372   - 0s - loss: 18.4430 -
     mean_absolute_error: 3.1057 - val_loss
     : 12.1260 - val_mean_absolute_error: 2.
     5453
373
374  Epoch 00150: saving model to ./model/
     model_best.h5
375  Epoch 151/10000
376   - 0s - loss: 21.8887 -
     mean_absolute_error: 3.4884 - val_loss
```

376 : 12.0285 - val_mean_absolute_error: 2.6071

377 Epoch 152/10000

378 - 0s - loss: 20.4878 - mean_absolute_error: 3.1021 - val_loss: 13.0847 - val_mean_absolute_error: 2.8004

379 Epoch 153/10000

380 - 0s - loss: 20.3392 - mean_absolute_error: 3.2942 - val_loss: 12.0568 - val_mean_absolute_error: 2.6390

381 Epoch 154/10000

382 - 0s - loss: 20.4135 - mean_absolute_error: 3.2507 - val_loss: 12.1221 - val_mean_absolute_error: 2.7019

383 Epoch 155/10000

384 - 0s - loss: 16.2324 - mean_absolute_error: 3.0194 - val_loss: 11.7185 - val_mean_absolute_error: 2.5665

385 Epoch 156/10000

386 - 0s - loss: 18.0156 -

386 mean_absolute_error: 3.0458 - val_loss: 12.3354 - val_mean_absolute_error: 2.6185

387 Epoch 157/10000

388 - 0s - loss: 17.6352 - mean_absolute_error: 3.1378 - val_loss: 12.0483 - val_mean_absolute_error: 2.6107

389 Epoch 158/10000

390 - 0s - loss: 24.0184 - mean_absolute_error: 3.4167 - val_loss: 12.3099 - val_mean_absolute_error: 2.5996

391 Epoch 159/10000

392 - 0s - loss: 18.4451 - mean_absolute_error: 3.1755 - val_loss: 12.3724 - val_mean_absolute_error: 2.6196

393 Epoch 160/10000

394 - 0s - loss: 17.3422 - mean_absolute_error: 2.9758 - val_loss: 12.4419 - val_mean_absolute_error: 2.6324

395

396 Epoch 00160: saving model to ./model/model_best.h5

397 Epoch 161/10000

398 - 0s - loss: 17.7402 - mean_absolute_error: 3.1484 - val_loss: 12.3449 - val_mean_absolute_error: 2.6021

399 Epoch 162/10000

400 - 0s - loss: 17.6350 - mean_absolute_error: 2.9880 - val_loss: 13.4061 - val_mean_absolute_error: 2.7609

401 Epoch 163/10000

402 - 0s - loss: 20.3174 - mean_absolute_error: 3.3153 - val_loss: 13.0097 - val_mean_absolute_error: 2.7667

403 Epoch 164/10000

404 - 0s - loss: 19.2180 - mean_absolute_error: 3.2110 - val_loss: 11.4287 - val_mean_absolute_error: 2.5262

405 Epoch 165/10000

406 - 0s - loss: 20.3728 -

406 mean_absolute_error: 3.1662 - val_loss: 13.6125 - val_mean_absolute_error: 2.8538

407 Epoch 166/10000

408 - 0s - loss: 17.6886 - mean_absolute_error: 3.1023 - val_loss: 13.1537 - val_mean_absolute_error: 2.8064

409 Epoch 167/10000

410 - 0s - loss: 21.6655 - mean_absolute_error: 3.2575 - val_loss: 12.4317 - val_mean_absolute_error: 2.6840

411 Epoch 168/10000

412 - 0s - loss: 18.0353 - mean_absolute_error: 3.1577 - val_loss: 12.2426 - val_mean_absolute_error: 2.6564

413 Epoch 169/10000

414 - 0s - loss: 18.0541 - mean_absolute_error: 3.0675 - val_loss: 12.7904 - val_mean_absolute_error: 2.6309

415 Epoch 170/10000

416   - 0s - loss: 19.0934 - mean_absolute_error: 3.0293 - val_loss: 12.5903 - val_mean_absolute_error: 2.6769

417

418 Epoch 00170: saving model to ./model/model_best.h5

419 Epoch 171/10000

420   - 0s - loss: 21.8668 - mean_absolute_error: 3.2399 - val_loss: 13.7565 - val_mean_absolute_error: 2.7733

421 Epoch 172/10000

422   - 0s - loss: 18.0038 - mean_absolute_error: 3.1254 - val_loss: 12.6531 - val_mean_absolute_error: 2.6521

423 Epoch 173/10000

424   - 0s - loss: 15.6618 - mean_absolute_error: 2.8494 - val_loss: 13.7669 - val_mean_absolute_error: 2.8037

425 Epoch 174/10000

426   - 0s - loss: 18.3935 -

426 mean_absolute_error: 3.0842 - val_loss: 13.2138 - val_mean_absolute_error: 2.6068

427 Epoch 175/10000

428 - 0s - loss: 18.4775 - mean_absolute_error: 3.0144 - val_loss: 12.3778 - val_mean_absolute_error: 2.7265

429 Epoch 176/10000

430 - 0s - loss: 18.7748 - mean_absolute_error: 3.2087 - val_loss: 12.1940 - val_mean_absolute_error: 2.5743

431 Epoch 177/10000

432 - 0s - loss: 17.8176 - mean_absolute_error: 3.0848 - val_loss: 12.3778 - val_mean_absolute_error: 2.6458

433 Epoch 178/10000

434 - 0s - loss: 16.5418 - mean_absolute_error: 3.0441 - val_loss: 12.2747 - val_mean_absolute_error: 2.6435

435 Epoch 179/10000

```
436   - 0s - loss: 19.5304 -
      mean_absolute_error: 3.1491 - val_loss
      : 14.8114 - val_mean_absolute_error: 2.
      8797
437   Epoch 180/10000
438   - 0s - loss: 18.6394 -
      mean_absolute_error: 3.2377 - val_loss
      : 13.1974 - val_mean_absolute_error: 2.
      7250
439
440   Epoch 00180: saving model to ./model/
      model_best.h5
441   Epoch 181/10000
442   - 0s - loss: 18.8817 -
      mean_absolute_error: 3.1721 - val_loss
      : 13.1686 - val_mean_absolute_error: 2.
      7858
443   Epoch 182/10000
444   - 0s - loss: 16.4728 -
      mean_absolute_error: 3.1643 - val_loss
      : 13.6162 - val_mean_absolute_error: 2.
      8010
445   Epoch 183/10000
446   - 0s - loss: 18.1520 -
```

446 mean_absolute_error: 3.0901 - val_loss: 12.3086 - val_mean_absolute_error: 2.6203

447 Epoch 184/10000

448 - 0s - loss: 17.5201 - mean_absolute_error: 3.1064 - val_loss: 12.7356 - val_mean_absolute_error: 2.6631

449 Epoch 185/10000

450 - 0s - loss: 16.7662 - mean_absolute_error: 3.0445 - val_loss: 12.8446 - val_mean_absolute_error: 2.7400

451 Epoch 186/10000

452 - 0s - loss: 18.1518 - mean_absolute_error: 3.1030 - val_loss: 13.9596 - val_mean_absolute_error: 2.8930

453 Epoch 187/10000

454 - 0s - loss: 18.1441 - mean_absolute_error: 3.1337 - val_loss: 12.0879 - val_mean_absolute_error: 2.6646

455 Epoch 188/10000

456 - 0s - loss: 14.3131 - mean_absolute_error: 2.6820 - val_loss: 12.6522 - val_mean_absolute_error: 2.6646

457 Epoch 189/10000

458 - 0s - loss: 17.6957 - mean_absolute_error: 3.2210 - val_loss: 11.8217 - val_mean_absolute_error: 2.6166

459 Epoch 190/10000

460 - 0s - loss: 20.6213 - mean_absolute_error: 3.1484 - val_loss: 11.5731 - val_mean_absolute_error: 2.6593

461

462 Epoch 00190: saving model to ./model/model_best.h5

463 Epoch 191/10000

464 - 0s - loss: 18.5293 - mean_absolute_error: 3.1072 - val_loss: 13.7409 - val_mean_absolute_error: 2.8653

465 Epoch 192/10000

466 - 0s - loss: 20.0449 -

466 mean_absolute_error: 3.2646 - val_loss: 11.1444 - val_mean_absolute_error: 2.5985

467 Epoch 193/10000

468 - 0s - loss: 16.1682 - mean_absolute_error: 2.8815 - val_loss: 11.6944 - val_mean_absolute_error: 2.6345

469 Epoch 194/10000

470 - 0s - loss: 17.5300 - mean_absolute_error: 3.0492 - val_loss: 10.7952 - val_mean_absolute_error: 2.5031

471 Epoch 195/10000

472 - 0s - loss: 16.8692 - mean_absolute_error: 3.0498 - val_loss: 11.5520 - val_mean_absolute_error: 2.5825

473 Epoch 196/10000

474 - 0s - loss: 19.6347 - mean_absolute_error: 3.1735 - val_loss: 11.8327 - val_mean_absolute_error: 2.6330

475 Epoch 197/10000

```
476    - 0s - loss: 18.4027 -
       mean_absolute_error: 3.0529 - val_loss
       : 11.5825 - val_mean_absolute_error: 2.
       5626
477    Epoch 198/10000
478    - 0s - loss: 15.4531 -
       mean_absolute_error: 2.8992 - val_loss
       : 12.4518 - val_mean_absolute_error: 2.
       7484
479    Epoch 199/10000
480    - 0s - loss: 18.6348 -
       mean_absolute_error: 3.0828 - val_loss
       : 11.4694 - val_mean_absolute_error: 2.
       5887
481    Epoch 200/10000
482    - 0s - loss: 18.0363 -
       mean_absolute_error: 3.0787 - val_loss
       : 11.7279 - val_mean_absolute_error: 2.
       6262
483
484    Epoch 00200: saving model to ./model/
       model_best.h5
485    Epoch 201/10000
486    - 0s - loss: 17.7124 -
```

486 mean_absolute_error: 3.1137 - val_loss: 12.4613 - val_mean_absolute_error: 2.7266

487 Epoch 202/10000

488   - 0s - loss: 18.6338 - mean_absolute_error: 3.2192 - val_loss: 11.5402 - val_mean_absolute_error: 2.5765

489 Epoch 203/10000

490   - 0s - loss: 19.2872 - mean_absolute_error: 3.0813 - val_loss: 13.3794 - val_mean_absolute_error: 2.7786

491 Epoch 204/10000

492   - 0s - loss: 17.1296 - mean_absolute_error: 2.9287 - val_loss: 14.7779 - val_mean_absolute_error: 2.9374

493 Epoch 205/10000

494   - 0s - loss: 17.5507 - mean_absolute_error: 3.0849 - val_loss: 11.6263 - val_mean_absolute_error: 2.6138

495 Epoch 206/10000

496   - 0s - loss: 18.5867 - mean_absolute_error: 3.1921 - val_loss: 12.3020 - val_mean_absolute_error: 2.6665

497 Epoch 207/10000

498   - 0s - loss: 19.2124 - mean_absolute_error: 3.1173 - val_loss: 12.1033 - val_mean_absolute_error: 2.5904

499 Epoch 208/10000

500   - 0s - loss: 16.3775 - mean_absolute_error: 3.0257 - val_loss: 12.0624 - val_mean_absolute_error: 2.5612

501 Epoch 209/10000

502   - 0s - loss: 15.9561 - mean_absolute_error: 2.8654 - val_loss: 12.0512 - val_mean_absolute_error: 2.5688

503 Epoch 210/10000

504   - 0s - loss: 15.9314 - mean_absolute_error: 2.8925 - val_loss: 11.2798 - val_mean_absolute_error: 2.5213

505

506 Epoch 00210: saving model to ./model/model_best.h5

507 Epoch 211/10000

508 - 0s - loss: 19.9481 - mean_absolute_error: 3.1276 - val_loss: 11.5776 - val_mean_absolute_error: 2.5706

509 Epoch 212/10000

510 - 0s - loss: 20.2375 - mean_absolute_error: 3.0815 - val_loss: 11.9642 - val_mean_absolute_error: 2.5331

511 Epoch 213/10000

512 - 0s - loss: 18.1532 - mean_absolute_error: 3.0974 - val_loss: 12.0870 - val_mean_absolute_error: 2.6055

513 Epoch 214/10000

514 - 0s - loss: 15.8583 - mean_absolute_error: 2.9116 - val_loss: 11.3803 - val_mean_absolute_error: 2.5688

515 Epoch 215/10000

516   - 0s - loss: 17.8076 - mean_absolute_error: 3.0649 - val_loss: 11.9667 - val_mean_absolute_error: 2.5640

517 Epoch 216/10000

518   - 0s - loss: 20.4097 - mean_absolute_error: 3.2143 - val_loss: 11.6911 - val_mean_absolute_error: 2.4875

519 Epoch 217/10000

520   - 0s - loss: 15.5928 - mean_absolute_error: 2.9433 - val_loss: 11.5383 - val_mean_absolute_error: 2.5445

521 Epoch 218/10000

522   - 0s - loss: 16.8684 - mean_absolute_error: 2.9659 - val_loss: 11.3009 - val_mean_absolute_error: 2.5695

523 Epoch 219/10000

524   - 0s - loss: 15.0054 - mean_absolute_error: 2.9377 - val_loss: 11.0551 - val_mean_absolute_error: 2.5654

```
525  Epoch 220/10000
526   - 0s - loss: 14.5755 -
     mean_absolute_error: 2.7739 - val_loss
     : 11.5387 - val_mean_absolute_error: 2.
     6700
527
528  Epoch 00220: saving model to ./model/
     model_best.h5
529  Epoch 221/10000
530   - 0s - loss: 21.0659 -
     mean_absolute_error: 3.2519 - val_loss
     : 11.2423 - val_mean_absolute_error: 2.
     5148
531  Epoch 222/10000
532   - 0s - loss: 19.0811 -
     mean_absolute_error: 3.1327 - val_loss
     : 11.6373 - val_mean_absolute_error: 2.
     5807
533  Epoch 223/10000
534   - 0s - loss: 17.7457 -
     mean_absolute_error: 3.0296 - val_loss
     : 11.7922 - val_mean_absolute_error: 2.
     6544
535  Epoch 224/10000
```

536   - 0s - loss: 19.4856 - mean_absolute_error: 3.1980 - val_loss: 11.5251 - val_mean_absolute_error: 2.5841

537 Epoch 225/10000

538   - 0s - loss: 16.3790 - mean_absolute_error: 2.8362 - val_loss: 11.5033 - val_mean_absolute_error: 2.6035

539 Epoch 226/10000

540   - 0s - loss: 15.9522 - mean_absolute_error: 2.8002 - val_loss: 11.0182 - val_mean_absolute_error: 2.5131

541 Epoch 227/10000

542   - 0s - loss: 16.3778 - mean_absolute_error: 2.9906 - val_loss: 11.9498 - val_mean_absolute_error: 2.5592

543 Epoch 228/10000

544   - 0s - loss: 18.6612 - mean_absolute_error: 3.1422 - val_loss: 11.2579 - val_mean_absolute_error: 2.4777

```
545  Epoch 229/10000
546   - 0s - loss: 18.6652 -
     mean_absolute_error: 3.0903 - val_loss
     : 12.1228 - val_mean_absolute_error: 2.
     6646
547  Epoch 230/10000
548   - 0s - loss: 19.0875 -
     mean_absolute_error: 3.1379 - val_loss
     : 11.6939 - val_mean_absolute_error: 2.
     6202
549
550  Epoch 00230: saving model to ./model/
     model_best.h5
551  Epoch 231/10000
552   - 0s - loss: 18.9797 -
     mean_absolute_error: 3.2115 - val_loss
     : 11.0239 - val_mean_absolute_error: 2.
     4364
553  Epoch 232/10000
554   - 0s - loss: 15.0564 -
     mean_absolute_error: 2.8719 - val_loss
     : 11.8507 - val_mean_absolute_error: 2.
     5748
555  Epoch 233/10000
```

556   - 0s - loss: 17.3198 - mean_absolute_error: 3.0918 - val_loss: 11.7547 - val_mean_absolute_error: 2.6204

557 Epoch 234/10000

558   - 0s - loss: 23.1107 - mean_absolute_error: 3.3178 - val_loss: 11.3748 - val_mean_absolute_error: 2.5564

559 Epoch 235/10000

560   - 0s - loss: 18.0629 - mean_absolute_error: 3.0214 - val_loss: 11.5255 - val_mean_absolute_error: 2.5853

561 Epoch 236/10000

562   - 0s - loss: 18.3382 - mean_absolute_error: 2.9936 - val_loss: 12.1526 - val_mean_absolute_error: 2.5423

563 Epoch 237/10000

564   - 0s - loss: 17.2632 - mean_absolute_error: 3.1475 - val_loss: 12.2133 - val_mean_absolute_error: 2.5359

```
565  Epoch 238/10000
566   - 0s - loss: 14.9704 -
     mean_absolute_error: 3.0102 - val_loss
     : 12.2571 - val_mean_absolute_error: 2.
     6158
567  Epoch 239/10000
568   - 0s - loss: 16.3860 -
     mean_absolute_error: 3.1227 - val_loss
     : 11.7557 - val_mean_absolute_error: 2.
     5580
569  Epoch 240/10000
570   - 0s - loss: 18.7236 -
     mean_absolute_error: 3.1709 - val_loss
     : 11.5305 - val_mean_absolute_error: 2.
     5611
571
572  Epoch 00240: saving model to ./model/
     model_best.h5
573  Epoch 241/10000
574   - 0s - loss: 18.2987 -
     mean_absolute_error: 3.0282 - val_loss
     : 10.8726 - val_mean_absolute_error: 2.
     4964
575  Epoch 242/10000
```

```
576    - 0s - loss: 16.9385 -
mean_absolute_error: 3.1117 - val_loss
: 10.7979 - val_mean_absolute_error: 2.
4983
577  Epoch 243/10000
578    - 0s - loss: 17.3142 -
mean_absolute_error: 3.0996 - val_loss
: 11.3466 - val_mean_absolute_error: 2.
5263
579  Epoch 244/10000
580    - 0s - loss: 16.8982 -
mean_absolute_error: 3.0161 - val_loss
: 10.7001 - val_mean_absolute_error: 2.
4451
581  Epoch 245/10000
582    - 0s - loss: 15.6230 -
mean_absolute_error: 2.8555 - val_loss
: 10.6644 - val_mean_absolute_error: 2.
5315
583  Epoch 246/10000
584    - 0s - loss: 16.1269 -
mean_absolute_error: 2.9605 - val_loss
: 10.8499 - val_mean_absolute_error: 2.
4685
```

```
585  Epoch 247/10000
586   - 0s - loss: 16.4680 -
mean_absolute_error: 3.0132 - val_loss
: 10.9458 - val_mean_absolute_error: 2.
5180
587  Epoch 248/10000
588   - 0s - loss: 14.0494 -
mean_absolute_error: 2.6902 - val_loss
: 11.5506 - val_mean_absolute_error: 2.
4926
589  Epoch 249/10000
590   - 0s - loss: 19.0961 -
mean_absolute_error: 3.1308 - val_loss
: 11.5650 - val_mean_absolute_error: 2.
4838
591  Epoch 250/10000
592   - 0s - loss: 15.5646 -
mean_absolute_error: 2.9453 - val_loss
: 12.1059 - val_mean_absolute_error: 2.
5098
593
594  Epoch 00250: saving model to ./model/
model_best.h5
595  Epoch 251/10000
```

```
596    - 0s - loss: 18.8099 -
mean_absolute_error: 3.1673 - val_loss
: 11.8630 - val_mean_absolute_error: 2.
5354
597  Epoch 252/10000
598    - 0s - loss: 18.2716 -
mean_absolute_error: 3.0846 - val_loss
: 11.2827 - val_mean_absolute_error: 2.
4699
599  Epoch 253/10000
600    - 0s - loss: 18.6380 -
mean_absolute_error: 3.2222 - val_loss
: 11.2127 - val_mean_absolute_error: 2.
5004
601  Epoch 254/10000
602    - 0s - loss: 16.5098 -
mean_absolute_error: 3.0000 - val_loss
: 11.1034 - val_mean_absolute_error: 2.
5067
603  Epoch 255/10000
604    - 0s - loss: 17.4312 -
mean_absolute_error: 3.0936 - val_loss
: 11.8316 - val_mean_absolute_error: 2.
5127
```

605 Epoch 256/10000
606   - 0s - loss: 18.8937 - mean_absolute_error: 3.2316 - val_loss: 12.5931 - val_mean_absolute_error: 2.7463
607 Epoch 257/10000
608   - 0s - loss: 16.5692 - mean_absolute_error: 2.7661 - val_loss: 10.9620 - val_mean_absolute_error: 2.4824
609 Epoch 258/10000
610   - 0s - loss: 19.0774 - mean_absolute_error: 3.1103 - val_loss: 10.8777 - val_mean_absolute_error: 2.4648
611 Epoch 259/10000
612   - 0s - loss: 15.4760 - mean_absolute_error: 2.8293 - val_loss: 11.6382 - val_mean_absolute_error: 2.5890
613 Epoch 260/10000
614   - 0s - loss: 17.8106 - mean_absolute_error: 3.0191 - val_loss: 11.7999 - val_mean_absolute_error: 2.

614 5112

615

616 Epoch 00260: saving model to ./model/model_best.h5

617 Epoch 261/10000

618 - 0s - loss: 15.4205 - mean_absolute_error: 2.9920 - val_loss: 11.4301 - val_mean_absolute_error: 2.5073

619 Epoch 262/10000

620 - 0s - loss: 16.6445 - mean_absolute_error: 2.9795 - val_loss: 11.5081 - val_mean_absolute_error: 2.4687

621 Epoch 263/10000

622 - 0s - loss: 17.9437 - mean_absolute_error: 2.9251 - val_loss: 10.8628 - val_mean_absolute_error: 2.4388

623 Epoch 264/10000

624 - 0s - loss: 17.8543 - mean_absolute_error: 3.0540 - val_loss: 11.4847 - val_mean_absolute_error: 2.4700

625 Epoch 265/10000
626 - 0s - loss: 17.6045 - mean_absolute_error: 2.9799 - val_loss: 10.8169 - val_mean_absolute_error: 2.4531
627 Epoch 266/10000
628 - 0s - loss: 14.3749 - mean_absolute_error: 2.7917 - val_loss: 11.4505 - val_mean_absolute_error: 2.5104
629 Epoch 267/10000
630 - 0s - loss: 17.2565 - mean_absolute_error: 2.9660 - val_loss: 12.9190 - val_mean_absolute_error: 2.6851
631 Epoch 268/10000
632 - 0s - loss: 16.0632 - mean_absolute_error: 3.0080 - val_loss: 12.0892 - val_mean_absolute_error: 2.5684
633 Epoch 269/10000
634 - 0s - loss: 16.9325 - mean_absolute_error: 2.9224 - val_loss: 10.9619 - val_mean_absolute_error: 2.

634 4439

635 Epoch 270/10000

636 - 0s - loss: 13.9301 - mean_absolute_error: 2.7920 - val_loss: 11.1146 - val_mean_absolute_error: 2.4838

637

638 Epoch 00270: saving model to ./model/model_best.h5

639 Epoch 271/10000

640 - 0s - loss: 13.3790 - mean_absolute_error: 2.7245 - val_loss: 11.5279 - val_mean_absolute_error: 2.5468

641 Epoch 272/10000

642 - 0s - loss: 14.2588 - mean_absolute_error: 2.8603 - val_loss: 11.4559 - val_mean_absolute_error: 2.5152

643 Epoch 273/10000

644 - 0s - loss: 16.5883 - mean_absolute_error: 2.9210 - val_loss: 12.2458 - val_mean_absolute_error: 2.7015

645 Epoch 274/10000

646 - 0s - loss: 16.5189 - mean_absolute_error: 2.9784 - val_loss: 10.7809 - val_mean_absolute_error: 2.4271

647 Epoch 275/10000

648 - 0s - loss: 17.6957 - mean_absolute_error: 3.0050 - val_loss: 10.6048 - val_mean_absolute_error: 2.4008

649 Epoch 276/10000

650 - 0s - loss: 14.7677 - mean_absolute_error: 2.8295 - val_loss: 11.4591 - val_mean_absolute_error: 2.5248

651 Epoch 277/10000

652 - 0s - loss: 15.9102 - mean_absolute_error: 2.8686 - val_loss: 11.4345 - val_mean_absolute_error: 2.4689

653 Epoch 278/10000

654 - 0s - loss: 15.9538 - mean_absolute_error: 2.9019 - val_loss: 11.3093 - val_mean_absolute_error: 2.

654 5242

655 Epoch 279/10000

656 - 0s - loss: 17.7838 - mean_absolute_error: 3.0331 - val_loss: 11.7065 - val_mean_absolute_error: 2.5318

657 Epoch 280/10000

658 - 0s - loss: 12.9079 - mean_absolute_error: 2.6934 - val_loss: 11.0164 - val_mean_absolute_error: 2.5081

659

660 Epoch 00280: saving model to ./model/model_best.h5

661 Epoch 281/10000

662 - 0s - loss: 14.1723 - mean_absolute_error: 2.7438 - val_loss: 12.5625 - val_mean_absolute_error: 2.5171

663 Epoch 282/10000

664 - 0s - loss: 15.5616 - mean_absolute_error: 2.8470 - val_loss: 11.1978 - val_mean_absolute_error: 2.4919

665 Epoch 283/10000

666 - 0s - loss: 15.3817 - mean_absolute_error: 2.8801 - val_loss: 12.7400 - val_mean_absolute_error: 2.6880

667 Epoch 284/10000

668 - 0s - loss: 17.7835 - mean_absolute_error: 3.0026 - val_loss: 10.5915 - val_mean_absolute_error: 2.4121

669 Epoch 285/10000

670 - 0s - loss: 16.2184 - mean_absolute_error: 2.9934 - val_loss: 11.2130 - val_mean_absolute_error: 2.5059

671 Epoch 286/10000

672 - 0s - loss: 15.8085 - mean_absolute_error: 2.9198 - val_loss: 11.3879 - val_mean_absolute_error: 2.4730

673 Epoch 287/10000

674 - 0s - loss: 15.6486 - mean_absolute_error: 2.9120 - val_loss: 11.2779 - val_mean_absolute_error: 2.

674 5321

675 Epoch 288/10000

676 - 0s - loss: 15.9050 - mean_absolute_error: 2.9645 - val_loss: 11.4197 - val_mean_absolute_error: 2.4818

677 Epoch 289/10000

678 - 0s - loss: 14.8050 - mean_absolute_error: 2.8550 - val_loss: 14.1025 - val_mean_absolute_error: 2.8219

679 Epoch 290/10000

680 - 0s - loss: 16.8203 - mean_absolute_error: 3.0669 - val_loss: 11.1341 - val_mean_absolute_error: 2.4760

681

682 Epoch 00290: saving model to ./model/model_best.h5

683 Epoch 291/10000

684 - 0s - loss: 15.8045 - mean_absolute_error: 2.9378 - val_loss: 11.3726 - val_mean_absolute_error: 2.5379

685 Epoch 292/10000
686 - 0s - loss: 17.1883 - mean_absolute_error: 3.0071 - val_loss: 11.8727 - val_mean_absolute_error: 2.5486
687 Epoch 293/10000
688 - 0s - loss: 14.8841 - mean_absolute_error: 2.7898 - val_loss: 11.4105 - val_mean_absolute_error: 2.5045
689 Epoch 294/10000
690 - 0s - loss: 16.0024 - mean_absolute_error: 2.8135 - val_loss: 11.5857 - val_mean_absolute_error: 2.6020
691 Epoch 295/10000
692 - 0s - loss: 13.9179 - mean_absolute_error: 2.8338 - val_loss: 10.6507 - val_mean_absolute_error: 2.4096
693 Epoch 296/10000
694 - 0s - loss: 17.0729 - mean_absolute_error: 3.0090 - val_loss: 11.2929 - val_mean_absolute_error: 2.

694 4772

695 Epoch 297/10000

696 - 0s - loss: 18.6193 - mean_absolute_error: 3.1748 - val_loss: 13.3473 - val_mean_absolute_error: 2.7747

697 Epoch 298/10000

698 - 0s - loss: 14.2770 - mean_absolute_error: 2.8537 - val_loss: 11.8642 - val_mean_absolute_error: 2.5319

699 Epoch 299/10000

700 - 0s - loss: 17.1964 - mean_absolute_error: 2.9757 - val_loss: 12.6926 - val_mean_absolute_error: 2.6446

701 Epoch 300/10000

702 - 0s - loss: 15.8464 - mean_absolute_error: 2.8980 - val_loss: 13.8935 - val_mean_absolute_error: 2.8459

703

704 Epoch 00300: saving model to ./model/model_best.h5

```
705 Epoch 301/10000
706  - 0s - loss: 18.8681 -
mean_absolute_error: 3.0974 - val_loss
: 12.2769 - val_mean_absolute_error: 2.
5388
707 Epoch 302/10000
708  - 0s - loss: 17.3454 -
mean_absolute_error: 2.9080 - val_loss
: 12.1046 - val_mean_absolute_error: 2.
6029
709 Epoch 303/10000
710  - 0s - loss: 19.2332 -
mean_absolute_error: 3.0283 - val_loss
: 13.1848 - val_mean_absolute_error: 2.
7041
711 Epoch 304/10000
712  - 0s - loss: 15.4070 -
mean_absolute_error: 2.9110 - val_loss
: 11.3476 - val_mean_absolute_error: 2.
4770
713 Epoch 305/10000
714  - 0s - loss: 15.9820 -
mean_absolute_error: 3.0026 - val_loss
: 11.3192 - val_mean_absolute_error: 2.
```

714 5440
715 Epoch 306/10000
716 - 0s - loss: 21.0073 - mean_absolute_error: 3.1406 - val_loss: 11.0470 - val_mean_absolute_error: 2.4796
717 Epoch 307/10000
718 - 0s - loss: 16.1500 - mean_absolute_error: 2.8639 - val_loss: 11.6137 - val_mean_absolute_error: 2.5268
719 Epoch 308/10000
720 - 0s - loss: 14.3241 - mean_absolute_error: 2.7808 - val_loss: 12.0193 - val_mean_absolute_error: 2.5389
721 Epoch 309/10000
722 - 0s - loss: 14.6704 - mean_absolute_error: 2.7701 - val_loss: 12.5367 - val_mean_absolute_error: 2.6098
723 Epoch 310/10000
724 - 0s - loss: 13.6870 - mean_absolute_error: 2.7116 - val_loss

724 `: 11.5775 - val_mean_absolute_error: 2.5534`

725

726 `Epoch 00310: saving model to ./model/model_best.h5`

727 `Epoch 311/10000`

728 ` - 0s - loss: 14.9481 - mean_absolute_error: 2.6940 - val_loss: 11.4463 - val_mean_absolute_error: 2.5121`

729 `Epoch 312/10000`

730 ` - 0s - loss: 18.0479 - mean_absolute_error: 2.9699 - val_loss: 11.4579 - val_mean_absolute_error: 2.5307`

731 `Epoch 313/10000`

732 ` - 0s - loss: 14.2772 - mean_absolute_error: 2.7902 - val_loss: 12.6667 - val_mean_absolute_error: 2.6351`

733 `Epoch 314/10000`

734 ` - 0s - loss: 17.5672 - mean_absolute_error: 2.9044 - val_loss: 11.4344 - val_mean_absolute_error: 2.`

734 4946
735 Epoch 315/10000
736 - 0s - loss: 17.1758 - mean_absolute_error: 3.0058 - val_loss: 11.8893 - val_mean_absolute_error: 2.5452
737 Epoch 316/10000
738 - 0s - loss: 15.6847 - mean_absolute_error: 2.9149 - val_loss: 11.5839 - val_mean_absolute_error: 2.5347
739 Epoch 317/10000
740 - 0s - loss: 13.6808 - mean_absolute_error: 2.8042 - val_loss: 11.7636 - val_mean_absolute_error: 2.5496
741 Epoch 318/10000
742 - 0s - loss: 14.2013 - mean_absolute_error: 2.8214 - val_loss: 11.2496 - val_mean_absolute_error: 2.5089
743 Epoch 319/10000
744 - 0s - loss: 14.6295 - mean_absolute_error: 2.8369 - val_loss

```
744 : 13.8791 - val_mean_absolute_error: 2.
8453
745 Epoch 320/10000
746  - 0s - loss: 14.9571 -
mean_absolute_error: 2.7932 - val_loss
: 11.1885 - val_mean_absolute_error: 2.
5202
747
748 Epoch 00320: saving model to ./model/
model_best.h5
749 Epoch 321/10000
750  - 0s - loss: 18.0221 -
mean_absolute_error: 3.0203 - val_loss
: 10.8164 - val_mean_absolute_error: 2.
5183
751 Epoch 322/10000
752  - 0s - loss: 15.6438 -
mean_absolute_error: 2.9098 - val_loss
: 11.6048 - val_mean_absolute_error: 2.
4720
753 Epoch 323/10000
754  - 0s - loss: 15.0612 -
mean_absolute_error: 2.7622 - val_loss
: 12.4360 - val_mean_absolute_error: 2.
```

```
754 6641
755 Epoch 324/10000
756  - 0s - loss: 17.0060 -
mean_absolute_error: 2.9604 - val_loss
: 11.5010 - val_mean_absolute_error: 2.
5040
757 Epoch 325/10000
758  - 0s - loss: 12.8505 -
mean_absolute_error: 2.5935 - val_loss
: 11.7827 - val_mean_absolute_error: 2.
5120
759 Epoch 326/10000
760  - 0s - loss: 17.2261 -
mean_absolute_error: 2.9947 - val_loss
: 12.2396 - val_mean_absolute_error: 2.
5646
761 Epoch 327/10000
762  - 0s - loss: 18.7316 -
mean_absolute_error: 3.1350 - val_loss
: 11.2768 - val_mean_absolute_error: 2.
4647
763 Epoch 328/10000
764  - 0s - loss: 13.7959 -
mean_absolute_error: 2.7587 - val_loss
```

764 : 12.7131 - val_mean_absolute_error: 2.6307

765 Epoch 329/10000

766 - 0s - loss: 15.6827 - mean_absolute_error: 2.8482 - val_loss: 13.7656 - val_mean_absolute_error: 2.7559

767 Epoch 330/10000

768 - 0s - loss: 14.8756 - mean_absolute_error: 2.8284 - val_loss: 11.5679 - val_mean_absolute_error: 2.4877

769

770 Epoch 00330: saving model to ./model/model_best.h5

771 Epoch 331/10000

772 - 0s - loss: 13.5794 - mean_absolute_error: 2.7996 - val_loss: 11.1004 - val_mean_absolute_error: 2.5242

773 Epoch 332/10000

774 - 0s - loss: 12.4661 - mean_absolute_error: 2.5413 - val_loss: 10.9010 - val_mean_absolute_error: 2.

774 5073
775 Epoch 333/10000
776 - 0s - loss: 13.5459 - mean_absolute_error: 2.6972 - val_loss: 10.8415 - val_mean_absolute_error: 2.4411
777 Epoch 334/10000
778 - 0s - loss: 16.9239 - mean_absolute_error: 3.0478 - val_loss: 10.6354 - val_mean_absolute_error: 2.4372
779 Epoch 335/10000
780 - 0s - loss: 14.5730 - mean_absolute_error: 2.7719 - val_loss: 10.4871 - val_mean_absolute_error: 2.3792
781 Epoch 336/10000
782 - 0s - loss: 14.3841 - mean_absolute_error: 2.7203 - val_loss: 11.6019 - val_mean_absolute_error: 2.6271
783 Epoch 337/10000
784 - 0s - loss: 14.2434 - mean_absolute_error: 2.8586 - val_loss

```
784  : 11.1680 - val_mean_absolute_error: 2.
     4799
785  Epoch 338/10000
786   - 0s - loss: 17.7798 -
     mean_absolute_error: 3.1174 - val_loss
     : 12.0559 - val_mean_absolute_error: 2.
     6232
787  Epoch 339/10000
788   - 0s - loss: 15.4448 -
     mean_absolute_error: 2.8191 - val_loss
     : 13.1020 - val_mean_absolute_error: 2.
     7797
789  Epoch 340/10000
790   - 0s - loss: 16.9903 -
     mean_absolute_error: 2.9391 - val_loss
     : 10.9826 - val_mean_absolute_error: 2.
     4676
791
792  Epoch 00340: saving model to ./model/
     model_best.h5
793  Epoch 341/10000
794   - 0s - loss: 16.1395 -
     mean_absolute_error: 2.9481 - val_loss
     : 10.5551 - val_mean_absolute_error: 2.
```

```
794 4316
795 Epoch 342/10000
796  - 0s - loss: 13.3942 -
mean_absolute_error: 2.7723 - val_loss
: 11.1637 - val_mean_absolute_error: 2.
4961
797 Epoch 343/10000
798  - 0s - loss: 16.6841 -
mean_absolute_error: 2.9598 - val_loss
: 11.2972 - val_mean_absolute_error: 2.
4784
799 Epoch 344/10000
800  - 0s - loss: 16.5609 -
mean_absolute_error: 3.0157 - val_loss
: 10.7969 - val_mean_absolute_error: 2.
4381
801 Epoch 345/10000
802  - 0s - loss: 14.0965 -
mean_absolute_error: 2.8005 - val_loss
: 10.5508 - val_mean_absolute_error: 2.
3979
803 Epoch 346/10000
804  - 0s - loss: 16.3499 -
mean_absolute_error: 3.0356 - val_loss
```

804 : 10.8938 - val_mean_absolute_error: 2.4467

805 Epoch 347/10000

806 - 0s - loss: 17.5918 - mean_absolute_error: 3.0680 - val_loss: 12.0053 - val_mean_absolute_error: 2.5945

807 Epoch 348/10000

808 - 0s - loss: 18.3310 - mean_absolute_error: 3.0853 - val_loss: 12.0452 - val_mean_absolute_error: 2.5972

809 Epoch 349/10000

810 - 0s - loss: 14.3386 - mean_absolute_error: 2.9125 - val_loss: 10.9686 - val_mean_absolute_error: 2.4667

811 Epoch 350/10000

812 - 0s - loss: 17.4217 - mean_absolute_error: 2.9650 - val_loss: 11.0462 - val_mean_absolute_error: 2.4989

813

814 Epoch 00350: saving model to ./model/

```
814  model_best.h5
815  Epoch 351/10000
816   - 0s - loss: 16.6019 -
     mean_absolute_error: 2.9566 - val_loss
     : 10.3829 - val_mean_absolute_error: 2.
     4214
817  Epoch 352/10000
818   - 0s - loss: 16.5406 -
     mean_absolute_error: 2.9925 - val_loss
     : 10.9027 - val_mean_absolute_error: 2.
     4040
819  Epoch 353/10000
820   - 0s - loss: 17.3442 -
     mean_absolute_error: 2.9529 - val_loss
     : 10.5064 - val_mean_absolute_error: 2.
     4089
821  Epoch 354/10000
822   - 0s - loss: 15.1615 -
     mean_absolute_error: 2.7628 - val_loss
     : 11.0556 - val_mean_absolute_error: 2.
     4768
823  Epoch 355/10000
824   - 0s - loss: 15.6698 -
     mean_absolute_error: 2.9654 - val_loss
```

824 : 11.8311 - val_mean_absolute_error: 2.5512

825 Epoch 356/10000

826 - 0s - loss: 14.3550 - mean_absolute_error: 2.8273 - val_loss: 11.9511 - val_mean_absolute_error: 2.6125

827 Epoch 357/10000

828 - 0s - loss: 15.3590 - mean_absolute_error: 2.8210 - val_loss: 11.4179 - val_mean_absolute_error: 2.5921

829 Epoch 358/10000

830 - 0s - loss: 15.0030 - mean_absolute_error: 2.8481 - val_loss: 10.4812 - val_mean_absolute_error: 2.4431

831 Epoch 359/10000

832 - 0s - loss: 15.5151 - mean_absolute_error: 2.7868 - val_loss: 10.9185 - val_mean_absolute_error: 2.4786

833 Epoch 360/10000

834 - 0s - loss: 15.9059 -

834 `mean_absolute_error: 2.9329 - val_loss: 11.8694 - val_mean_absolute_error: 2.5332`

835

836 `Epoch 00360: saving model to ./model/model_best.h5`

837 `Epoch 361/10000`

838 ` - 0s - loss: 15.4085 - mean_absolute_error: 2.8796 - val_loss: 11.1250 - val_mean_absolute_error: 2.5386`

839 `Epoch 362/10000`

840 ` - 0s - loss: 13.0876 - mean_absolute_error: 2.6601 - val_loss: 11.5068 - val_mean_absolute_error: 2.5667`

841 `Epoch 363/10000`

842 ` - 0s - loss: 15.9200 - mean_absolute_error: 2.8744 - val_loss: 11.4437 - val_mean_absolute_error: 2.4860`

843 `Epoch 364/10000`

844 ` - 0s - loss: 16.9856 - mean_absolute_error: 2.9896 - val_loss`

844 : 11.1736 - val_mean_absolute_error: 2.5166

845 Epoch 365/10000

846 - 0s - loss: 15.6313 - mean_absolute_error: 2.8579 - val_loss: 10.9515 - val_mean_absolute_error: 2.4933

847 Epoch 366/10000

848 - 0s - loss: 15.9011 - mean_absolute_error: 2.8835 - val_loss: 11.2287 - val_mean_absolute_error: 2.4900

849 Epoch 367/10000

850 - 0s - loss: 14.0819 - mean_absolute_error: 2.7899 - val_loss: 10.9493 - val_mean_absolute_error: 2.4650

851 Epoch 368/10000

852 - 0s - loss: 15.6455 - mean_absolute_error: 2.8374 - val_loss: 10.3137 - val_mean_absolute_error: 2.4278

853 Epoch 369/10000

854 - 0s - loss: 12.5166 -

854 mean_absolute_error: 2.5086 - val_loss: 10.8216 - val_mean_absolute_error: 2.4581

855 Epoch 370/10000

856 - 0s - loss: 16.3295 - mean_absolute_error: 2.9310 - val_loss: 10.9275 - val_mean_absolute_error: 2.5000

857

858 Epoch 00370: saving model to ./model/model_best.h5

859 Epoch 371/10000

860 - 0s - loss: 13.5283 - mean_absolute_error: 2.7137 - val_loss: 12.1206 - val_mean_absolute_error: 2.6060

861 Epoch 372/10000

862 - 0s - loss: 14.4781 - mean_absolute_error: 2.8567 - val_loss: 10.9737 - val_mean_absolute_error: 2.4528

863 Epoch 373/10000

864 - 0s - loss: 14.6597 - mean_absolute_error: 2.8327 - val_loss

864 : 10.4912 - val_mean_absolute_error: 2.4264

865 Epoch 374/10000

866 - 0s - loss: 16.1654 - mean_absolute_error: 2.9549 - val_loss: 10.5510 - val_mean_absolute_error: 2.4194

867 Epoch 375/10000

868 - 0s - loss: 14.6736 - mean_absolute_error: 2.8563 - val_loss: 11.1297 - val_mean_absolute_error: 2.4446

869 Epoch 376/10000

870 - 0s - loss: 13.0740 - mean_absolute_error: 2.5297 - val_loss: 10.9640 - val_mean_absolute_error: 2.4795

871 Epoch 377/10000

872 - 0s - loss: 12.8443 - mean_absolute_error: 2.7223 - val_loss: 11.2089 - val_mean_absolute_error: 2.5344

873 Epoch 378/10000

874 - 0s - loss: 14.5347 -

```
874  mean_absolute_error: 2.8924 - val_loss
     : 11.6052 - val_mean_absolute_error: 2.
     4974
875  Epoch 379/10000
876   - 0s - loss: 13.6371 -
     mean_absolute_error: 2.6820 - val_loss
     : 11.5210 - val_mean_absolute_error: 2.
     4939
877  Epoch 380/10000
878   - 0s - loss: 13.4140 -
     mean_absolute_error: 2.7380 - val_loss
     : 12.8163 - val_mean_absolute_error: 2.
     8053
879
880  Epoch 00380: saving model to ./model/
     model_best.h5
881  Epoch 381/10000
882   - 0s - loss: 18.5260 -
     mean_absolute_error: 2.8939 - val_loss
     : 9.9254 - val_mean_absolute_error: 2.
     3565
883  Epoch 382/10000
884   - 0s - loss: 17.2412 -
     mean_absolute_error: 2.9469 - val_loss
```

884 : 10.5650 - val_mean_absolute_error: 2.4393

885 Epoch 383/10000

886 - 0s - loss: 14.8320 - mean_absolute_error: 2.7351 - val_loss: 12.6575 - val_mean_absolute_error: 2.7989

887 Epoch 384/10000

888 - 0s - loss: 13.4311 - mean_absolute_error: 2.7834 - val_loss: 11.1715 - val_mean_absolute_error: 2.5065

889 Epoch 385/10000

890 - 0s - loss: 13.2597 - mean_absolute_error: 2.7546 - val_loss: 10.4849 - val_mean_absolute_error: 2.4197

891 Epoch 386/10000

892 - 0s - loss: 14.2679 - mean_absolute_error: 2.7423 - val_loss: 10.3456 - val_mean_absolute_error: 2.4081

893 Epoch 387/10000

894 - 0s - loss: 15.0084 -

894 mean_absolute_error: 2.7423 - val_loss: 10.6152 - val_mean_absolute_error: 2.4820

895 Epoch 388/10000

896 - 0s - loss: 15.7095 - mean_absolute_error: 2.8944 - val_loss: 10.3451 - val_mean_absolute_error: 2.4777

897 Epoch 389/10000

898 - 0s - loss: 15.6080 - mean_absolute_error: 2.8511 - val_loss: 11.9088 - val_mean_absolute_error: 2.6494

899 Epoch 390/10000

900 - 0s - loss: 15.8079 - mean_absolute_error: 2.9116 - val_loss: 10.1808 - val_mean_absolute_error: 2.3993

901

902 Epoch 00390: saving model to ./model/model_best.h5

903 Epoch 391/10000

904 - 0s - loss: 14.9964 - mean_absolute_error: 2.8958 - val_loss

904 : 10.6701 - val_mean_absolute_error: 2.5398

905 Epoch 392/10000

906 - 0s - loss: 14.7998 - mean_absolute_error: 2.7200 - val_loss: 10.6345 - val_mean_absolute_error: 2.4594

907 Epoch 393/10000

908 - 0s - loss: 13.2038 - mean_absolute_error: 2.7759 - val_loss: 10.5509 - val_mean_absolute_error: 2.4405

909 Epoch 394/10000

910 - 0s - loss: 14.9604 - mean_absolute_error: 2.7574 - val_loss: 10.5339 - val_mean_absolute_error: 2.4458

911 Epoch 395/10000

912 - 0s - loss: 14.7811 - mean_absolute_error: 2.7611 - val_loss: 10.5839 - val_mean_absolute_error: 2.4400

913 Epoch 396/10000

914 - 0s - loss: 16.6719 -

914 mean_absolute_error: 2.9392 - val_loss: 10.3906 - val_mean_absolute_error: 2.4257

915 Epoch 397/10000

916 - 0s - loss: 13.9780 - mean_absolute_error: 2.7199 - val_loss: 10.2670 - val_mean_absolute_error: 2.4292

917 Epoch 398/10000

918 - 0s - loss: 15.9838 - mean_absolute_error: 2.9205 - val_loss: 10.7560 - val_mean_absolute_error: 2.4867

919 Epoch 399/10000

920 - 0s - loss: 13.4075 - mean_absolute_error: 2.6418 - val_loss: 11.1716 - val_mean_absolute_error: 2.5176

921 Epoch 400/10000

922 - 0s - loss: 14.2790 - mean_absolute_error: 2.6915 - val_loss: 11.0984 - val_mean_absolute_error: 2.5453

923

924 Epoch 00400: saving model to ./model/model_best.h5

925 Epoch 401/10000

926 - 0s - loss: 17.3316 - mean_absolute_error: 2.9497 - val_loss: 10.9241 - val_mean_absolute_error: 2.4895

927 Epoch 402/10000

928 - 0s - loss: 14.3380 - mean_absolute_error: 2.8765 - val_loss: 10.6021 - val_mean_absolute_error: 2.4459

929 Epoch 403/10000

930 - 0s - loss: 14.9799 - mean_absolute_error: 2.8669 - val_loss: 11.5181 - val_mean_absolute_error: 2.4989

931 Epoch 404/10000

932 - 0s - loss: 15.9937 - mean_absolute_error: 2.6396 - val_loss: 12.0929 - val_mean_absolute_error: 2.6211

933 Epoch 405/10000

934 - 0s - loss: 13.9130 -

934 mean_absolute_error: 2.8327 - val_loss: 11.3215 - val_mean_absolute_error: 2.5329

935 Epoch 406/10000

936 - 0s - loss: 18.6235 - mean_absolute_error: 2.9756 - val_loss: 10.3531 - val_mean_absolute_error: 2.4210

937 Epoch 407/10000

938 - 0s - loss: 19.0087 - mean_absolute_error: 2.9866 - val_loss: 10.9572 - val_mean_absolute_error: 2.5287

939 Epoch 408/10000

940 - 0s - loss: 14.6780 - mean_absolute_error: 2.8143 - val_loss: 11.2114 - val_mean_absolute_error: 2.5604

941 Epoch 409/10000

942 - 0s - loss: 13.4058 - mean_absolute_error: 2.7151 - val_loss: 11.6248 - val_mean_absolute_error: 2.5254

943 Epoch 410/10000

944   - 0s - loss: 15.3302 - mean_absolute_error: 2.9506 - val_loss: 10.8320 - val_mean_absolute_error: 2.4790

945

946 Epoch 00410: saving model to ./model/model_best.h5

947 Epoch 411/10000

948   - 0s - loss: 15.0320 - mean_absolute_error: 2.9076 - val_loss: 10.1978 - val_mean_absolute_error: 2.4508

949 Epoch 412/10000

950   - 0s - loss: 15.1948 - mean_absolute_error: 2.7811 - val_loss: 10.7372 - val_mean_absolute_error: 2.4743

951 Epoch 413/10000

952   - 0s - loss: 16.1149 - mean_absolute_error: 2.8923 - val_loss: 11.0684 - val_mean_absolute_error: 2.5264

953 Epoch 414/10000

954   - 0s - loss: 15.1589 -

954 mean_absolute_error: 2.7808 - val_loss: 12.6309 - val_mean_absolute_error: 2.8086

955 Epoch 415/10000

956 - 0s - loss: 15.3709 - mean_absolute_error: 2.8598 - val_loss: 10.9850 - val_mean_absolute_error: 2.5326

957 Epoch 416/10000

958 - 0s - loss: 17.3438 - mean_absolute_error: 2.9147 - val_loss: 10.3019 - val_mean_absolute_error: 2.4164

959 Epoch 417/10000

960 - 0s - loss: 12.4421 - mean_absolute_error: 2.6787 - val_loss: 10.1951 - val_mean_absolute_error: 2.3964

961 Epoch 418/10000

962 - 0s - loss: 13.8517 - mean_absolute_error: 2.6795 - val_loss: 9.9694 - val_mean_absolute_error: 2.3747

963 Epoch 419/10000

964   - 0s - loss: 14.8643 - mean_absolute_error: 2.8452 - val_loss: 10.1378 - val_mean_absolute_error: 2.3998

965 Epoch 420/10000

966   - 0s - loss: 14.1314 - mean_absolute_error: 2.8107 - val_loss: 10.2449 - val_mean_absolute_error: 2.4263

967

968 Epoch 00420: saving model to ./model/model_best.h5

969 Epoch 421/10000

970   - 0s - loss: 16.0161 - mean_absolute_error: 2.9265 - val_loss: 10.3641 - val_mean_absolute_error: 2.4315

971 Epoch 422/10000

972   - 0s - loss: 13.3531 - mean_absolute_error: 2.6502 - val_loss: 10.4325 - val_mean_absolute_error: 2.4369

973 Epoch 423/10000

974   - 0s - loss: 16.0849 -

974 mean_absolute_error: 2.8729 - val_loss: 10.0597 - val_mean_absolute_error: 2.3642

975 Epoch 424/10000

976 - 0s - loss: 13.4655 - mean_absolute_error: 2.7805 - val_loss: 10.2358 - val_mean_absolute_error: 2.4066

977 Epoch 425/10000

978 - 0s - loss: 14.8616 - mean_absolute_error: 2.8895 - val_loss: 11.4581 - val_mean_absolute_error: 2.5466

979 Epoch 426/10000

980 - 0s - loss: 14.9702 - mean_absolute_error: 2.7315 - val_loss: 10.5752 - val_mean_absolute_error: 2.4294

981 Epoch 427/10000

982 - 0s - loss: 15.5750 - mean_absolute_error: 2.8773 - val_loss: 10.6547 - val_mean_absolute_error: 2.4796

983 Epoch 428/10000

984 - 0s - loss: 14.3857 - mean_absolute_error: 2.7900 - val_loss: 10.4393 - val_mean_absolute_error: 2.4565

985 Epoch 429/10000

986 - 0s - loss: 15.7789 - mean_absolute_error: 2.7928 - val_loss: 10.3550 - val_mean_absolute_error: 2.4218

987 Epoch 430/10000

988 - 0s - loss: 13.1173 - mean_absolute_error: 2.6687 - val_loss: 9.8639 - val_mean_absolute_error: 2.3439

989

990 Epoch 00430: saving model to ./model/model_best.h5

991 Epoch 431/10000

992 - 0s - loss: 15.2647 - mean_absolute_error: 2.7253 - val_loss: 10.2364 - val_mean_absolute_error: 2.4382

993 Epoch 432/10000

994 - 0s - loss: 14.2653 -

994 mean_absolute_error: 2.7647 - val_loss: 12.0685 - val_mean_absolute_error: 2.4909

995 Epoch 433/10000

996 - 0s - loss: 16.7950 - mean_absolute_error: 2.9129 - val_loss: 12.1494 - val_mean_absolute_error: 2.5602

997 Epoch 434/10000

998 - 0s - loss: 11.3189 - mean_absolute_error: 2.5413 - val_loss: 10.9816 - val_mean_absolute_error: 2.4955

999 Epoch 435/10000

1000 - 0s - loss: 14.9058 - mean_absolute_error: 2.7542 - val_loss: 10.9967 - val_mean_absolute_error: 2.5060

1001 Epoch 436/10000

1002 - 0s - loss: 15.4667 - mean_absolute_error: 2.7823 - val_loss: 11.6390 - val_mean_absolute_error: 2.5603

1003 Epoch 437/10000

```
1004   - 0s - loss: 13.7104 -
       mean_absolute_error: 2.7054 - val_loss
       : 10.5304 - val_mean_absolute_error: 2
       .3915
1005   Epoch 438/10000
1006   - 0s - loss: 13.7830 -
       mean_absolute_error: 2.8058 - val_loss
       : 9.9197 - val_mean_absolute_error: 2.
       3694
1007   Epoch 439/10000
1008   - 0s - loss: 14.3823 -
       mean_absolute_error: 2.7438 - val_loss
       : 11.1852 - val_mean_absolute_error: 2
       .5184
1009   Epoch 440/10000
1010   - 0s - loss: 14.0227 -
       mean_absolute_error: 2.6796 - val_loss
       : 11.7005 - val_mean_absolute_error: 2
       .4923
1011
1012   Epoch 00440: saving model to ./model/
       model_best.h5
1013   Epoch 441/10000
1014   - 0s - loss: 13.6910 -
```

```
1014  mean_absolute_error: 2.7637 - val_loss
      : 11.1357 - val_mean_absolute_error: 2
      .4728
1015  Epoch 442/10000
1016   - 0s - loss: 15.8541 -
      mean_absolute_error: 2.8244 - val_loss
      : 10.6998 - val_mean_absolute_error: 2
      .4221
1017  Epoch 443/10000
1018   - 0s - loss: 13.8752 -
      mean_absolute_error: 2.7573 - val_loss
      : 10.2815 - val_mean_absolute_error: 2
      .4059
1019  Epoch 444/10000
1020   - 0s - loss: 15.2175 -
      mean_absolute_error: 2.7128 - val_loss
      : 11.1871 - val_mean_absolute_error: 2
      .4950
1021  Epoch 445/10000
1022   - 0s - loss: 15.1165 -
      mean_absolute_error: 2.8852 - val_loss
      : 11.2299 - val_mean_absolute_error: 2
      .4734
1023  Epoch 446/10000
```

```
1024    - 0s - loss: 11.5104 -
mean_absolute_error: 2.4105 - val_loss
: 12.2702 - val_mean_absolute_error: 2
.6925
1025 Epoch 447/10000
1026    - 0s - loss: 17.7449 -
mean_absolute_error: 2.8444 - val_loss
: 10.7140 - val_mean_absolute_error: 2
.4227
1027 Epoch 448/10000
1028    - 0s - loss: 13.3034 -
mean_absolute_error: 2.6608 - val_loss
: 10.9180 - val_mean_absolute_error: 2
.5311
1029 Epoch 449/10000
1030    - 0s - loss: 13.3248 -
mean_absolute_error: 2.7229 - val_loss
: 10.3032 - val_mean_absolute_error: 2
.3890
1031 Epoch 450/10000
1032    - 0s - loss: 14.4425 -
mean_absolute_error: 2.8321 - val_loss
: 10.8249 - val_mean_absolute_error: 2
.4606
```

1033

1034 Epoch 00450: saving model to ./model/
model_best.h5

1035 Epoch 451/10000

1036 - 0s - loss: 12.9693 -
mean_absolute_error: 2.6368 - val_loss
: 11.0901 - val_mean_absolute_error: 2
.4627

1037 Epoch 452/10000

1038 - 0s - loss: 14.1284 -
mean_absolute_error: 2.7600 - val_loss
: 10.6623 - val_mean_absolute_error: 2
.4255

1039 Epoch 453/10000

1040 - 0s - loss: 13.9128 -
mean_absolute_error: 2.7549 - val_loss
: 10.8275 - val_mean_absolute_error: 2
.4470

1041 Epoch 454/10000

1042 - 0s - loss: 12.5598 -
mean_absolute_error: 2.6465 - val_loss
: 10.6032 - val_mean_absolute_error: 2
.4835

1043 Epoch 455/10000

```
1044     - 0s - loss: 15.2487 -
mean_absolute_error: 2.8465 - val_loss
: 11.3559 - val_mean_absolute_error: 2
.6116
1045  Epoch 456/10000
1046     - 0s - loss: 13.5339 -
mean_absolute_error: 2.6727 - val_loss
: 9.8590 - val_mean_absolute_error: 2.
3810
1047  Epoch 457/10000
1048     - 0s - loss: 14.8489 -
mean_absolute_error: 2.7971 - val_loss
: 10.5836 - val_mean_absolute_error: 2
.5134
1049  Epoch 458/10000
1050     - 0s - loss: 16.5119 -
mean_absolute_error: 2.9163 - val_loss
: 9.3912 - val_mean_absolute_error: 2.
3026
1051  Epoch 459/10000
1052     - 0s - loss: 14.0060 -
mean_absolute_error: 2.6983 - val_loss
: 9.6343 - val_mean_absolute_error: 2.
3463
```

```
1053  Epoch 460/10000
1054   - 0s - loss: 15.5536 -
      mean_absolute_error: 2.7502 - val_loss
      : 10.9089 - val_mean_absolute_error: 2
      .4741
1055
1056  Epoch 00460: saving model to ./model/
      model_best.h5
1057  Epoch 461/10000
1058   - 0s - loss: 13.6046 -
      mean_absolute_error: 2.7100 - val_loss
      : 10.7910 - val_mean_absolute_error: 2
      .4534
1059  Epoch 462/10000
1060   - 0s - loss: 15.2929 -
      mean_absolute_error: 2.7890 - val_loss
      : 9.3597 - val_mean_absolute_error: 2.
      3339
1061  Epoch 463/10000
1062   - 0s - loss: 16.2554 -
      mean_absolute_error: 2.9001 - val_loss
      : 9.5973 - val_mean_absolute_error: 2.
      3169
1063  Epoch 464/10000
```

1064   - 0s - loss: 13.9065 - mean_absolute_error: 2.6925 - val_loss: 10.2403 - val_mean_absolute_error: 2.4066

1065 Epoch 465/10000

1066   - 0s - loss: 13.7225 - mean_absolute_error: 2.8977 - val_loss: 10.4615 - val_mean_absolute_error: 2.4859

1067 Epoch 466/10000

1068   - 0s - loss: 13.6976 - mean_absolute_error: 2.7681 - val_loss: 10.1234 - val_mean_absolute_error: 2.3586

1069 Epoch 467/10000

1070   - 0s - loss: 12.5506 - mean_absolute_error: 2.6334 - val_loss: 9.7128 - val_mean_absolute_error: 2.3028

1071 Epoch 468/10000

1072   - 0s - loss: 15.6623 - mean_absolute_error: 2.9622 - val_loss: 9.8836 - val_mean_absolute_error: 2.3427

```
1073  Epoch 469/10000
1074   - 0s - loss: 14.1509 -
       mean_absolute_error: 2.7570 - val_loss
       : 11.1259 - val_mean_absolute_error: 2
       .4742
1075  Epoch 470/10000
1076   - 0s - loss: 15.7417 -
       mean_absolute_error: 2.7444 - val_loss
       : 10.4574 - val_mean_absolute_error: 2
       .3902
1077
1078  Epoch 00470: saving model to ./model/
       model_best.h5
1079  Epoch 471/10000
1080   - 0s - loss: 14.0721 -
       mean_absolute_error: 2.6607 - val_loss
       : 10.3693 - val_mean_absolute_error: 2
       .4127
1081  Epoch 472/10000
1082   - 0s - loss: 13.8990 -
       mean_absolute_error: 2.8260 - val_loss
       : 10.8402 - val_mean_absolute_error: 2
       .4367
1083  Epoch 473/10000
```

```
1084    - 0s - loss: 13.0358 -
mean_absolute_error: 2.6644 - val_loss
: 10.4935 - val_mean_absolute_error: 2
.4141
1085 Epoch 474/10000
1086    - 0s - loss: 13.3304 -
mean_absolute_error: 2.7141 - val_loss
: 12.0753 - val_mean_absolute_error: 2
.6795
1087 Epoch 475/10000
1088    - 0s - loss: 13.5714 -
mean_absolute_error: 2.6979 - val_loss
: 9.0925 - val_mean_absolute_error: 2.
2576
1089 Epoch 476/10000
1090    - 0s - loss: 13.5927 -
mean_absolute_error: 2.7149 - val_loss
: 9.4798 - val_mean_absolute_error: 2.
3256
1091 Epoch 477/10000
1092    - 0s - loss: 11.2102 -
mean_absolute_error: 2.5404 - val_loss
: 9.5793 - val_mean_absolute_error: 2.
3331
```

```
1093  Epoch 478/10000
1094   - 0s - loss: 12.8423 -
      mean_absolute_error: 2.7209 - val_loss
      : 10.5307 - val_mean_absolute_error: 2
      .4422
1095  Epoch 479/10000
1096   - 0s - loss: 16.1386 -
      mean_absolute_error: 2.8104 - val_loss
      : 10.9802 - val_mean_absolute_error: 2
      .4503
1097  Epoch 480/10000
1098   - 0s - loss: 12.9341 -
      mean_absolute_error: 2.5962 - val_loss
      : 10.2578 - val_mean_absolute_error: 2
      .4016
1099
1100  Epoch 00480: saving model to ./model/
      model_best.h5
1101  Epoch 481/10000
1102   - 0s - loss: 15.1237 -
      mean_absolute_error: 2.7608 - val_loss
      : 9.5929 - val_mean_absolute_error: 2.
      3544
1103  Epoch 482/10000
```

```
1104    - 0s - loss: 14.8019 -
mean_absolute_error: 2.8286 - val_loss
: 9.2900 - val_mean_absolute_error: 2.
2954
1105  Epoch 483/10000
1106    - 0s - loss: 11.3912 -
mean_absolute_error: 2.3335 - val_loss
: 10.3083 - val_mean_absolute_error: 2
.3984
1107  Epoch 484/10000
1108    - 0s - loss: 15.0295 -
mean_absolute_error: 2.7573 - val_loss
: 9.9227 - val_mean_absolute_error: 2.
3499
1109  Epoch 485/10000
1110    - 0s - loss: 16.7024 -
mean_absolute_error: 2.9958 - val_loss
: 9.6417 - val_mean_absolute_error: 2.
3568
1111  Epoch 486/10000
1112    - 0s - loss: 14.9169 -
mean_absolute_error: 2.8763 - val_loss
: 9.9730 - val_mean_absolute_error: 2.
3384
```

```
1113  Epoch 487/10000
1114   - 0s - loss: 13.7218 -
      mean_absolute_error: 2.6932 - val_loss
      : 9.8220 - val_mean_absolute_error: 2.
      3533
1115  Epoch 488/10000
1116   - 0s - loss: 15.2305 -
      mean_absolute_error: 2.8399 - val_loss
      : 9.4734 - val_mean_absolute_error: 2.
      3378
1117  Epoch 489/10000
1118   - 0s - loss: 13.2269 -
      mean_absolute_error: 2.6582 - val_loss
      : 9.9999 - val_mean_absolute_error: 2.
      4195
1119  Epoch 490/10000
1120   - 0s - loss: 15.0685 -
      mean_absolute_error: 2.8695 - val_loss
      : 9.3525 - val_mean_absolute_error: 2.
      3275
1121
1122  Epoch 00490: saving model to ./model/
      model_best.h5
1123  Epoch 491/10000
```

1124   - 0s - loss: 13.8910 - mean_absolute_error: 2.6812 - val_loss: 10.0687 - val_mean_absolute_error: 2.3710

1125 Epoch 492/10000

1126   - 0s - loss: 14.7447 - mean_absolute_error: 2.7973 - val_loss: 9.4730 - val_mean_absolute_error: 2.3380

1127 Epoch 493/10000

1128   - 0s - loss: 15.8649 - mean_absolute_error: 2.7571 - val_loss: 10.2720 - val_mean_absolute_error: 2.3893

1129 Epoch 494/10000

1130   - 0s - loss: 16.2270 - mean_absolute_error: 2.7429 - val_loss: 9.7431 - val_mean_absolute_error: 2.3400

1131 Epoch 495/10000

1132   - 0s - loss: 14.8122 - mean_absolute_error: 2.7993 - val_loss: 10.0338 - val_mean_absolute_error: 2.4295

```
1133  Epoch 496/10000
1134   - 0s - loss: 13.2123 -
      mean_absolute_error: 2.6996 - val_loss
      : 9.7487 - val_mean_absolute_error: 2.
      3448
1135  Epoch 497/10000
1136   - 0s - loss: 12.8026 -
      mean_absolute_error: 2.6430 - val_loss
      : 10.2987 - val_mean_absolute_error: 2
      .3650
1137  Epoch 498/10000
1138   - 0s - loss: 16.9402 -
      mean_absolute_error: 2.9259 - val_loss
      : 11.2973 - val_mean_absolute_error: 2
      .4449
1139  Epoch 499/10000
1140   - 0s - loss: 15.3704 -
      mean_absolute_error: 2.7850 - val_loss
      : 10.2412 - val_mean_absolute_error: 2
      .3940
1141  Epoch 500/10000
1142   - 0s - loss: 16.0992 -
      mean_absolute_error: 2.7739 - val_loss
      : 10.2435 - val_mean_absolute_error: 2
```

1142 `.3959`

1143

1144 `Epoch 00500: saving model to ./model/model_best.h5`

1145 `Epoch 501/10000`

1146 ` - 0s - loss: 15.5794 - mean_absolute_error: 2.8757 - val_loss: 10.6110 - val_mean_absolute_error: 2.4350`

1147 `Epoch 502/10000`

1148 ` - 0s - loss: 16.5889 - mean_absolute_error: 2.8699 - val_loss: 9.7999 - val_mean_absolute_error: 2.3456`

1149 `Epoch 503/10000`

1150 ` - 0s - loss: 14.0855 - mean_absolute_error: 2.7173 - val_loss: 10.2304 - val_mean_absolute_error: 2.4084`

1151 `Epoch 504/10000`

1152 ` - 0s - loss: 13.6230 - mean_absolute_error: 2.6306 - val_loss: 10.0505 - val_mean_absolute_error: 2.3729`

```
1153  Epoch 505/10000
1154   - 0s - loss: 12.5847 -
       mean_absolute_error: 2.5508 - val_loss
       : 10.5686 - val_mean_absolute_error: 2
       .4406
1155  Epoch 506/10000
1156   - 0s - loss: 16.1302 -
       mean_absolute_error: 2.8596 - val_loss
       : 10.1543 - val_mean_absolute_error: 2
       .3682
1157  Epoch 507/10000
1158   - 0s - loss: 14.5722 -
       mean_absolute_error: 2.6799 - val_loss
       : 10.4657 - val_mean_absolute_error: 2
       .4097
1159  Epoch 508/10000
1160   - 0s - loss: 14.1813 -
       mean_absolute_error: 2.6306 - val_loss
       : 9.8063 - val_mean_absolute_error: 2.
       3427
1161  Epoch 509/10000
1162   - 0s - loss: 13.4359 -
       mean_absolute_error: 2.6165 - val_loss
       : 9.8829 - val_mean_absolute_error: 2.
```

1162 4014

1163 Epoch 510/10000

1164 - 0s - loss: 14.3660 - mean_absolute_error: 2.7571 - val_loss: 9.6252 - val_mean_absolute_error: 2.3108

1165

1166 Epoch 00510: saving model to ./model/model_best.h5

1167 Epoch 511/10000

1168 - 0s - loss: 15.6594 - mean_absolute_error: 2.7368 - val_loss: 11.6367 - val_mean_absolute_error: 2.5626

1169 Epoch 512/10000

1170 - 0s - loss: 11.8173 - mean_absolute_error: 2.5338 - val_loss: 9.7625 - val_mean_absolute_error: 2.3383

1171 Epoch 513/10000

1172 - 0s - loss: 14.2580 - mean_absolute_error: 2.7780 - val_loss: 9.6438 - val_mean_absolute_error: 2.3259

```
1173  Epoch 514/10000
1174   - 0s - loss: 12.6871 -
      mean_absolute_error: 2.5699 - val_loss
      : 10.0323 - val_mean_absolute_error: 2
      .3876
1175  Epoch 515/10000
1176   - 0s - loss: 15.0460 -
      mean_absolute_error: 2.7865 - val_loss
      : 10.8810 - val_mean_absolute_error: 2
      .4602
1177  Epoch 516/10000
1178   - 0s - loss: 14.5860 -
      mean_absolute_error: 2.7382 - val_loss
      : 11.7082 - val_mean_absolute_error: 2
      .5046
1179  Epoch 517/10000
1180   - 0s - loss: 12.9961 -
      mean_absolute_error: 2.5922 - val_loss
      : 10.8314 - val_mean_absolute_error: 2
      .4391
1181  Epoch 518/10000
1182   - 0s - loss: 12.0870 -
      mean_absolute_error: 2.6451 - val_loss
      : 11.7896 - val_mean_absolute_error: 2
```

1182 .5832

1183 Epoch 519/10000

1184 - 0s - loss: 13.7144 - mean_absolute_error: 2.6713 - val_loss: 12.2731 - val_mean_absolute_error: 2.5587

1185 Epoch 520/10000

1186 - 0s - loss: 15.3243 - mean_absolute_error: 2.8764 - val_loss: 11.4289 - val_mean_absolute_error: 2.5953

1187

1188 Epoch 00520: saving model to ./model/model_best.h5

1189 Epoch 521/10000

1190 - 0s - loss: 12.0413 - mean_absolute_error: 2.5768 - val_loss: 10.6499 - val_mean_absolute_error: 2.4822

1191 Epoch 522/10000

1192 - 0s - loss: 13.9443 - mean_absolute_error: 2.7329 - val_loss: 10.5260 - val_mean_absolute_error: 2.4687

```
1193  Epoch 523/10000
1194   - 0s - loss: 11.5092 -
      mean_absolute_error: 2.5854 - val_loss
      : 10.3950 - val_mean_absolute_error: 2
      .4133
1195  Epoch 524/10000
1196   - 0s - loss: 13.6167 -
      mean_absolute_error: 2.7008 - val_loss
      : 10.9063 - val_mean_absolute_error: 2
      .5157
1197  Epoch 525/10000
1198   - 0s - loss: 16.4030 -
      mean_absolute_error: 2.9171 - val_loss
      : 11.3308 - val_mean_absolute_error: 2
      .5469
1199  Epoch 526/10000
1200   - 0s - loss: 13.8091 -
      mean_absolute_error: 2.6097 - val_loss
      : 10.5270 - val_mean_absolute_error: 2
      .4371
1201  Epoch 527/10000
1202   - 0s - loss: 12.1431 -
      mean_absolute_error: 2.6043 - val_loss
      : 10.4716 - val_mean_absolute_error: 2
```

```
1202  .4589
1203  Epoch 528/10000
1204   - 0s - loss: 12.1683 -
      mean_absolute_error: 2.5848 - val_loss
      : 10.4686 - val_mean_absolute_error: 2
      .4363
1205  Epoch 529/10000
1206   - 0s - loss: 15.0809 -
      mean_absolute_error: 2.8351 - val_loss
      : 10.2891 - val_mean_absolute_error: 2
      .4438
1207  Epoch 530/10000
1208   - 0s - loss: 15.4522 -
      mean_absolute_error: 2.6283 - val_loss
      : 10.2241 - val_mean_absolute_error: 2
      .3886
1209
1210  Epoch 00530: saving model to ./model/
      model_best.h5
1211  Epoch 531/10000
1212   - 0s - loss: 13.1566 -
      mean_absolute_error: 2.5916 - val_loss
      : 10.2434 - val_mean_absolute_error: 2
      .3627
```

```
1213  Epoch 532/10000
1214   - 0s - loss: 14.5952 -
mean_absolute_error: 2.7206 - val_loss
: 11.7348 - val_mean_absolute_error: 2
.5816
1215  Epoch 533/10000
1216   - 0s - loss: 11.7124 -
mean_absolute_error: 2.4675 - val_loss
: 10.6147 - val_mean_absolute_error: 2
.4135
1217  Epoch 534/10000
1218   - 0s - loss: 14.8148 -
mean_absolute_error: 2.8582 - val_loss
: 10.4011 - val_mean_absolute_error: 2
.5180
1219  Epoch 535/10000
1220   - 0s - loss: 12.0041 -
mean_absolute_error: 2.5086 - val_loss
: 9.8616 - val_mean_absolute_error: 2.
3825
1221  Epoch 536/10000
1222   - 0s - loss: 12.1459 -
mean_absolute_error: 2.5083 - val_loss
: 11.1408 - val_mean_absolute_error: 2
```

```
1222  .5242
1223  Epoch 537/10000
1224   - 0s - loss: 15.0436 -
      mean_absolute_error: 2.7119 - val_loss
      : 10.9922 - val_mean_absolute_error: 2
      .4663
1225  Epoch 538/10000
1226   - 0s - loss: 11.5508 -
      mean_absolute_error: 2.4716 - val_loss
      : 10.6791 - val_mean_absolute_error: 2
      .4611
1227  Epoch 539/10000
1228   - 0s - loss: 12.0551 -
      mean_absolute_error: 2.5324 - val_loss
      : 10.0557 - val_mean_absolute_error: 2
      .3416
1229  Epoch 540/10000
1230   - 0s - loss: 16.1684 -
      mean_absolute_error: 2.8634 - val_loss
      : 10.1066 - val_mean_absolute_error: 2
      .3550
1231
1232  Epoch 00540: saving model to ./model/
      model_best.h5
```

```
1233  Epoch 541/10000
1234   - 0s - loss: 16.7758 -
      mean_absolute_error: 2.9987 - val_loss
      : 9.5909 - val_mean_absolute_error: 2.
      3192
1235  Epoch 542/10000
1236   - 0s - loss: 13.5818 -
      mean_absolute_error: 2.7163 - val_loss
      : 9.8919 - val_mean_absolute_error: 2.
      3491
1237  Epoch 543/10000
1238   - 0s - loss: 14.9779 -
      mean_absolute_error: 2.7197 - val_loss
      : 9.6604 - val_mean_absolute_error: 2.
      3191
1239  Epoch 544/10000
1240   - 0s - loss: 13.6176 -
      mean_absolute_error: 2.7099 - val_loss
      : 9.7661 - val_mean_absolute_error: 2.
      3365
1241  Epoch 545/10000
1242   - 0s - loss: 13.9792 -
      mean_absolute_error: 2.6387 - val_loss
      : 9.5536 - val_mean_absolute_error: 2.
```

```
1242  2958
1243  Epoch 546/10000
1244   - 0s - loss: 12.8125 -
      mean_absolute_error: 2.6303 - val_loss
      : 10.3207 - val_mean_absolute_error: 2
      .4693
1245  Epoch 547/10000
1246   - 0s - loss: 12.6577 -
      mean_absolute_error: 2.6498 - val_loss
      : 9.6594 - val_mean_absolute_error: 2.
      2957
1247  Epoch 548/10000
1248   - 0s - loss: 10.9413 -
      mean_absolute_error: 2.5131 - val_loss
      : 9.4834 - val_mean_absolute_error: 2.
      3129
1249  Epoch 549/10000
1250   - 0s - loss: 10.7794 -
      mean_absolute_error: 2.3627 - val_loss
      : 9.7743 - val_mean_absolute_error: 2.
      3243
1251  Epoch 550/10000
1252   - 0s - loss: 14.1222 -
      mean_absolute_error: 2.6909 - val_loss
```

1252 : 9.1536 - val_mean_absolute_error: 2.2756

1253

1254 Epoch 00550: saving model to ./model/model_best.h5

1255 Epoch 551/10000

1256 - 0s - loss: 11.5386 - mean_absolute_error: 2.4894 - val_loss: 10.1297 - val_mean_absolute_error: 2.4517

1257 Epoch 552/10000

1258 - 0s - loss: 12.0260 - mean_absolute_error: 2.5606 - val_loss: 9.8609 - val_mean_absolute_error: 2.3450

1259 Epoch 553/10000

1260 - 0s - loss: 11.8037 - mean_absolute_error: 2.5684 - val_loss: 9.2675 - val_mean_absolute_error: 2.3034

1261 Epoch 554/10000

1262 - 0s - loss: 14.1826 - mean_absolute_error: 2.7010 - val_loss: 10.0654 - val_mean_absolute_error: 2

1262 .3785

1263 Epoch 555/10000

1264 - 0s - loss: 14.1506 - mean_absolute_error: 2.7635 - val_loss: 9.5847 - val_mean_absolute_error: 2.3066

1265 Epoch 556/10000

1266 - 0s - loss: 11.4989 - mean_absolute_error: 2.5691 - val_loss: 10.2932 - val_mean_absolute_error: 2.4014

1267 Epoch 557/10000

1268 - 0s - loss: 13.7394 - mean_absolute_error: 2.6614 - val_loss: 10.1089 - val_mean_absolute_error: 2.3841

1269 Epoch 558/10000

1270 - 0s - loss: 12.6153 - mean_absolute_error: 2.7223 - val_loss: 10.1593 - val_mean_absolute_error: 2.3588

1271 Epoch 559/10000

1272 - 0s - loss: 14.5975 - mean_absolute_error: 2.8115 - val_loss

```
1272  : 11.3675 - val_mean_absolute_error: 2
      .4515
1273  Epoch 560/10000
1274   - 0s - loss: 12.6860 -
      mean_absolute_error: 2.6777 - val_loss
      : 9.8451 - val_mean_absolute_error: 2.
      3422
1275
1276  Epoch 00560: saving model to ./model/
      model_best.h5
1277  Epoch 561/10000
1278   - 0s - loss: 12.4307 -
      mean_absolute_error: 2.5892 - val_loss
      : 10.1782 - val_mean_absolute_error: 2
      .4154
1279  Epoch 562/10000
1280   - 0s - loss: 12.0148 -
      mean_absolute_error: 2.5500 - val_loss
      : 10.4792 - val_mean_absolute_error: 2
      .3766
1281  Epoch 563/10000
1282   - 0s - loss: 12.7273 -
      mean_absolute_error: 2.6863 - val_loss
      : 10.2981 - val_mean_absolute_error: 2
```

1282 .4013

1283 Epoch 564/10000

1284 - 0s - loss: 14.5108 - mean_absolute_error: 2.6709 - val_loss: 10.3967 - val_mean_absolute_error: 2.3727

1285 Epoch 565/10000

1286 - 0s - loss: 12.7899 - mean_absolute_error: 2.6860 - val_loss: 10.2491 - val_mean_absolute_error: 2.3750

1287 Epoch 566/10000

1288 - 0s - loss: 13.1841 - mean_absolute_error: 2.5958 - val_loss: 9.3060 - val_mean_absolute_error: 2.2847

1289 Epoch 567/10000

1290 - 0s - loss: 14.3639 - mean_absolute_error: 2.6232 - val_loss: 9.1379 - val_mean_absolute_error: 2.2652

1291 Epoch 568/10000

1292 - 0s - loss: 10.6206 - mean_absolute_error: 2.4237 - val_loss

```
1292  : 8.8511 - val_mean_absolute_error: 2.
      2312
1293  Epoch 569/10000
1294   - 0s - loss: 15.7844 -
      mean_absolute_error: 2.8262 - val_loss
      : 11.0054 - val_mean_absolute_error: 2
      .5193
1295  Epoch 570/10000
1296   - 0s - loss: 15.0079 -
      mean_absolute_error: 2.6772 - val_loss
      : 10.4830 - val_mean_absolute_error: 2
      .4013
1297
1298  Epoch 00570: saving model to ./model/
      model_best.h5
1299  Epoch 571/10000
1300   - 0s - loss: 11.2798 -
      mean_absolute_error: 2.4134 - val_loss
      : 10.3184 - val_mean_absolute_error: 2
      .3532
1301  Epoch 572/10000
1302   - 0s - loss: 13.9157 -
      mean_absolute_error: 2.7681 - val_loss
      : 9.8177 - val_mean_absolute_error: 2.
```

1302 3178

1303 Epoch 573/10000

1304 - 0s - loss: 12.3133 - mean_absolute_error: 2.6068 - val_loss: 10.4755 - val_mean_absolute_error: 2.3509

1305 Epoch 574/10000

1306 - 0s - loss: 16.0951 - mean_absolute_error: 2.8246 - val_loss: 10.0738 - val_mean_absolute_error: 2.3299

1307 Epoch 575/10000

1308 - 0s - loss: 14.5506 - mean_absolute_error: 2.6565 - val_loss: 10.0667 - val_mean_absolute_error: 2.3325

1309 Epoch 576/10000

1310 - 0s - loss: 13.2403 - mean_absolute_error: 2.7472 - val_loss: 9.6075 - val_mean_absolute_error: 2.3225

1311 Epoch 577/10000

1312 - 0s - loss: 14.1313 - mean_absolute_error: 2.7142 - val_loss

```
1312  : 9.8528 - val_mean_absolute_error: 2.
      2987
1313  Epoch 578/10000
1314   - 0s - loss: 16.9705 -
      mean_absolute_error: 2.8370 - val_loss
      : 9.9935 - val_mean_absolute_error: 2.
      3696
1315  Epoch 579/10000
1316   - 0s - loss: 12.8233 -
      mean_absolute_error: 2.5314 - val_loss
      : 9.5447 - val_mean_absolute_error: 2.
      3164
1317  Epoch 580/10000
1318   - 0s - loss: 13.5132 -
      mean_absolute_error: 2.6401 - val_loss
      : 10.1262 - val_mean_absolute_error: 2
      .3404
1319
1320  Epoch 00580: saving model to ./model/
      model_best.h5
1321  Epoch 581/10000
1322   - 0s - loss: 12.9067 -
      mean_absolute_error: 2.6072 - val_loss
      : 9.9327 - val_mean_absolute_error: 2.
```

```
1322 2765
1323 Epoch 582/10000
1324  - 0s - loss: 12.8409 -
     mean_absolute_error: 2.5727 - val_loss
     : 10.3211 - val_mean_absolute_error: 2
     .3293
1325 Epoch 583/10000
1326  - 0s - loss: 12.5682 -
     mean_absolute_error: 2.5513 - val_loss
     : 10.0432 - val_mean_absolute_error: 2
     .2983
1327 Epoch 584/10000
1328  - 0s - loss: 11.7853 -
     mean_absolute_error: 2.5478 - val_loss
     : 9.5128 - val_mean_absolute_error: 2.
     2917
1329 Epoch 585/10000
1330  - 0s - loss: 11.7348 -
     mean_absolute_error: 2.5611 - val_loss
     : 10.3999 - val_mean_absolute_error: 2
     .4054
1331 Epoch 586/10000
1332  - 0s - loss: 13.7256 -
     mean_absolute_error: 2.6389 - val_loss
```

```
1332  : 9.2760 - val_mean_absolute_error: 2.
      2607
1333  Epoch 587/10000
1334   - 0s - loss: 12.6329 -
      mean_absolute_error: 2.6132 - val_loss
      : 10.0094 - val_mean_absolute_error: 2
      .3422
1335  Epoch 588/10000
1336   - 0s - loss: 13.5773 -
      mean_absolute_error: 2.5677 - val_loss
      : 10.6002 - val_mean_absolute_error: 2
      .4191
1337  Epoch 589/10000
1338   - 0s - loss: 15.0809 -
      mean_absolute_error: 2.8220 - val_loss
      : 10.2081 - val_mean_absolute_error: 2
      .3539
1339  Epoch 590/10000
1340   - 0s - loss: 15.4374 -
      mean_absolute_error: 2.8179 - val_loss
      : 9.7481 - val_mean_absolute_error: 2.
      3252
1341
1342  Epoch 00590: saving model to ./model/
```

```
1342 model_best.h5
1343 Epoch 591/10000
1344  - 0s - loss: 13.6378 -
     mean_absolute_error: 2.7223 - val_loss
     : 10.9338 - val_mean_absolute_error: 2
     .4270
1345 Epoch 592/10000
1346  - 0s - loss: 13.0078 -
     mean_absolute_error: 2.5576 - val_loss
     : 11.6237 - val_mean_absolute_error: 2
     .5622
1347 Epoch 593/10000
1348  - 0s - loss: 13.6159 -
     mean_absolute_error: 2.5571 - val_loss
     : 10.7592 - val_mean_absolute_error: 2
     .3786
1349 Epoch 594/10000
1350  - 0s - loss: 12.8410 -
     mean_absolute_error: 2.6177 - val_loss
     : 11.2866 - val_mean_absolute_error: 2
     .5227
1351 Epoch 595/10000
1352  - 0s - loss: 14.1533 -
     mean_absolute_error: 2.7417 - val_loss
```

```
1352  : 9.6217 - val_mean_absolute_error: 2.3023
1353  Epoch 596/10000
1354   - 0s - loss: 11.2829 - mean_absolute_error: 2.6043 - val_loss: 10.6091 - val_mean_absolute_error: 2.4052
1355  Epoch 597/10000
1356   - 0s - loss: 14.1855 - mean_absolute_error: 2.7097 - val_loss: 10.2308 - val_mean_absolute_error: 2.3646
1357  Epoch 598/10000
1358   - 0s - loss: 11.3544 - mean_absolute_error: 2.4566 - val_loss: 10.6284 - val_mean_absolute_error: 2.4126
1359  Epoch 599/10000
1360   - 0s - loss: 14.4585 - mean_absolute_error: 2.6892 - val_loss: 10.7689 - val_mean_absolute_error: 2.4161
1361  Epoch 600/10000
1362   - 0s - loss: 13.4421 -
```

```
1362  mean_absolute_error: 2.5971 - val_loss
      : 10.6221 - val_mean_absolute_error: 2
      .4049
1363
1364  Epoch 00600: saving model to ./model/
      model_best.h5
1365  Epoch 601/10000
1366   - 0s - loss: 13.5252 -
      mean_absolute_error: 2.6053 - val_loss
      : 11.0899 - val_mean_absolute_error: 2
      .5239
1367  Epoch 602/10000
1368   - 0s - loss: 11.7169 -
      mean_absolute_error: 2.5298 - val_loss
      : 9.9122 - val_mean_absolute_error: 2.
      3745
1369  Epoch 603/10000
1370   - 0s - loss: 15.9770 -
      mean_absolute_error: 2.8904 - val_loss
      : 9.8560 - val_mean_absolute_error: 2.
      3329
1371  Epoch 604/10000
1372   - 0s - loss: 10.8816 -
      mean_absolute_error: 2.4281 - val_loss
```

1372 : 10.1297 - val_mean_absolute_error: 2
.3521

1373 Epoch 605/10000

1374 - 0s - loss: 12.2380 -
mean_absolute_error: 2.5236 - val_loss
: 9.8625 - val_mean_absolute_error: 2.
2920

1375 Epoch 606/10000

1376 - 0s - loss: 12.5143 -
mean_absolute_error: 2.5517 - val_loss
: 10.4358 - val_mean_absolute_error: 2
.3984

1377 Epoch 607/10000

1378 - 0s - loss: 13.0612 -
mean_absolute_error: 2.6339 - val_loss
: 10.1667 - val_mean_absolute_error: 2
.3790

1379 Epoch 608/10000

1380 - 0s - loss: 14.4868 -
mean_absolute_error: 2.6397 - val_loss
: 10.4259 - val_mean_absolute_error: 2
.4316

1381 Epoch 609/10000

1382 - 0s - loss: 12.9108 -

```
1382  mean_absolute_error: 2.5805 - val_loss
      : 10.9161 - val_mean_absolute_error: 2
      .4161
1383  Epoch 610/10000
1384   - 0s - loss: 12.7706 -
      mean_absolute_error: 2.5608 - val_loss
      : 10.4766 - val_mean_absolute_error: 2
      .3604
1385
1386  Epoch 00610: saving model to ./model/
      model_best.h5
1387  Epoch 611/10000
1388   - 0s - loss: 14.8968 -
      mean_absolute_error: 2.6411 - val_loss
      : 10.3301 - val_mean_absolute_error: 2
      .4186
1389  Epoch 612/10000
1390   - 0s - loss: 14.5074 -
      mean_absolute_error: 2.6308 - val_loss
      : 9.1030 - val_mean_absolute_error: 2.
      2136
1391  Epoch 613/10000
1392   - 0s - loss: 11.7275 -
      mean_absolute_error: 2.4650 - val_loss
```

```
1392  : 9.1980 - val_mean_absolute_error: 2.
      2489
1393  Epoch 614/10000
1394   - 0s - loss: 12.4255 -
      mean_absolute_error: 2.5343 - val_loss
      : 9.4408 - val_mean_absolute_error: 2.
      2929
1395  Epoch 615/10000
1396   - 0s - loss: 14.0143 -
      mean_absolute_error: 2.7662 - val_loss
      : 8.8010 - val_mean_absolute_error: 2.
      1977
1397  Epoch 616/10000
1398   - 0s - loss: 12.5987 -
      mean_absolute_error: 2.6134 - val_loss
      : 9.1833 - val_mean_absolute_error: 2.
      2340
1399  Epoch 617/10000
1400   - 0s - loss: 13.8475 -
      mean_absolute_error: 2.6708 - val_loss
      : 9.0565 - val_mean_absolute_error: 2.
      2394
1401  Epoch 618/10000
1402   - 0s - loss: 11.8973 -
```

1402 mean_absolute_error: 2.4779 - val_loss: 9.4870 - val_mean_absolute_error: 2.2487

1403 Epoch 619/10000

1404 - 0s - loss: 13.6371 - mean_absolute_error: 2.7209 - val_loss: 9.6076 - val_mean_absolute_error: 2.2590

1405 Epoch 620/10000

1406 - 0s - loss: 14.6848 - mean_absolute_error: 2.6657 - val_loss: 9.3854 - val_mean_absolute_error: 2.2353

1407

1408 Epoch 00620: saving model to ./model/model_best.h5

1409 Epoch 621/10000

1410 - 0s - loss: 13.0646 - mean_absolute_error: 2.6154 - val_loss: 10.1696 - val_mean_absolute_error: 2.3770

1411 Epoch 622/10000

1412 - 0s - loss: 16.8594 - mean_absolute_error: 2.8421 - val_loss

1412 : 9.5308 - val_mean_absolute_error: 2.
2806

1413 Epoch 623/10000

1414 - 0s - loss: 14.4502 -
mean_absolute_error: 2.7164 - val_loss
: 8.6326 - val_mean_absolute_error: 2.
1544

1415 Epoch 624/10000

1416 - 0s - loss: 11.2730 -
mean_absolute_error: 2.4448 - val_loss
: 10.0498 - val_mean_absolute_error: 2
.3220

1417 Epoch 625/10000

1418 - 0s - loss: 14.3181 -
mean_absolute_error: 2.6882 - val_loss
: 9.5187 - val_mean_absolute_error: 2.
2397

1419 Epoch 626/10000

1420 - 0s - loss: 12.1062 -
mean_absolute_error: 2.5296 - val_loss
: 9.0944 - val_mean_absolute_error: 2.
2002

1421 Epoch 627/10000

1422 - 0s - loss: 14.2265 -

1422 mean_absolute_error: 2.5898 - val_loss: 9.1978 - val_mean_absolute_error: 2.2113

1423 Epoch 628/10000

1424 - 0s - loss: 15.0105 - mean_absolute_error: 2.7200 - val_loss: 8.9472 - val_mean_absolute_error: 2.2233

1425 Epoch 629/10000

1426 - 0s - loss: 12.3544 - mean_absolute_error: 2.5609 - val_loss: 9.5595 - val_mean_absolute_error: 2.2859

1427 Epoch 630/10000

1428 - 0s - loss: 13.5141 - mean_absolute_error: 2.7228 - val_loss: 9.0717 - val_mean_absolute_error: 2.2924

1429

1430 Epoch 00630: saving model to ./model/model_best.h5

1431 Epoch 631/10000

1432 - 0s - loss: 14.2283 - mean_absolute_error: 2.6756 - val_loss

```
1432  : 9.3443 - val_mean_absolute_error: 2.
      2817
1433  Epoch 632/10000
1434   - 0s - loss: 15.8350 -
      mean_absolute_error: 2.8434 - val_loss
      : 8.6958 - val_mean_absolute_error: 2.
      1901
1435  Epoch 633/10000
1436   - 0s - loss: 12.2532 -
      mean_absolute_error: 2.5771 - val_loss
      : 9.3413 - val_mean_absolute_error: 2.
      2088
1437  Epoch 634/10000
1438   - 0s - loss: 11.5073 -
      mean_absolute_error: 2.5191 - val_loss
      : 9.5238 - val_mean_absolute_error: 2.
      2714
1439  Epoch 635/10000
1440   - 0s - loss: 14.7383 -
      mean_absolute_error: 2.7342 - val_loss
      : 8.8108 - val_mean_absolute_error: 2.
      2087
1441  Epoch 636/10000
1442   - 0s - loss: 12.6048 -
```

1442 mean_absolute_error: 2.6447 - val_loss: 9.1730 - val_mean_absolute_error: 2.2346

1443 Epoch 637/10000

1444 - 0s - loss: 11.6289 - mean_absolute_error: 2.5432 - val_loss: 9.6638 - val_mean_absolute_error: 2.3379

1445 Epoch 638/10000

1446 - 0s - loss: 13.7244 - mean_absolute_error: 2.6779 - val_loss: 9.1571 - val_mean_absolute_error: 2.2104

1447 Epoch 639/10000

1448 - 0s - loss: 11.5273 - mean_absolute_error: 2.4350 - val_loss: 9.4222 - val_mean_absolute_error: 2.2599

1449 Epoch 640/10000

1450 - 0s - loss: 10.3180 - mean_absolute_error: 2.3706 - val_loss: 9.3781 - val_mean_absolute_error: 2.2982

1451

1452 Epoch 00640: saving model to ./model/model_best.h5
1453 Epoch 641/10000
1454   - 0s - loss: 12.1852 - mean_absolute_error: 2.5721 - val_loss: 9.2703 - val_mean_absolute_error: 2.2533
1455 Epoch 642/10000
1456   - 0s - loss: 14.2277 - mean_absolute_error: 2.7914 - val_loss: 10.1044 - val_mean_absolute_error: 2.3948
1457 Epoch 643/10000
1458   - 0s - loss: 11.8128 - mean_absolute_error: 2.5766 - val_loss: 9.4532 - val_mean_absolute_error: 2.2647
1459 Epoch 644/10000
1460   - 0s - loss: 11.9504 - mean_absolute_error: 2.5115 - val_loss: 10.2368 - val_mean_absolute_error: 2.3430
1461 Epoch 645/10000
1462   - 0s - loss: 11.2541 -

1462 mean_absolute_error: 2.4171 - val_loss: 10.3308 - val_mean_absolute_error: 2.3695

1463 Epoch 646/10000

1464 - 0s - loss: 12.7042 - mean_absolute_error: 2.5619 - val_loss: 9.9691 - val_mean_absolute_error: 2.3804

1465 Epoch 647/10000

1466 - 0s - loss: 12.2855 - mean_absolute_error: 2.6502 - val_loss: 9.7166 - val_mean_absolute_error: 2.3310

1467 Epoch 648/10000

1468 - 0s - loss: 11.4289 - mean_absolute_error: 2.4986 - val_loss: 9.2595 - val_mean_absolute_error: 2.2752

1469 Epoch 649/10000

1470 - 0s - loss: 12.0182 - mean_absolute_error: 2.5671 - val_loss: 9.5534 - val_mean_absolute_error: 2.2844

1471 Epoch 650/10000

```
1472     - 0s - loss: 14.6632 -
         mean_absolute_error: 2.7421 - val_loss
         : 9.6767 - val_mean_absolute_error: 2.
         3763
1473
1474  Epoch 00650: saving model to ./model/
      model_best.h5
1475  Epoch 651/10000
1476     - 0s - loss: 11.7853 -
         mean_absolute_error: 2.5565 - val_loss
         : 9.6184 - val_mean_absolute_error: 2.
         3123
1477  Epoch 652/10000
1478     - 0s - loss: 13.1807 -
         mean_absolute_error: 2.6655 - val_loss
         : 9.4715 - val_mean_absolute_error: 2.
         3362
1479  Epoch 653/10000
1480     - 0s - loss: 12.1320 -
         mean_absolute_error: 2.4923 - val_loss
         : 9.6391 - val_mean_absolute_error: 2.
         3306
1481  Epoch 654/10000
1482     - 0s - loss: 12.8179 -
```

1482 mean_absolute_error: 2.5920 - val_loss: 10.7358 - val_mean_absolute_error: 2.4308

1483 Epoch 655/10000

1484 - 0s - loss: 11.6867 - mean_absolute_error: 2.5312 - val_loss: 9.6682 - val_mean_absolute_error: 2.2989

1485 Epoch 656/10000

1486 - 0s - loss: 11.3701 - mean_absolute_error: 2.4937 - val_loss: 9.0904 - val_mean_absolute_error: 2.2588

1487 Epoch 657/10000

1488 - 0s - loss: 13.0914 - mean_absolute_error: 2.6281 - val_loss: 9.0183 - val_mean_absolute_error: 2.2331

1489 Epoch 658/10000

1490 - 0s - loss: 10.1340 - mean_absolute_error: 2.4240 - val_loss: 8.5859 - val_mean_absolute_error: 2.2125

1491 Epoch 659/10000

1492 - 0s - loss: 15.4691 - mean_absolute_error: 2.8029 - val_loss: 9.6149 - val_mean_absolute_error: 2.3742

1493 Epoch 660/10000

1494 - 0s - loss: 14.5894 - mean_absolute_error: 2.7100 - val_loss: 8.7999 - val_mean_absolute_error: 2.2611

1495

1496 Epoch 00660: saving model to ./model/model_best.h5

1497 Epoch 661/10000

1498 - 0s - loss: 15.6363 - mean_absolute_error: 2.7883 - val_loss: 8.4888 - val_mean_absolute_error: 2.2117

1499 Epoch 662/10000

1500 - 0s - loss: 14.9768 - mean_absolute_error: 2.6976 - val_loss: 8.3671 - val_mean_absolute_error: 2.1842

1501 Epoch 663/10000

1502 - 0s - loss: 13.8414 -

1502 mean_absolute_error: 2.7026 - val_loss: 8.9923 - val_mean_absolute_error: 2.2475

1503 Epoch 664/10000

1504 - 0s - loss: 11.6446 - mean_absolute_error: 2.5939 - val_loss: 9.2892 - val_mean_absolute_error: 2.3037

1505 Epoch 665/10000

1506 - 0s - loss: 13.6421 - mean_absolute_error: 2.5741 - val_loss: 10.1193 - val_mean_absolute_error: 2.4161

1507 Epoch 666/10000

1508 - 0s - loss: 12.1398 - mean_absolute_error: 2.6027 - val_loss: 8.9400 - val_mean_absolute_error: 2.2300

1509 Epoch 667/10000

1510 - 0s - loss: 16.3760 - mean_absolute_error: 2.6738 - val_loss: 8.6072 - val_mean_absolute_error: 2.2025

1511 Epoch 668/10000

```
1512  - 0s - loss: 12.2146 -
      mean_absolute_error: 2.5041 - val_loss
      : 8.3514 - val_mean_absolute_error: 2.
      1796
1513  Epoch 669/10000
1514  - 0s - loss: 13.4524 -
      mean_absolute_error: 2.5552 - val_loss
      : 8.5783 - val_mean_absolute_error: 2.
      2134
1515  Epoch 670/10000
1516  - 0s - loss: 15.7541 -
      mean_absolute_error: 2.7765 - val_loss
      : 11.4589 - val_mean_absolute_error: 2
      .6083
1517
1518  Epoch 00670: saving model to ./model/
      model_best.h5
1519  Epoch 671/10000
1520  - 0s - loss: 12.7570 -
      mean_absolute_error: 2.6253 - val_loss
      : 8.6034 - val_mean_absolute_error: 2.
      1689
1521  Epoch 672/10000
1522  - 0s - loss: 15.2204 -
```

1522 mean_absolute_error: 2.7071 - val_loss: 9.5975 - val_mean_absolute_error: 2.2868

1523 Epoch 673/10000

1524 - 0s - loss: 12.5519 - mean_absolute_error: 2.5779 - val_loss: 9.0433 - val_mean_absolute_error: 2.2854

1525 Epoch 674/10000

1526 - 0s - loss: 11.7409 - mean_absolute_error: 2.4571 - val_loss: 10.4153 - val_mean_absolute_error: 2.3490

1527 Epoch 675/10000

1528 - 0s - loss: 14.1832 - mean_absolute_error: 2.7155 - val_loss: 10.0684 - val_mean_absolute_error: 2.3206

1529 Epoch 676/10000

1530 - 0s - loss: 15.9190 - mean_absolute_error: 2.6844 - val_loss: 8.8335 - val_mean_absolute_error: 2.2383

1531 Epoch 677/10000

1532   - 0s - loss: 12.3249 - mean_absolute_error: 2.4265 - val_loss: 9.2435 - val_mean_absolute_error: 2.2550

1533 Epoch 678/10000

1534   - 0s - loss: 12.6306 - mean_absolute_error: 2.5440 - val_loss: 10.0269 - val_mean_absolute_error: 2.3705

1535 Epoch 679/10000

1536   - 0s - loss: 11.9312 - mean_absolute_error: 2.4567 - val_loss: 11.0424 - val_mean_absolute_error: 2.3881

1537 Epoch 680/10000

1538   - 0s - loss: 13.7333 - mean_absolute_error: 2.7719 - val_loss: 9.4350 - val_mean_absolute_error: 2.3182

1539

1540 Epoch 00680: saving model to ./model/model_best.h5

1541 Epoch 681/10000

1542   - 0s - loss: 12.8196 -

1542 mean_absolute_error: 2.4747 - val_loss: 8.6509 - val_mean_absolute_error: 2.1940

1543 Epoch 682/10000

1544 - 0s - loss: 10.9625 - mean_absolute_error: 2.4892 - val_loss: 9.6426 - val_mean_absolute_error: 2.3525

1545 Epoch 683/10000

1546 - 0s - loss: 11.6690 - mean_absolute_error: 2.5985 - val_loss: 8.7842 - val_mean_absolute_error: 2.1903

1547 Epoch 684/10000

1548 - 0s - loss: 11.5422 - mean_absolute_error: 2.4751 - val_loss: 10.0602 - val_mean_absolute_error: 2.3851

1549 Epoch 685/10000

1550 - 0s - loss: 10.4185 - mean_absolute_error: 2.3877 - val_loss: 9.5400 - val_mean_absolute_error: 2.2753

1551 Epoch 686/10000

```
1552    - 0s - loss: 11.0325 -
mean_absolute_error: 2.4125 - val_loss
: 9.0982 - val_mean_absolute_error: 2.
2525
1553 Epoch 687/10000
1554    - 0s - loss: 11.6574 -
mean_absolute_error: 2.5246 - val_loss
: 8.9233 - val_mean_absolute_error: 2.
1872
1555 Epoch 688/10000
1556    - 0s - loss: 11.7299 -
mean_absolute_error: 2.4934 - val_loss
: 8.3069 - val_mean_absolute_error: 2.
1168
1557 Epoch 689/10000
1558    - 0s - loss: 15.3252 -
mean_absolute_error: 2.8177 - val_loss
: 8.9772 - val_mean_absolute_error: 2.
2462
1559 Epoch 690/10000
1560    - 0s - loss: 13.1641 -
mean_absolute_error: 2.6813 - val_loss
: 9.3626 - val_mean_absolute_error: 2.
2792
```

1561

1562 Epoch 00690: saving model to ./model/model_best.h5

1563 Epoch 691/10000

1564 - 0s - loss: 14.2079 - mean_absolute_error: 2.6551 - val_loss: 9.9102 - val_mean_absolute_error: 2.3063

1565 Epoch 692/10000

1566 - 0s - loss: 13.4755 - mean_absolute_error: 2.5961 - val_loss: 10.0146 - val_mean_absolute_error: 2.3299

1567 Epoch 693/10000

1568 - 0s - loss: 12.6064 - mean_absolute_error: 2.6137 - val_loss: 9.9059 - val_mean_absolute_error: 2.3989

1569 Epoch 694/10000

1570 - 0s - loss: 12.7785 - mean_absolute_error: 2.6827 - val_loss: 11.0696 - val_mean_absolute_error: 2.4214

1571 Epoch 695/10000

1572   - 0s - loss: 13.7210 - mean_absolute_error: 2.6269 - val_loss: 10.0839 - val_mean_absolute_error: 2.3577

1573   Epoch 696/10000

1574   - 0s - loss: 14.6134 - mean_absolute_error: 2.6475 - val_loss: 9.1249 - val_mean_absolute_error: 2.2185

1575   Epoch 697/10000

1576   - 0s - loss: 16.1870 - mean_absolute_error: 2.6611 - val_loss: 9.0763 - val_mean_absolute_error: 2.2403

1577   Epoch 698/10000

1578   - 0s - loss: 14.0281 - mean_absolute_error: 2.7498 - val_loss: 10.5096 - val_mean_absolute_error: 2.3941

1579   Epoch 699/10000

1580   - 0s - loss: 13.3069 - mean_absolute_error: 2.6270 - val_loss: 10.1978 - val_mean_absolute_error: 2.3576

```
1581  Epoch 700/10000
1582   - 0s - loss: 12.0847 -
      mean_absolute_error: 2.5772 - val_loss
      : 8.9400 - val_mean_absolute_error: 2.
      2343
1583
1584  Epoch 00700: saving model to ./model/
      model_best.h5
1585  Epoch 701/10000
1586   - 0s - loss: 11.8271 -
      mean_absolute_error: 2.5243 - val_loss
      : 9.9573 - val_mean_absolute_error: 2.
      3435
1587  Epoch 702/10000
1588   - 0s - loss: 10.0265 -
      mean_absolute_error: 2.3194 - val_loss
      : 10.0994 - val_mean_absolute_error: 2
      .3438
1589  Epoch 703/10000
1590   - 0s - loss: 12.9830 -
      mean_absolute_error: 2.5714 - val_loss
      : 9.5772 - val_mean_absolute_error: 2.
      3513
1591  Epoch 704/10000
```

1592   - 0s - loss: 10.8648 - mean_absolute_error: 2.5243 - val_loss: 9.7843 - val_mean_absolute_error: 2.3333

1593   Epoch 705/10000

1594   - 0s - loss: 13.5895 - mean_absolute_error: 2.6809 - val_loss: 11.0476 - val_mean_absolute_error: 2.4319

1595   Epoch 706/10000

1596   - 0s - loss: 13.8528 - mean_absolute_error: 2.6140 - val_loss: 10.7499 - val_mean_absolute_error: 2.4239

1597   Epoch 707/10000

1598   - 0s - loss: 16.0716 - mean_absolute_error: 2.8442 - val_loss: 9.9207 - val_mean_absolute_error: 2.3661

1599   Epoch 708/10000

1600   - 0s - loss: 12.2794 - mean_absolute_error: 2.5251 - val_loss: 10.1791 - val_mean_absolute_error: 2.4263

```
1601  Epoch 709/10000
1602   - 0s - loss: 12.3477 -
       mean_absolute_error: 2.5499 - val_loss
       : 9.9890 - val_mean_absolute_error: 2.
       4068
1603  Epoch 710/10000
1604   - 0s - loss: 13.9222 -
       mean_absolute_error: 2.6090 - val_loss
       : 10.4780 - val_mean_absolute_error: 2
       .3756

1605
1606  Epoch 00710: saving model to ./model/
       model_best.h5
1607  Epoch 711/10000
1608   - 0s - loss: 13.9697 -
       mean_absolute_error: 2.5543 - val_loss
       : 9.9777 - val_mean_absolute_error: 2.
       3347
1609  Epoch 712/10000
1610   - 0s - loss: 12.1594 -
       mean_absolute_error: 2.5371 - val_loss
       : 9.5777 - val_mean_absolute_error: 2.
       3370
1611  Epoch 713/10000
```

1612   - 0s - loss: 12.1424 - mean_absolute_error: 2.6009 - val_loss: 9.4964 - val_mean_absolute_error: 2.2506

1613 Epoch 714/10000

1614   - 0s - loss: 11.9733 - mean_absolute_error: 2.5298 - val_loss: 9.6909 - val_mean_absolute_error: 2.3234

1615 Epoch 715/10000

1616   - 0s - loss: 11.9124 - mean_absolute_error: 2.5025 - val_loss: 9.9692 - val_mean_absolute_error: 2.3174

1617 Epoch 716/10000

1618   - 0s - loss: 11.8406 - mean_absolute_error: 2.4819 - val_loss: 9.1621 - val_mean_absolute_error: 2.2430

1619 Epoch 717/10000

1620   - 0s - loss: 14.4607 - mean_absolute_error: 2.6841 - val_loss: 9.2720 - val_mean_absolute_error: 2.2130

```
1621  Epoch 718/10000
1622   - 0s - loss: 14.3171 -
      mean_absolute_error: 2.7323 - val_loss
      : 10.0741 - val_mean_absolute_error: 2
      .3411
1623  Epoch 719/10000
1624   - 0s - loss: 10.7198 -
      mean_absolute_error: 2.4439 - val_loss
      : 9.4446 - val_mean_absolute_error: 2.
      2369
1625  Epoch 720/10000
1626   - 0s - loss: 12.5646 -
      mean_absolute_error: 2.5644 - val_loss
      : 10.7201 - val_mean_absolute_error: 2
      .4907
1627
1628  Epoch 00720: saving model to ./model/
      model_best.h5
1629  Epoch 721/10000
1630   - 0s - loss: 14.1900 -
      mean_absolute_error: 2.6620 - val_loss
      : 9.6117 - val_mean_absolute_error: 2.
      2714
1631  Epoch 722/10000
```

1632 - 0s - loss: 13.6625 - mean_absolute_error: 2.6364 - val_loss: 10.3651 - val_mean_absolute_error: 2.4279

1633 Epoch 723/10000

1634 - 0s - loss: 12.5454 - mean_absolute_error: 2.5552 - val_loss: 10.1043 - val_mean_absolute_error: 2.3191

1635 Epoch 724/10000

1636 - 0s - loss: 11.8837 - mean_absolute_error: 2.5284 - val_loss: 12.1396 - val_mean_absolute_error: 2.6304

1637 Epoch 725/10000

1638 - 0s - loss: 11.4609 - mean_absolute_error: 2.5052 - val_loss: 8.5727 - val_mean_absolute_error: 2.1655

1639 Epoch 726/10000

1640 - 0s - loss: 11.6658 - mean_absolute_error: 2.4645 - val_loss: 9.1485 - val_mean_absolute_error: 2.2203

1641 Epoch 727/10000

1642 - 0s - loss: 11.6225 - mean_absolute_error: 2.5275 - val_loss: 8.7032 - val_mean_absolute_error: 2.2018

1643 Epoch 728/10000

1644 - 0s - loss: 15.3372 - mean_absolute_error: 2.6633 - val_loss: 8.1683 - val_mean_absolute_error: 2.1610

1645 Epoch 729/10000

1646 - 0s - loss: 13.8092 - mean_absolute_error: 2.7625 - val_loss: 8.3811 - val_mean_absolute_error: 2.1630

1647 Epoch 730/10000

1648 - 0s - loss: 14.0225 - mean_absolute_error: 2.6334 - val_loss: 8.3927 - val_mean_absolute_error: 2.1766

1649

1650 Epoch 00730: saving model to ./model/model_best.h5

1651 Epoch 731/10000

1652   - 0s - loss: 12.9047 - mean_absolute_error: 2.3861 - val_loss: 8.7346 - val_mean_absolute_error: 2.2337

1653 Epoch 732/10000

1654   - 0s - loss: 13.4635 - mean_absolute_error: 2.6543 - val_loss: 9.0096 - val_mean_absolute_error: 2.2425

1655 Epoch 733/10000

1656   - 0s - loss: 14.9297 - mean_absolute_error: 2.6505 - val_loss: 8.4610 - val_mean_absolute_error: 2.2019

1657 Epoch 734/10000

1658   - 0s - loss: 14.1103 - mean_absolute_error: 2.6562 - val_loss: 9.1619 - val_mean_absolute_error: 2.2417

1659 Epoch 735/10000

1660   - 0s - loss: 11.8902 - mean_absolute_error: 2.4378 - val_loss: 9.3054 - val_mean_absolute_error: 2.2668

```
1661  Epoch 736/10000
1662   - 0s - loss: 15.1208 -
      mean_absolute_error: 2.6909 - val_loss
      : 9.1964 - val_mean_absolute_error: 2.
      2814
1663  Epoch 737/10000
1664   - 0s - loss: 13.7518 -
      mean_absolute_error: 2.6872 - val_loss
      : 8.2937 - val_mean_absolute_error: 2.
      1890
1665  Epoch 738/10000
1666   - 0s - loss: 12.2051 -
      mean_absolute_error: 2.5982 - val_loss
      : 9.3030 - val_mean_absolute_error: 2.
      3663
1667  Epoch 739/10000
1668   - 0s - loss: 12.2371 -
      mean_absolute_error: 2.5480 - val_loss
      : 9.4047 - val_mean_absolute_error: 2.
      2680
1669  Epoch 740/10000
1670   - 0s - loss: 11.7111 -
      mean_absolute_error: 2.4691 - val_loss
      : 10.0897 - val_mean_absolute_error: 2
```

```
1670   .4043
1671
1672   Epoch 00740: saving model to ./model/
       model_best.h5
1673   Epoch 741/10000
1674    - 0s - loss: 12.0726 -
       mean_absolute_error: 2.5162 - val_loss
       : 8.6234 - val_mean_absolute_error: 2.
       2247
1675   Epoch 742/10000
1676    - 0s - loss: 11.9553 -
       mean_absolute_error: 2.4067 - val_loss
       : 8.6851 - val_mean_absolute_error: 2.
       2386
1677   Epoch 743/10000
1678    - 0s - loss: 13.4023 -
       mean_absolute_error: 2.6951 - val_loss
       : 8.2300 - val_mean_absolute_error: 2.
       1614
1679   Epoch 744/10000
1680    - 0s - loss: 12.2140 -
       mean_absolute_error: 2.5553 - val_loss
       : 8.2006 - val_mean_absolute_error: 2.
       1678
```

1681 Epoch 745/10000
1682 - 0s - loss: 11.6727 - mean_absolute_error: 2.4745 - val_loss: 8.2336 - val_mean_absolute_error: 2.2301
1683 Epoch 746/10000
1684 - 0s - loss: 14.0900 - mean_absolute_error: 2.6607 - val_loss: 8.9256 - val_mean_absolute_error: 2.2411
1685 Epoch 747/10000
1686 - 0s - loss: 12.7609 - mean_absolute_error: 2.5557 - val_loss: 9.3464 - val_mean_absolute_error: 2.2872
1687 Epoch 748/10000
1688 - 0s - loss: 12.2409 - mean_absolute_error: 2.4909 - val_loss: 9.7052 - val_mean_absolute_error: 2.3698
1689 Epoch 749/10000
1690 - 0s - loss: 12.2479 - mean_absolute_error: 2.4594 - val_loss: 8.9134 - val_mean_absolute_error: 2.

1690 2374

1691 Epoch 750/10000

1692 - 0s - loss: 10.9431 - mean_absolute_error: 2.4519 - val_loss: 8.9595 - val_mean_absolute_error: 2.2579

1693

1694 Epoch 00750: saving model to ./model/model_best.h5

1695 Epoch 751/10000

1696 - 0s - loss: 10.3552 - mean_absolute_error: 2.5268 - val_loss: 9.8254 - val_mean_absolute_error: 2.2988

1697 Epoch 752/10000

1698 - 0s - loss: 13.1296 - mean_absolute_error: 2.5521 - val_loss: 10.3587 - val_mean_absolute_error: 2.3878

1699 Epoch 753/10000

1700 - 0s - loss: 12.7754 - mean_absolute_error: 2.5614 - val_loss: 9.6655 - val_mean_absolute_error: 2.3431

```
1701  Epoch 754/10000
1702   - 0s - loss: 12.8883 -
      mean_absolute_error: 2.5228 - val_loss
      : 8.9390 - val_mean_absolute_error: 2.
      2970
1703  Epoch 755/10000
1704   - 0s - loss: 13.3183 -
      mean_absolute_error: 2.6818 - val_loss
      : 8.9276 - val_mean_absolute_error: 2.
      2290
1705  Epoch 756/10000
1706   - 0s - loss: 12.0787 -
      mean_absolute_error: 2.5775 - val_loss
      : 10.2084 - val_mean_absolute_error: 2
      .4870
1707  Epoch 757/10000
1708   - 0s - loss: 13.4342 -
      mean_absolute_error: 2.5809 - val_loss
      : 9.3642 - val_mean_absolute_error: 2.
      4000
1709  Epoch 758/10000
1710   - 0s - loss: 10.1978 -
      mean_absolute_error: 2.3974 - val_loss
      : 8.4963 - val_mean_absolute_error: 2.
```

1710 1932

1711 Epoch 759/10000

1712 - 0s - loss: 13.2052 - mean_absolute_error: 2.6386 - val_loss: 8.3625 - val_mean_absolute_error: 2.1878

1713 Epoch 760/10000

1714 - 0s - loss: 12.8123 - mean_absolute_error: 2.5700 - val_loss: 8.7318 - val_mean_absolute_error: 2.2390

1715

1716 Epoch 00760: saving model to ./model/model_best.h5

1717 Epoch 761/10000

1718 - 0s - loss: 12.5765 - mean_absolute_error: 2.4888 - val_loss: 9.2873 - val_mean_absolute_error: 2.2793

1719 Epoch 762/10000

1720 - 0s - loss: 10.4762 - mean_absolute_error: 2.3862 - val_loss: 8.9232 - val_mean_absolute_error: 2.2428

```
1721  Epoch 763/10000
1722   - 0s - loss: 12.3806 -
      mean_absolute_error: 2.5802 - val_loss
      : 8.5818 - val_mean_absolute_error: 2.
      1692
1723  Epoch 764/10000
1724   - 0s - loss: 14.1619 -
      mean_absolute_error: 2.7664 - val_loss
      : 9.1891 - val_mean_absolute_error: 2.
      2519
1725  Epoch 765/10000
1726   - 0s - loss: 11.9384 -
      mean_absolute_error: 2.4397 - val_loss
      : 8.5838 - val_mean_absolute_error: 2.
      2031
1727  Epoch 766/10000
1728   - 0s - loss: 13.6551 -
      mean_absolute_error: 2.7163 - val_loss
      : 8.6622 - val_mean_absolute_error: 2.
      2306
1729  Epoch 767/10000
1730   - 0s - loss: 11.6120 -
      mean_absolute_error: 2.5490 - val_loss
      : 8.2347 - val_mean_absolute_error: 2.
```

```
1730  1805
1731  Epoch 768/10000
1732   - 0s - loss: 12.3165 -
      mean_absolute_error: 2.4874 - val_loss
      : 8.2329 - val_mean_absolute_error: 2.
      2194
1733  Epoch 769/10000
1734   - 0s - loss: 12.0071 -
      mean_absolute_error: 2.4668 - val_loss
      : 9.2010 - val_mean_absolute_error: 2.
      2963
1735  Epoch 770/10000
1736   - 0s - loss: 12.5723 -
      mean_absolute_error: 2.4700 - val_loss
      : 8.8878 - val_mean_absolute_error: 2.
      2462
1737
1738  Epoch 00770: saving model to ./model/
      model_best.h5
1739  Epoch 771/10000
1740   - 0s - loss: 11.4173 -
      mean_absolute_error: 2.4001 - val_loss
      : 9.2472 - val_mean_absolute_error: 2.
      2546
```

```
1741  Epoch 772/10000
1742   - 0s - loss: 13.7236 -
      mean_absolute_error: 2.6227 - val_loss
      : 8.8544 - val_mean_absolute_error: 2.
      2647
1743  Epoch 773/10000
1744   - 0s - loss: 12.4710 -
      mean_absolute_error: 2.4897 - val_loss
      : 8.5172 - val_mean_absolute_error: 2.
      2184
1745  Epoch 774/10000
1746   - 0s - loss: 10.1652 -
      mean_absolute_error: 2.4375 - val_loss
      : 9.9978 - val_mean_absolute_error: 2.
      3584
1747  Epoch 775/10000
1748   - 0s - loss: 11.3721 -
      mean_absolute_error: 2.4545 - val_loss
      : 8.9356 - val_mean_absolute_error: 2.
      3126
1749  Epoch 776/10000
1750   - 0s - loss: 14.6660 -
      mean_absolute_error: 2.6136 - val_loss
      : 8.6349 - val_mean_absolute_error: 2.
```

1750 2440

1751 Epoch 777/10000

1752   - 0s - loss: 11.7452 - mean_absolute_error: 2.5350 - val_loss: 8.9751 - val_mean_absolute_error: 2.2405

1753 Epoch 778/10000

1754   - 0s - loss: 12.2086 - mean_absolute_error: 2.4949 - val_loss: 8.6106 - val_mean_absolute_error: 2.1950

1755 Epoch 779/10000

1756   - 0s - loss: 12.0327 - mean_absolute_error: 2.4183 - val_loss: 10.2496 - val_mean_absolute_error: 2.4219

1757 Epoch 780/10000

1758   - 0s - loss: 11.8185 - mean_absolute_error: 2.5752 - val_loss: 9.8333 - val_mean_absolute_error: 2.3481

1759

1760 Epoch 00780: saving model to ./model/model_best.h5

```
1761  Epoch 781/10000
1762   - 0s - loss: 14.7086 -
      mean_absolute_error: 2.6564 - val_loss
      : 9.3339 - val_mean_absolute_error: 2.
      3213
1763  Epoch 782/10000
1764   - 0s - loss: 11.5170 -
      mean_absolute_error: 2.4376 - val_loss
      : 8.8535 - val_mean_absolute_error: 2.
      2474
1765  Epoch 783/10000
1766   - 0s - loss: 11.2711 -
      mean_absolute_error: 2.5411 - val_loss
      : 12.2368 - val_mean_absolute_error: 2
      .6221
1767  Epoch 784/10000
1768   - 0s - loss: 9.7945 -
      mean_absolute_error: 2.3228 - val_loss
      : 10.5897 - val_mean_absolute_error: 2
      .4128
1769  Epoch 785/10000
1770   - 0s - loss: 9.2193 -
      mean_absolute_error: 2.2988 - val_loss
      : 9.0058 - val_mean_absolute_error: 2.
```

1770 2450

1771 Epoch 786/10000

1772 - 0s - loss: 12.3043 - mean_absolute_error: 2.4962 - val_loss: 8.8852 - val_mean_absolute_error: 2.2872

1773 Epoch 787/10000

1774 - 0s - loss: 12.8982 - mean_absolute_error: 2.5523 - val_loss: 8.1997 - val_mean_absolute_error: 2.1604

1775 Epoch 788/10000

1776 - 0s - loss: 13.9600 - mean_absolute_error: 2.6460 - val_loss: 8.3140 - val_mean_absolute_error: 2.2005

1777

1778 Epoch 00788: ReduceLROnPlateau reducing learning rate to 0.00010000000475.

1779 Epoch 789/10000

1780 - 0s - loss: 13.4523 - mean_absolute_error: 2.5752 - val_loss: 8.1977 - val_mean_absolute_error: 2.

1780 1877

1781 Epoch 790/10000

1782 - 0s - loss: 10.9185 - mean_absolute_error: 2.4328 - val_loss: 8.1430 - val_mean_absolute_error: 2.1837

1783

1784 Epoch 00790: saving model to ./model/model_best.h5

1785 Epoch 791/10000

1786 - 0s - loss: 10.7025 - mean_absolute_error: 2.5035 - val_loss: 8.1749 - val_mean_absolute_error: 2.1873

1787 Epoch 792/10000

1788 - 0s - loss: 13.4179 - mean_absolute_error: 2.5796 - val_loss: 8.0357 - val_mean_absolute_error: 2.1670

1789 Epoch 793/10000

1790 - 0s - loss: 11.0229 - mean_absolute_error: 2.4299 - val_loss: 8.0665 - val_mean_absolute_error: 2.1699

```
1791  Epoch 794/10000
1792   - 0s - loss: 10.6158 -
       mean_absolute_error: 2.3273 - val_loss
       : 8.1587 - val_mean_absolute_error: 2.
       1727
1793  Epoch 795/10000
1794   - 0s - loss: 14.0339 -
       mean_absolute_error: 2.7265 - val_loss
       : 8.2775 - val_mean_absolute_error: 2.
       1860
1795  Epoch 796/10000
1796   - 0s - loss: 11.8614 -
       mean_absolute_error: 2.4145 - val_loss
       : 8.2810 - val_mean_absolute_error: 2.
       1860
1797  Epoch 797/10000
1798   - 0s - loss: 12.9229 -
       mean_absolute_error: 2.5039 - val_loss
       : 8.3021 - val_mean_absolute_error: 2.
       1953
1799  Epoch 798/10000
1800   - 0s - loss: 10.7398 -
       mean_absolute_error: 2.3982 - val_loss
       : 8.2903 - val_mean_absolute_error: 2.
```

1800 1893

1801 Epoch 799/10000

1802   - 0s - loss: 11.1007 - mean_absolute_error: 2.4168 - val_loss: 8.3152 - val_mean_absolute_error: 2.1976

1803 Epoch 800/10000

1804   - 0s - loss: 11.1854 - mean_absolute_error: 2.4312 - val_loss: 8.3565 - val_mean_absolute_error: 2.1958

1805

1806 Epoch 00800: saving model to ./model/model_best.h5

1807 Epoch 801/10000

1808   - 0s - loss: 11.8946 - mean_absolute_error: 2.5088 - val_loss: 8.3634 - val_mean_absolute_error: 2.2060

1809 Epoch 802/10000

1810   - 0s - loss: 11.5927 - mean_absolute_error: 2.5082 - val_loss: 8.3863 - val_mean_absolute_error: 2.2094

```
1811   Epoch 803/10000
1812    - 0s - loss: 11.9417 -
       mean_absolute_error: 2.5295 - val_loss
       : 8.3292 - val_mean_absolute_error: 2.
       1986
1813   Epoch 804/10000
1814    - 0s - loss: 11.0735 -
       mean_absolute_error: 2.4097 - val_loss
       : 8.3368 - val_mean_absolute_error: 2.
       1976
1815   Epoch 805/10000
1816    - 0s - loss: 10.7146 -
       mean_absolute_error: 2.3634 - val_loss
       : 8.3483 - val_mean_absolute_error: 2.
       1983
1817   Epoch 806/10000
1818    - 0s - loss: 11.5669 -
       mean_absolute_error: 2.5443 - val_loss
       : 8.2247 - val_mean_absolute_error: 2.
       1722
1819   Epoch 807/10000
1820    - 0s - loss: 11.8341 -
       mean_absolute_error: 2.3839 - val_loss
       : 8.1866 - val_mean_absolute_error: 2.
```

1820 1758

1821 Epoch 808/10000

1822 - 0s - loss: 12.4556 - mean_absolute_error: 2.4729 - val_loss: 8.2973 - val_mean_absolute_error: 2.1910

1823 Epoch 809/10000

1824 - 0s - loss: 12.0559 - mean_absolute_error: 2.4880 - val_loss: 8.2668 - val_mean_absolute_error: 2.1879

1825 Epoch 810/10000

1826 - 0s - loss: 10.6805 - mean_absolute_error: 2.3916 - val_loss: 8.2732 - val_mean_absolute_error: 2.1810

1827

1828 Epoch 00810: saving model to ./model/model_best.h5

1829 Epoch 811/10000

1830 - 0s - loss: 11.5014 - mean_absolute_error: 2.4581 - val_loss: 8.2768 - val_mean_absolute_error: 2.1881

1831 Epoch 812/10000
1832   - 0s - loss: 11.9353 - mean_absolute_error: 2.4726 - val_loss: 8.2426 - val_mean_absolute_error: 2.1808
1833 Epoch 813/10000
1834   - 0s - loss: 10.2849 - mean_absolute_error: 2.2812 - val_loss: 8.2631 - val_mean_absolute_error: 2.1793
1835 Epoch 814/10000
1836   - 0s - loss: 10.8839 - mean_absolute_error: 2.3602 - val_loss: 8.3138 - val_mean_absolute_error: 2.1801
1837 Epoch 815/10000
1838   - 0s - loss: 12.7500 - mean_absolute_error: 2.4709 - val_loss: 8.3476 - val_mean_absolute_error: 2.1922
1839 Epoch 816/10000
1840   - 0s - loss: 9.7538 - mean_absolute_error: 2.3748 - val_loss: 8.4158 - val_mean_absolute_error: 2.

1840 1932

1841 Epoch 817/10000

1842 - 0s - loss: 10.1267 - mean_absolute_error: 2.3044 - val_loss: 8.3677 - val_mean_absolute_error: 2.1884

1843 Epoch 818/10000

1844 - 0s - loss: 12.6037 - mean_absolute_error: 2.5280 - val_loss: 8.3762 - val_mean_absolute_error: 2.1816

1845 Epoch 819/10000

1846 - 0s - loss: 11.6356 - mean_absolute_error: 2.4071 - val_loss: 8.3148 - val_mean_absolute_error: 2.1712

1847 Epoch 820/10000

1848 - 0s - loss: 10.4855 - mean_absolute_error: 2.3540 - val_loss: 8.2997 - val_mean_absolute_error: 2.1681

1849

1850 Epoch 00820: saving model to ./model/model_best.h5

```
1851   Epoch 821/10000
1852    - 0s - loss: 12.5591 -
        mean_absolute_error: 2.4978 - val_loss
        : 8.2939 - val_mean_absolute_error: 2.
        1774
1853   Epoch 822/10000
1854    - 0s - loss: 11.9458 -
        mean_absolute_error: 2.5642 - val_loss
        : 8.3679 - val_mean_absolute_error: 2.
        1960
1855   Epoch 823/10000
1856    - 0s - loss: 12.0422 -
        mean_absolute_error: 2.4619 - val_loss
        : 8.3631 - val_mean_absolute_error: 2.
        1863
1857   Epoch 824/10000
1858    - 0s - loss: 8.3880 -
        mean_absolute_error: 2.1685 - val_loss
        : 8.3578 - val_mean_absolute_error: 2.
        1785
1859   Epoch 825/10000
1860    - 0s - loss: 12.1361 -
        mean_absolute_error: 2.3698 - val_loss
        : 8.4432 - val_mean_absolute_error: 2.
```

1860 2002

1861 Epoch 826/10000

1862 - 0s - loss: 11.8013 - mean_absolute_error: 2.5468 - val_loss: 8.4491 - val_mean_absolute_error: 2.1955

1863 Epoch 827/10000

1864 - 0s - loss: 13.7239 - mean_absolute_error: 2.5734 - val_loss: 8.5890 - val_mean_absolute_error: 2.2081

1865 Epoch 828/10000

1866 - 0s - loss: 10.6898 - mean_absolute_error: 2.3957 - val_loss: 8.5337 - val_mean_absolute_error: 2.2066

1867 Epoch 829/10000

1868 - 0s - loss: 11.0283 - mean_absolute_error: 2.4264 - val_loss: 8.4562 - val_mean_absolute_error: 2.2079

1869 Epoch 830/10000

1870 - 0s - loss: 11.8421 - mean_absolute_error: 2.5139 - val_loss

1870 : 8.4102 - val_mean_absolute_error: 2.2105

1871

1872 Epoch 00830: saving model to ./model/model_best.h5

1873 Epoch 831/10000

1874 - 0s - loss: 10.4665 - mean_absolute_error: 2.4450 - val_loss: 8.4564 - val_mean_absolute_error: 2.2176

1875 Epoch 832/10000

1876 - 0s - loss: 11.1837 - mean_absolute_error: 2.3084 - val_loss: 8.2769 - val_mean_absolute_error: 2.1950

1877 Epoch 833/10000

1878 - 0s - loss: 12.0833 - mean_absolute_error: 2.4944 - val_loss: 8.2814 - val_mean_absolute_error: 2.1950

1879 Epoch 834/10000

1880 - 0s - loss: 13.0668 - mean_absolute_error: 2.4651 - val_loss: 8.2782 - val_mean_absolute_error: 2.

1880 1911

1881 Epoch 835/10000

1882 - 0s - loss: 13.8679 - mean_absolute_error: 2.6746 - val_loss: 8.3170 - val_mean_absolute_error: 2.1942

1883 Epoch 836/10000

1884 - 0s - loss: 9.9936 - mean_absolute_error: 2.2735 - val_loss: 8.2676 - val_mean_absolute_error: 2.1758

1885 Epoch 837/10000

1886 - 0s - loss: 12.2874 - mean_absolute_error: 2.4392 - val_loss: 8.3803 - val_mean_absolute_error: 2.1852

1887 Epoch 838/10000

1888 - 0s - loss: 12.9852 - mean_absolute_error: 2.5018 - val_loss: 8.2624 - val_mean_absolute_error: 2.1766

1889 Epoch 839/10000

1890 - 0s - loss: 11.9764 - mean_absolute_error: 2.5053 - val_loss

```
1890  : 8.3441 - val_mean_absolute_error: 2.
      1802
1891  Epoch 840/10000
1892   - 0s - loss: 10.9629 -
      mean_absolute_error: 2.4426 - val_loss
      : 8.4272 - val_mean_absolute_error: 2.
      1954
1893
1894  Epoch 00840: saving model to ./model/
      model_best.h5
1895  Epoch 841/10000
1896   - 0s - loss: 9.9307 -
      mean_absolute_error: 2.3630 - val_loss
      : 8.4236 - val_mean_absolute_error: 2.
      1895
1897  Epoch 842/10000
1898   - 0s - loss: 12.0041 -
      mean_absolute_error: 2.5495 - val_loss
      : 8.4996 - val_mean_absolute_error: 2.
      1944
1899  Epoch 843/10000
1900   - 0s - loss: 10.0916 -
      mean_absolute_error: 2.3056 - val_loss
      : 8.3980 - val_mean_absolute_error: 2.
```

1900 1892
1901 Epoch 844/10000
1902 - 0s - loss: 12.9507 - mean_absolute_error: 2.5066 - val_loss: 8.5177 - val_mean_absolute_error: 2.2040
1903 Epoch 845/10000
1904 - 0s - loss: 8.1934 - mean_absolute_error: 2.1276 - val_loss: 8.4374 - val_mean_absolute_error: 2.1870
1905 Epoch 846/10000
1906 - 0s - loss: 12.1559 - mean_absolute_error: 2.4405 - val_loss: 8.4726 - val_mean_absolute_error: 2.1761
1907 Epoch 847/10000
1908 - 0s - loss: 12.6137 - mean_absolute_error: 2.4489 - val_loss: 8.4555 - val_mean_absolute_error: 2.1740
1909 Epoch 848/10000
1910 - 0s - loss: 11.1331 - mean_absolute_error: 2.3576 - val_loss

```
1910  : 8.4213 - val_mean_absolute_error: 2.
      1751
1911  Epoch 849/10000
1912   - 0s - loss: 10.0823 -
      mean_absolute_error: 2.3252 - val_loss
      : 8.4584 - val_mean_absolute_error: 2.
      1795
1913  Epoch 850/10000
1914   - 0s - loss: 9.5983 -
      mean_absolute_error: 2.3294 - val_loss
      : 8.4321 - val_mean_absolute_error: 2.
      1809
1915
1916  Epoch 00850: saving model to ./model/
      model_best.h5
1917  Epoch 851/10000
1918   - 0s - loss: 11.8247 -
      mean_absolute_error: 2.4789 - val_loss
      : 8.3347 - val_mean_absolute_error: 2.
      1860
1919  Epoch 852/10000
1920   - 0s - loss: 9.9275 -
      mean_absolute_error: 2.4260 - val_loss
      : 8.4362 - val_mean_absolute_error: 2.
```

1920 1953

1921 Epoch 853/10000

1922 - 0s - loss: 10.1465 - mean_absolute_error: 2.3977 - val_loss: 8.4820 - val_mean_absolute_error: 2.1896

1923 Epoch 854/10000

1924 - 0s - loss: 12.1006 - mean_absolute_error: 2.5262 - val_loss: 8.6007 - val_mean_absolute_error: 2.1859

1925 Epoch 855/10000

1926 - 0s - loss: 14.4070 - mean_absolute_error: 2.7724 - val_loss: 8.6605 - val_mean_absolute_error: 2.1919

1927 Epoch 856/10000

1928 - 0s - loss: 11.7639 - mean_absolute_error: 2.4599 - val_loss: 8.5861 - val_mean_absolute_error: 2.1966

1929 Epoch 857/10000

1930 - 0s - loss: 11.3767 - mean_absolute_error: 2.4064 - val_loss

```
1930  : 8.5901 - val_mean_absolute_error: 2.
      1923
1931  Epoch 858/10000
1932   - 0s - loss: 9.9821 -
      mean_absolute_error: 2.4086 - val_loss
      : 8.5860 - val_mean_absolute_error: 2.
      2004
1933  Epoch 859/10000
1934   - 0s - loss: 11.3080 -
      mean_absolute_error: 2.4428 - val_loss
      : 8.5111 - val_mean_absolute_error: 2.
      1965
1935  Epoch 860/10000
1936   - 0s - loss: 13.7587 -
      mean_absolute_error: 2.5945 - val_loss
      : 8.4698 - val_mean_absolute_error: 2.
      1982
1937
1938  Epoch 00860: saving model to ./model/
      model_best.h5
1939  Epoch 861/10000
1940   - 0s - loss: 11.8886 -
      mean_absolute_error: 2.6062 - val_loss
      : 8.4781 - val_mean_absolute_error: 2.
```

1940 1967
1941 Epoch 862/10000
1942 - 0s - loss: 9.6883 - mean_absolute_error: 2.3241 - val_loss: 8.4250 - val_mean_absolute_error: 2.1864
1943 Epoch 863/10000
1944 - 0s - loss: 9.5005 - mean_absolute_error: 2.2477 - val_loss: 8.4883 - val_mean_absolute_error: 2.1789
1945 Epoch 864/10000
1946 - 0s - loss: 11.7266 - mean_absolute_error: 2.4907 - val_loss: 8.5065 - val_mean_absolute_error: 2.1871
1947 Epoch 865/10000
1948 - 0s - loss: 10.7715 - mean_absolute_error: 2.3721 - val_loss: 8.5518 - val_mean_absolute_error: 2.2086
1949 Epoch 866/10000
1950 - 0s - loss: 12.0866 - mean_absolute_error: 2.4599 - val_loss

1950 : 8.5558 - val_mean_absolute_error: 2.2113

1951 Epoch 867/10000

1952 - 0s - loss: 11.6727 - mean_absolute_error: 2.3281 - val_loss: 8.5593 - val_mean_absolute_error: 2.2100

1953 Epoch 868/10000

1954 - 0s - loss: 12.5759 - mean_absolute_error: 2.5055 - val_loss: 8.4580 - val_mean_absolute_error: 2.1871

1955 Epoch 869/10000

1956 - 0s - loss: 10.0443 - mean_absolute_error: 2.3728 - val_loss: 8.5685 - val_mean_absolute_error: 2.1711

1957 Epoch 870/10000

1958 - 0s - loss: 12.7150 - mean_absolute_error: 2.5885 - val_loss: 8.5679 - val_mean_absolute_error: 2.1678

1959

1960 Epoch 00870: saving model to ./model/

1960 model_best.h5
1961 Epoch 871/10000
1962 - 0s - loss: 11.0699 - mean_absolute_error: 2.4720 - val_loss: 8.5487 - val_mean_absolute_error: 2.1851
1963 Epoch 872/10000
1964 - 0s - loss: 10.4047 - mean_absolute_error: 2.3402 - val_loss: 8.5728 - val_mean_absolute_error: 2.1954
1965 Epoch 873/10000
1966 - 0s - loss: 12.0083 - mean_absolute_error: 2.5016 - val_loss: 8.7125 - val_mean_absolute_error: 2.2001
1967 Epoch 874/10000
1968 - 0s - loss: 10.8775 - mean_absolute_error: 2.4641 - val_loss: 8.6668 - val_mean_absolute_error: 2.1892
1969 Epoch 875/10000
1970 - 0s - loss: 13.7555 - mean_absolute_error: 2.7121 - val_loss

1970 : 8.6424 - val_mean_absolute_error: 2.2079

1971 Epoch 876/10000

1972 - 0s - loss: 10.9664 - mean_absolute_error: 2.4525 - val_loss: 8.5404 - val_mean_absolute_error: 2.1958

1973 Epoch 877/10000

1974 - 0s - loss: 11.9721 - mean_absolute_error: 2.5560 - val_loss: 8.5695 - val_mean_absolute_error: 2.2212

1975 Epoch 878/10000

1976 - 0s - loss: 12.1278 - mean_absolute_error: 2.5812 - val_loss: 8.6038 - val_mean_absolute_error: 2.2225

1977 Epoch 879/10000

1978 - 0s - loss: 12.1859 - mean_absolute_error: 2.4198 - val_loss: 8.5487 - val_mean_absolute_error: 2.1958

1979 Epoch 880/10000

1980 - 0s - loss: 11.0676 -

1980 mean_absolute_error: 2.3789 - val_loss: 8.5665 - val_mean_absolute_error: 2.1852

1981

1982 Epoch 00880: saving model to ./model/model_best.h5

1983 Epoch 881/10000

1984 - 0s - loss: 13.9625 - mean_absolute_error: 2.6004 - val_loss: 8.5196 - val_mean_absolute_error: 2.1831

1985 Epoch 882/10000

1986 - 0s - loss: 10.7568 - mean_absolute_error: 2.2420 - val_loss: 8.5811 - val_mean_absolute_error: 2.1766

1987 Epoch 883/10000

1988 - 0s - loss: 11.4912 - mean_absolute_error: 2.4014 - val_loss: 8.5139 - val_mean_absolute_error: 2.1835

1989 Epoch 884/10000

1990 - 0s - loss: 11.4654 - mean_absolute_error: 2.4555 - val_loss

1990 : 8.5526 - val_mean_absolute_error: 2.2044

1991 Epoch 885/10000

1992 - 0s - loss: 13.1207 - mean_absolute_error: 2.4585 - val_loss: 8.5998 - val_mean_absolute_error: 2.2185

1993 Epoch 886/10000

1994 - 0s - loss: 12.0996 - mean_absolute_error: 2.4639 - val_loss: 8.5815 - val_mean_absolute_error: 2.2076

1995 Epoch 887/10000

1996 - 0s - loss: 10.2749 - mean_absolute_error: 2.2033 - val_loss: 8.5927 - val_mean_absolute_error: 2.2122

1997 Epoch 888/10000

1998 - 0s - loss: 11.1450 - mean_absolute_error: 2.4035 - val_loss: 8.5274 - val_mean_absolute_error: 2.2021

1999

2000 Epoch 00888: ReduceLROnPlateau

```
2000  reducing learning rate to 1.
      0000000475e-05.
2001  Epoch 889/10000
2002   - 0s - loss: 11.5494 -
      mean_absolute_error: 2.5118 - val_loss
      : 8.5277 - val_mean_absolute_error: 2.
      2034
2003  Epoch 890/10000
2004   - 0s - loss: 10.6753 -
      mean_absolute_error: 2.5302 - val_loss
      : 8.5290 - val_mean_absolute_error: 2.
      2034
2005
2006  Epoch 00890: saving model to ./model/
      model_best.h5
2007  Epoch 891/10000
2008   - 0s - loss: 11.4646 -
      mean_absolute_error: 2.4643 - val_loss
      : 8.5233 - val_mean_absolute_error: 2.
      2019
2009  Epoch 892/10000
2010   - 0s - loss: 11.2829 -
      mean_absolute_error: 2.4534 - val_loss
      : 8.5306 - val_mean_absolute_error: 2.
```

2010 | 2037
2011 | Epoch 893/10000
2012 | - 0s - loss: 10.4955 - mean_absolute_error: 2.3699 - val_loss: 8.5180 - val_mean_absolute_error: 2.2020
2013 | Epoch 894/10000
2014 | - 0s - loss: 9.9634 - mean_absolute_error: 2.3602 - val_loss: 8.5179 - val_mean_absolute_error: 2.2017
2015 | Epoch 895/10000
2016 | - 0s - loss: 12.8232 - mean_absolute_error: 2.5583 - val_loss: 8.5147 - val_mean_absolute_error: 2.2011
2017 | Epoch 896/10000
2018 | - 0s - loss: 10.6347 - mean_absolute_error: 2.3860 - val_loss: 8.5124 - val_mean_absolute_error: 2.2005
2019 | Epoch 897/10000
2020 | - 0s - loss: 11.1306 - mean_absolute_error: 2.3929 - val_loss

2020 : 8.5111 - val_mean_absolute_error: 2.2000

2021 Epoch 898/10000

2022 - 0s - loss: 11.3930 - mean_absolute_error: 2.4862 - val_loss: 8.5175 - val_mean_absolute_error: 2.2010

2023 Epoch 899/10000

2024 - 0s - loss: 9.4842 - mean_absolute_error: 2.3348 - val_loss: 8.5175 - val_mean_absolute_error: 2.2016

2025 Epoch 900/10000

2026 - 0s - loss: 11.7530 - mean_absolute_error: 2.5346 - val_loss: 8.5062 - val_mean_absolute_error: 2.2004

2027

2028 Epoch 00900: saving model to ./model/model_best.h5

2029 Epoch 901/10000

2030 - 0s - loss: 11.0823 - mean_absolute_error: 2.3575 - val_loss: 8.4954 - val_mean_absolute_error: 2.

2030 1980

2031 Epoch 902/10000

2032   - 0s - loss: 11.7815 - mean_absolute_error: 2.5114 - val_loss: 8.5014 - val_mean_absolute_error: 2.1975

2033 Epoch 903/10000

2034   - 0s - loss: 11.7370 - mean_absolute_error: 2.3816 - val_loss: 8.4996 - val_mean_absolute_error: 2.1969

2035 Epoch 904/10000

2036   - 0s - loss: 10.8964 - mean_absolute_error: 2.3316 - val_loss: 8.4961 - val_mean_absolute_error: 2.1971

2037 Epoch 905/10000

2038   - 0s - loss: 11.8097 - mean_absolute_error: 2.5804 - val_loss: 8.4989 - val_mean_absolute_error: 2.1962

2039 Epoch 906/10000

2040   - 0s - loss: 11.2864 - mean_absolute_error: 2.3945 - val_loss

2040 : 8.5033 - val_mean_absolute_error: 2.1966

2041 Epoch 907/10000

2042 - 0s - loss: 11.1878 - mean_absolute_error: 2.4349 - val_loss: 8.4966 - val_mean_absolute_error: 2.1963

2043 Epoch 908/10000

2044 - 0s - loss: 12.8762 - mean_absolute_error: 2.5561 - val_loss: 8.5028 - val_mean_absolute_error: 2.1967

2045 Epoch 909/10000

2046 - 0s - loss: 12.0979 - mean_absolute_error: 2.4214 - val_loss: 8.5103 - val_mean_absolute_error: 2.1997

2047 Epoch 910/10000

2048 - 0s - loss: 10.2942 - mean_absolute_error: 2.3972 - val_loss: 8.5009 - val_mean_absolute_error: 2.1995

2049

2050 Epoch 00910: saving model to ./model/

2050 model_best.h5

2051 Epoch 911/10000

2052 - 0s - loss: 10.1605 - mean_absolute_error: 2.4482 - val_loss: 8.5058 - val_mean_absolute_error: 2.1990

2053 Epoch 912/10000

2054 - 0s - loss: 11.2345 - mean_absolute_error: 2.4019 - val_loss: 8.4981 - val_mean_absolute_error: 2.1985

2055 Epoch 913/10000

2056 - 0s - loss: 12.7466 - mean_absolute_error: 2.5253 - val_loss: 8.4929 - val_mean_absolute_error: 2.1967

2057 Epoch 914/10000

2058 - 0s - loss: 10.4725 - mean_absolute_error: 2.3824 - val_loss: 8.4950 - val_mean_absolute_error: 2.1956

2059 Epoch 915/10000

2060 - 0s - loss: 10.8083 - mean_absolute_error: 2.4399 - val_loss

2060 : 8.4977 - val_mean_absolute_error: 2.1972

2061 Epoch 916/10000

2062 - 0s - loss: 14.5028 - mean_absolute_error: 2.7044 - val_loss: 8.4985 - val_mean_absolute_error: 2.1971

2063 Epoch 917/10000

2064 - 0s - loss: 10.0644 - mean_absolute_error: 2.4235 - val_loss: 8.4987 - val_mean_absolute_error: 2.1978

2065 Epoch 918/10000

2066 - 0s - loss: 10.2425 - mean_absolute_error: 2.3368 - val_loss: 8.5018 - val_mean_absolute_error: 2.1982

2067 Epoch 919/10000

2068 - 0s - loss: 12.7549 - mean_absolute_error: 2.5320 - val_loss: 8.4936 - val_mean_absolute_error: 2.1962

2069 Epoch 920/10000

2070 - 0s - loss: 10.2943 -

```
2070  mean_absolute_error: 2.3110 - val_loss
      : 8.4902 - val_mean_absolute_error: 2.
      1944
2071
2072  Epoch 00920: saving model to ./model/
      model_best.h5
2073  Epoch 921/10000
2074   - 0s - loss: 10.3082 -
      mean_absolute_error: 2.3385 - val_loss
      : 8.4897 - val_mean_absolute_error: 2.
      1931
2075  Epoch 922/10000
2076   - 0s - loss: 10.6628 -
      mean_absolute_error: 2.3940 - val_loss
      : 8.4913 - val_mean_absolute_error: 2.
      1927
2077  Epoch 923/10000
2078   - 0s - loss: 9.8568 -
      mean_absolute_error: 2.2027 - val_loss
      : 8.4993 - val_mean_absolute_error: 2.
      1933
2079  Epoch 924/10000
2080   - 0s - loss: 12.0293 -
      mean_absolute_error: 2.4865 - val_loss
```

2080 `: 8.5033 - val_mean_absolute_error: 2.1936`

2081 `Epoch 925/10000`

2082 ` - 0s - loss: 12.2337 - mean_absolute_error: 2.5340 - val_loss: 8.4945 - val_mean_absolute_error: 2.1933`

2083 `Epoch 926/10000`

2084 ` - 0s - loss: 10.1052 - mean_absolute_error: 2.4205 - val_loss: 8.4961 - val_mean_absolute_error: 2.1950`

2085 `Epoch 927/10000`

2086 ` - 0s - loss: 10.2598 - mean_absolute_error: 2.3090 - val_loss: 8.4955 - val_mean_absolute_error: 2.1938`

2087 `Epoch 928/10000`

2088 ` - 0s - loss: 10.8286 - mean_absolute_error: 2.4651 - val_loss: 8.4974 - val_mean_absolute_error: 2.1943`

2089 `Epoch 929/10000`

2090 ` - 0s - loss: 11.9239 -`

2090 mean_absolute_error: 2.4055 - val_loss: 8.5043 - val_mean_absolute_error: 2.1948

2091 Epoch 930/10000

2092 - 0s - loss: 11.5746 - mean_absolute_error: 2.5187 - val_loss: 8.5044 - val_mean_absolute_error: 2.1933

2093

2094 Epoch 00930: saving model to ./model/model_best.h5

2095 Epoch 931/10000

2096 - 0s - loss: 12.6624 - mean_absolute_error: 2.5585 - val_loss: 8.4994 - val_mean_absolute_error: 2.1931

2097 Epoch 932/10000

2098 - 0s - loss: 10.4152 - mean_absolute_error: 2.3576 - val_loss: 8.4946 - val_mean_absolute_error: 2.1940

2099 Epoch 933/10000

2100 - 0s - loss: 13.3819 - mean_absolute_error: 2.5315 - val_loss

2100 : 8.5024 - val_mean_absolute_error: 2.1939

2101 Epoch 934/10000

2102 - 0s - loss: 10.8678 - mean_absolute_error: 2.4196 - val_loss: 8.5005 - val_mean_absolute_error: 2.1931

2103 Epoch 935/10000

2104 - 0s - loss: 11.1160 - mean_absolute_error: 2.4208 - val_loss: 8.5077 - val_mean_absolute_error: 2.1945

2105 Epoch 936/10000

2106 - 0s - loss: 12.1659 - mean_absolute_error: 2.5378 - val_loss: 8.5009 - val_mean_absolute_error: 2.1949

2107 Epoch 937/10000

2108 - 0s - loss: 9.9952 - mean_absolute_error: 2.3499 - val_loss: 8.5042 - val_mean_absolute_error: 2.1963

2109 Epoch 938/10000

2110 - 0s - loss: 10.8887 -

2110 mean_absolute_error: 2.3039 - val_loss: 8.5071 - val_mean_absolute_error: 2.1937

2111 Epoch 939/10000

2112 - 0s - loss: 11.1935 - mean_absolute_error: 2.4685 - val_loss: 8.5052 - val_mean_absolute_error: 2.1923

2113 Epoch 940/10000

2114 - 0s - loss: 12.6843 - mean_absolute_error: 2.5233 - val_loss: 8.5124 - val_mean_absolute_error: 2.1920

2115

2116 Epoch 00940: saving model to ./model/model_best.h5

2117 Epoch 941/10000

2118 - 0s - loss: 12.4125 - mean_absolute_error: 2.5983 - val_loss: 8.5043 - val_mean_absolute_error: 2.1911

2119 Epoch 942/10000

2120 - 0s - loss: 11.4181 - mean_absolute_error: 2.4900 - val_loss

2120 : 8.5082 - val_mean_absolute_error: 2.1914

2121 Epoch 943/10000

2122 - 0s - loss: 11.1123 - mean_absolute_error: 2.4423 - val_loss: 8.5095 - val_mean_absolute_error: 2.1920

2123 Epoch 944/10000

2124 - 0s - loss: 11.2913 - mean_absolute_error: 2.5934 - val_loss: 8.5095 - val_mean_absolute_error: 2.1930

2125 Epoch 945/10000

2126 - 0s - loss: 8.8086 - mean_absolute_error: 2.2294 - val_loss: 8.5098 - val_mean_absolute_error: 2.1915

2127 Epoch 946/10000

2128 - 0s - loss: 10.5884 - mean_absolute_error: 2.3911 - val_loss: 8.4985 - val_mean_absolute_error: 2.1899

2129 Epoch 947/10000

2130 - 0s - loss: 11.5597 -

```
2130 mean_absolute_error: 2.4550 - val_loss
     : 8.4993 - val_mean_absolute_error: 2.
     1898
2131 Epoch 948/10000
2132  - 0s - loss: 12.1203 -
     mean_absolute_error: 2.4728 - val_loss
     : 8.4981 - val_mean_absolute_error: 2.
     1900
2133 Epoch 949/10000
2134  - 0s - loss: 11.1346 -
     mean_absolute_error: 2.4165 - val_loss
     : 8.4969 - val_mean_absolute_error: 2.
     1902
2135 Epoch 950/10000
2136  - 0s - loss: 9.6096 -
     mean_absolute_error: 2.2816 - val_loss
     : 8.4973 - val_mean_absolute_error: 2.
     1930
2137
2138 Epoch 00950: saving model to ./model/
     model_best.h5
2139 Epoch 951/10000
2140  - 0s - loss: 11.8106 -
     mean_absolute_error: 2.4957 - val_loss
```

2140 : 8.4925 - val_mean_absolute_error: 2.1924

2141 Epoch 952/10000

2142 - 0s - loss: 10.4546 - mean_absolute_error: 2.3368 - val_loss: 8.4911 - val_mean_absolute_error: 2.1928

2143 Epoch 953/10000

2144 - 0s - loss: 12.6496 - mean_absolute_error: 2.5370 - val_loss: 8.4935 - val_mean_absolute_error: 2.1924

2145 Epoch 954/10000

2146 - 0s - loss: 11.8992 - mean_absolute_error: 2.4560 - val_loss: 8.4957 - val_mean_absolute_error: 2.1928

2147 Epoch 955/10000

2148 - 0s - loss: 11.4919 - mean_absolute_error: 2.4933 - val_loss: 8.5036 - val_mean_absolute_error: 2.1949

2149 Epoch 956/10000

2150 - 0s - loss: 12.5692 -

2150 mean_absolute_error: 2.4500 - val_loss: 8.5098 - val_mean_absolute_error: 2.1944

2151 Epoch 957/10000

2152 - 0s - loss: 10.8594 - mean_absolute_error: 2.4379 - val_loss: 8.5055 - val_mean_absolute_error: 2.1938

2153 Epoch 958/10000

2154 - 0s - loss: 9.2994 - mean_absolute_error: 2.2001 - val_loss: 8.4983 - val_mean_absolute_error: 2.1939

2155 Epoch 959/10000

2156 - 0s - loss: 11.1712 - mean_absolute_error: 2.3418 - val_loss: 8.4894 - val_mean_absolute_error: 2.1932

2157 Epoch 960/10000

2158 - 0s - loss: 13.1982 - mean_absolute_error: 2.5962 - val_loss: 8.4894 - val_mean_absolute_error: 2.1910

2159

2160 Epoch 00960: saving model to ./model/model_best.h5

2161 Epoch 961/10000

2162 - 0s - loss: 10.5226 - mean_absolute_error: 2.3861 - val_loss: 8.4884 - val_mean_absolute_error: 2.1899

2163 Epoch 962/10000

2164 - 0s - loss: 14.2350 - mean_absolute_error: 2.7070 - val_loss: 8.4926 - val_mean_absolute_error: 2.1915

2165 Epoch 963/10000

2166 - 0s - loss: 12.5565 - mean_absolute_error: 2.4693 - val_loss: 8.5001 - val_mean_absolute_error: 2.1925

2167 Epoch 964/10000

2168 - 0s - loss: 11.1274 - mean_absolute_error: 2.3934 - val_loss: 8.5073 - val_mean_absolute_error: 2.1939

2169 Epoch 965/10000

2170 - 0s - loss: 12.3817 -

2170 mean_absolute_error: 2.4494 - val_loss: 8.5058 - val_mean_absolute_error: 2.1932

2171 Epoch 966/10000

2172 - 0s - loss: 12.4408 - mean_absolute_error: 2.5741 - val_loss: 8.5184 - val_mean_absolute_error: 2.1943

2173 Epoch 967/10000

2174 - 0s - loss: 11.9826 - mean_absolute_error: 2.4438 - val_loss: 8.5267 - val_mean_absolute_error: 2.1949

2175 Epoch 968/10000

2176 - 0s - loss: 10.5703 - mean_absolute_error: 2.3133 - val_loss: 8.5313 - val_mean_absolute_error: 2.1957

2177 Epoch 969/10000

2178 - 0s - loss: 13.1880 - mean_absolute_error: 2.5325 - val_loss: 8.5389 - val_mean_absolute_error: 2.1947

2179 Epoch 970/10000

```
2180    - 0s - loss: 11.7226 -
        mean_absolute_error: 2.4374 - val_loss
        : 8.5400 - val_mean_absolute_error: 2.
        1940
2181
2182    Epoch 00970: saving model to ./model/
        model_best.h5
2183    Epoch 971/10000
2184     - 0s - loss: 10.8711 -
        mean_absolute_error: 2.4984 - val_loss
        : 8.5356 - val_mean_absolute_error: 2.
        1935
2185    Epoch 972/10000
2186     - 0s - loss: 12.0378 -
        mean_absolute_error: 2.5409 - val_loss
        : 8.5328 - val_mean_absolute_error: 2.
        1945
2187    Epoch 973/10000
2188     - 0s - loss: 10.3861 -
        mean_absolute_error: 2.3174 - val_loss
        : 8.5357 - val_mean_absolute_error: 2.
        1949
2189    Epoch 974/10000
2190     - 0s - loss: 12.6567 -
```

2190 mean_absolute_error: 2.4399 - val_loss: 8.5287 - val_mean_absolute_error: 2.1931

2191 Epoch 975/10000

2192 - 0s - loss: 11.2701 - mean_absolute_error: 2.3304 - val_loss: 8.5315 - val_mean_absolute_error: 2.1941

2193 Epoch 976/10000

2194 - 0s - loss: 12.4383 - mean_absolute_error: 2.5962 - val_loss: 8.5409 - val_mean_absolute_error: 2.1949

2195 Epoch 977/10000

2196 - 0s - loss: 9.6544 - mean_absolute_error: 2.2973 - val_loss: 8.5420 - val_mean_absolute_error: 2.1951

2197 Epoch 978/10000

2198 - 0s - loss: 9.4356 - mean_absolute_error: 2.2375 - val_loss: 8.5372 - val_mean_absolute_error: 2.1947

2199 Epoch 979/10000

```
2200   - 0s - loss: 9.8291 -
       mean_absolute_error: 2.2858 - val_loss
       : 8.5414 - val_mean_absolute_error: 2.
       1990
2201   Epoch 980/10000
2202   - 0s - loss: 11.7686 -
       mean_absolute_error: 2.4135 - val_loss
       : 8.5531 - val_mean_absolute_error: 2.
       2003
2203
2204   Epoch 00980: saving model to ./model/
       model_best.h5
2205   Epoch 981/10000
2206   - 0s - loss: 11.6235 -
       mean_absolute_error: 2.5413 - val_loss
       : 8.5488 - val_mean_absolute_error: 2.
       2017
2207   Epoch 982/10000
2208   - 0s - loss: 9.9069 -
       mean_absolute_error: 2.3603 - val_loss
       : 8.5407 - val_mean_absolute_error: 2.
       2011
2209   Epoch 983/10000
2210   - 0s - loss: 12.0059 -
```

2210 mean_absolute_error: 2.5230 - val_loss: 8.5326 - val_mean_absolute_error: 2.2007

2211 Epoch 984/10000

2212 - 0s - loss: 11.0341 - mean_absolute_error: 2.4746 - val_loss: 8.5245 - val_mean_absolute_error: 2.1993

2213 Epoch 985/10000

2214 - 0s - loss: 11.9818 - mean_absolute_error: 2.5036 - val_loss: 8.5212 - val_mean_absolute_error: 2.1994

2215 Epoch 986/10000

2216 - 0s - loss: 10.5172 - mean_absolute_error: 2.3713 - val_loss: 8.5262 - val_mean_absolute_error: 2.1995

2217 Epoch 987/10000

2218 - 0s - loss: 10.3249 - mean_absolute_error: 2.2543 - val_loss: 8.5190 - val_mean_absolute_error: 2.1976

2219 Epoch 988/10000

2220　- 0s - loss: 10.8572 - mean_absolute_error: 2.4763 - val_loss: 8.5148 - val_mean_absolute_error: 2.1952

2221

2222　Epoch 00988: ReduceLROnPlateau reducing learning rate to 1.00000006569e-06.

2223　Epoch 989/10000

2224　- 0s - loss: 12.9240 - mean_absolute_error: 2.4937 - val_loss: 8.5146 - val_mean_absolute_error: 2.1954

2225　Epoch 990/10000

2226　- 0s - loss: 9.7247 - mean_absolute_error: 2.2774 - val_loss: 8.5148 - val_mean_absolute_error: 2.1953

2227

2228　Epoch 00990: saving model to ./model/model_best.h5

2229　Epoch 991/10000

2230　- 0s - loss: 10.9340 - mean_absolute_error: 2.3693 - val_loss

```
2230  : 8.5143 - val_mean_absolute_error: 2.
      1954
2231  Epoch 992/10000
2232   - 0s - loss: 10.8030 -
      mean_absolute_error: 2.2915 - val_loss
      : 8.5150 - val_mean_absolute_error: 2.
      1955
2233  Epoch 993/10000
2234   - 0s - loss: 10.9540 -
      mean_absolute_error: 2.4387 - val_loss
      : 8.5152 - val_mean_absolute_error: 2.
      1957
2235  Epoch 994/10000
2236   - 0s - loss: 11.6094 -
      mean_absolute_error: 2.4420 - val_loss
      : 8.5154 - val_mean_absolute_error: 2.
      1956
2237  Epoch 995/10000
2238   - 0s - loss: 11.5454 -
      mean_absolute_error: 2.4765 - val_loss
      : 8.5146 - val_mean_absolute_error: 2.
      1956
2239  Epoch 996/10000
2240   - 0s - loss: 12.8698 -
```

2240 mean_absolute_error: 2.6232 - val_loss: 8.5143 - val_mean_absolute_error: 2.1955

2241 Epoch 997/10000

2242 - 0s - loss: 12.7750 - mean_absolute_error: 2.4479 - val_loss: 8.5141 - val_mean_absolute_error: 2.1954

2243 Epoch 998/10000

2244 - 0s - loss: 12.7174 - mean_absolute_error: 2.6298 - val_loss: 8.5144 - val_mean_absolute_error: 2.1955

2245 Epoch 999/10000

2246 - 0s - loss: 10.8028 - mean_absolute_error: 2.3280 - val_loss: 8.5140 - val_mean_absolute_error: 2.1954

2247 Epoch 1000/10000

2248 - 0s - loss: 11.3482 - mean_absolute_error: 2.3199 - val_loss: 8.5149 - val_mean_absolute_error: 2.1955

2249

2250 Epoch 01000: saving model to ./model/model_best.h5

2251 Epoch 1001/10000

2252 - 0s - loss: 12.5767 - mean_absolute_error: 2.5879 - val_loss: 8.5146 - val_mean_absolute_error: 2.1956

2253 Epoch 1002/10000

2254 - 0s - loss: 11.0243 - mean_absolute_error: 2.3752 - val_loss: 8.5143 - val_mean_absolute_error: 2.1952

2255 Epoch 1003/10000

2256 - 0s - loss: 9.0384 - mean_absolute_error: 2.3111 - val_loss: 8.5142 - val_mean_absolute_error: 2.1950

2257 Epoch 1004/10000

2258 - 0s - loss: 10.2619 - mean_absolute_error: 2.3344 - val_loss: 8.5135 - val_mean_absolute_error: 2.1948

2259 Epoch 1005/10000

2260 - 0s - loss: 10.3959 -

2260 mean_absolute_error: 2.4114 - val_loss: 8.5143 - val_mean_absolute_error: 2.1950

2261 Epoch 1006/10000

2262 - 0s - loss: 14.2606 - mean_absolute_error: 2.6950 - val_loss: 8.5126 - val_mean_absolute_error: 2.1950

2263 Epoch 1007/10000

2264 - 0s - loss: 14.3000 - mean_absolute_error: 2.6560 - val_loss: 8.5127 - val_mean_absolute_error: 2.1952

2265 Epoch 1008/10000

2266 - 0s - loss: 12.9036 - mean_absolute_error: 2.4853 - val_loss: 8.5133 - val_mean_absolute_error: 2.1952

2267 Epoch 1009/10000

2268 - 0s - loss: 10.9926 - mean_absolute_error: 2.3427 - val_loss: 8.5139 - val_mean_absolute_error: 2.1953

2269 Epoch 1010/10000

2270 - 0s - loss: 10.9239 - mean_absolute_error: 2.3362 - val_loss: 8.5140 - val_mean_absolute_error: 2.1954

2271

2272 Epoch 01010: saving model to ./model/model_best.h5

2273 Epoch 1011/10000

2274 - 0s - loss: 11.3532 - mean_absolute_error: 2.4538 - val_loss: 8.5137 - val_mean_absolute_error: 2.1952

2275 Epoch 1012/10000

2276 - 0s - loss: 11.0713 - mean_absolute_error: 2.3642 - val_loss: 8.5136 - val_mean_absolute_error: 2.1951

2277 Epoch 1013/10000

2278 - 0s - loss: 11.9337 - mean_absolute_error: 2.4616 - val_loss: 8.5141 - val_mean_absolute_error: 2.1949

2279 Epoch 1014/10000

2280 - 0s - loss: 11.1542 -

2280 mean_absolute_error: 2.4564 - val_loss: 8.5147 - val_mean_absolute_error: 2.1949

2281 Epoch 1015/10000

2282 - 0s - loss: 11.7822 - mean_absolute_error: 2.4212 - val_loss: 8.5142 - val_mean_absolute_error: 2.1950

2283 Epoch 1016/10000

2284 - 0s - loss: 11.7522 - mean_absolute_error: 2.4309 - val_loss: 8.5139 - val_mean_absolute_error: 2.1951

2285 Epoch 1017/10000

2286 - 0s - loss: 11.0522 - mean_absolute_error: 2.3830 - val_loss: 8.5137 - val_mean_absolute_error: 2.1950

2287 Epoch 1018/10000

2288 - 0s - loss: 11.0715 - mean_absolute_error: 2.3918 - val_loss: 8.5142 - val_mean_absolute_error: 2.1953

2289 Epoch 1019/10000

2290   - 0s - loss: 9.2554 - mean_absolute_error: 2.3026 - val_loss: 8.5137 - val_mean_absolute_error: 2.1953

2291 Epoch 1020/10000

2292   - 0s - loss: 15.1873 - mean_absolute_error: 2.6593 - val_loss: 8.5129 - val_mean_absolute_error: 2.1953

2293

2294 Epoch 01020: saving model to ./model/model_best.h5

2295 Epoch 1021/10000

2296   - 0s - loss: 12.1548 - mean_absolute_error: 2.4224 - val_loss: 8.5134 - val_mean_absolute_error: 2.1954

2297 Epoch 1022/10000

2298   - 0s - loss: 11.5044 - mean_absolute_error: 2.4809 - val_loss: 8.5128 - val_mean_absolute_error: 2.1953

2299 Epoch 1023/10000

2300   - 0s - loss: 12.4445 -

2300 mean_absolute_error: 2.4801 - val_loss: 8.5130 - val_mean_absolute_error: 2.1952

2301 Epoch 1024/10000

2302 - 0s - loss: 12.1827 - mean_absolute_error: 2.4165 - val_loss: 8.5127 - val_mean_absolute_error: 2.1953

2303 Epoch 1025/10000

2304 - 0s - loss: 11.2001 - mean_absolute_error: 2.5440 - val_loss: 8.5126 - val_mean_absolute_error: 2.1953

2305 Epoch 1026/10000

2306 - 0s - loss: 11.8836 - mean_absolute_error: 2.4807 - val_loss: 8.5126 - val_mean_absolute_error: 2.1955

2307 Epoch 1027/10000

2308 - 0s - loss: 10.8791 - mean_absolute_error: 2.3364 - val_loss: 8.5120 - val_mean_absolute_error: 2.1954

2309 Epoch 1028/10000

2310   - 0s - loss: 9.3875 - mean_absolute_error: 2.2666 - val_loss: 8.5125 - val_mean_absolute_error: 2.1953

2311 Epoch 1029/10000

2312   - 0s - loss: 11.9268 - mean_absolute_error: 2.4296 - val_loss: 8.5126 - val_mean_absolute_error: 2.1953

2313 Epoch 1030/10000

2314   - 0s - loss: 9.4161 - mean_absolute_error: 2.3389 - val_loss: 8.5114 - val_mean_absolute_error: 2.1952

2315

2316 Epoch 01030: saving model to ./model/model_best.h5

2317 Epoch 1031/10000

2318   - 0s - loss: 11.9601 - mean_absolute_error: 2.5080 - val_loss: 8.5115 - val_mean_absolute_error: 2.1953

2319 Epoch 1032/10000

2320   - 0s - loss: 10.4287 -

2320	mean_absolute_error: 2.4202 - val_loss: 8.5111 - val_mean_absolute_error: 2.1953
2321	Epoch 1033/10000
2322	- 0s - loss: 10.8675 - mean_absolute_error: 2.4401 - val_loss: 8.5114 - val_mean_absolute_error: 2.1952
2323	Epoch 1034/10000
2324	- 0s - loss: 12.2674 - mean_absolute_error: 2.5345 - val_loss: 8.5116 - val_mean_absolute_error: 2.1953
2325	Epoch 1035/10000
2326	- 0s - loss: 12.7696 - mean_absolute_error: 2.5040 - val_loss: 8.5119 - val_mean_absolute_error: 2.1954
2327	Epoch 1036/10000
2328	- 0s - loss: 13.9503 - mean_absolute_error: 2.6063 - val_loss: 8.5114 - val_mean_absolute_error: 2.1953
2329	Epoch 1037/10000

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2330   - 0s - loss: 11.3425 -
       mean_absolute_error: 2.3842 - val_loss
       : 8.5108 - val_mean_absolute_error: 2.
       1952
2331   Epoch 1038/10000
2332   - 0s - loss: 12.3774 -
       mean_absolute_error: 2.5452 - val_loss
       : 8.5110 - val_mean_absolute_error: 2.
       1953
2333   Epoch 1039/10000
2334   - 0s - loss: 10.1321 -
       mean_absolute_error: 2.2962 - val_loss
       : 8.5113 - val_mean_absolute_error: 2.
       1953
2335   Epoch 1040/10000
2336   - 0s - loss: 12.7393 -
       mean_absolute_error: 2.5386 - val_loss
       : 8.5104 - val_mean_absolute_error: 2.
       1952
2337
2338   Epoch 01040: saving model to ./model/
       model_best.h5
2339   Epoch 1041/10000
2340   - 0s - loss: 11.5784 -
```

2340 mean_absolute_error: 2.4468 - val_loss: 8.5091 - val_mean_absolute_error: 2.1951

2341 Epoch 1042/10000

2342 - 0s - loss: 11.7863 - mean_absolute_error: 2.5225 - val_loss: 8.5099 - val_mean_absolute_error: 2.1953

2343 Epoch 1043/10000

2344 - 0s - loss: 13.2013 - mean_absolute_error: 2.6033 - val_loss: 8.5103 - val_mean_absolute_error: 2.1953

2345 Epoch 1044/10000

2346 - 0s - loss: 10.7844 - mean_absolute_error: 2.3478 - val_loss: 8.5109 - val_mean_absolute_error: 2.1954

2347 Epoch 1045/10000

2348 - 0s - loss: 11.4739 - mean_absolute_error: 2.3992 - val_loss: 8.5103 - val_mean_absolute_error: 2.1952

2349 Epoch 1046/10000

2350 - 0s - loss: 10.7303 - mean_absolute_error: 2.4158 - val_loss: 8.5101 - val_mean_absolute_error: 2.1951

2351 Epoch 1047/10000

2352 - 0s - loss: 9.5692 - mean_absolute_error: 2.2626 - val_loss: 8.5099 - val_mean_absolute_error: 2.1952

2353 Epoch 1048/10000

2354 - 0s - loss: 12.3206 - mean_absolute_error: 2.5581 - val_loss: 8.5096 - val_mean_absolute_error: 2.1953

2355 Epoch 1049/10000

2356 - 0s - loss: 10.8952 - mean_absolute_error: 2.3960 - val_loss: 8.5102 - val_mean_absolute_error: 2.1954

2357 Epoch 1050/10000

2358 - 0s - loss: 11.4557 - mean_absolute_error: 2.4743 - val_loss: 8.5110 - val_mean_absolute_error: 2.1955

2359

2360 Epoch 01050: saving model to ./model/model_best.h5

2361 Epoch 1051/10000

2362 - 0s - loss: 12.0701 - mean_absolute_error: 2.4429 - val_loss: 8.5102 - val_mean_absolute_error: 2.1953

2363 Epoch 1052/10000

2364 - 0s - loss: 12.9032 - mean_absolute_error: 2.5797 - val_loss: 8.5103 - val_mean_absolute_error: 2.1954

2365 Epoch 1053/10000

2366 - 0s - loss: 11.0460 - mean_absolute_error: 2.3841 - val_loss: 8.5096 - val_mean_absolute_error: 2.1953

2367 Epoch 1054/10000

2368 - 0s - loss: 12.2811 - mean_absolute_error: 2.4580 - val_loss: 8.5098 - val_mean_absolute_error: 2.1955

2369 Epoch 1055/10000

2370 - 0s - loss: 12.5498 - mean_absolute_error: 2.4891 - val_loss: 8.5103 - val_mean_absolute_error: 2.1955

2371 Epoch 1056/10000

2372 - 0s - loss: 12.2468 - mean_absolute_error: 2.4666 - val_loss: 8.5097 - val_mean_absolute_error: 2.1953

2373 Epoch 1057/10000

2374 - 0s - loss: 10.9193 - mean_absolute_error: 2.4464 - val_loss: 8.5099 - val_mean_absolute_error: 2.1953

2375 Epoch 1058/10000

2376 - 0s - loss: 14.7690 - mean_absolute_error: 2.6531 - val_loss: 8.5106 - val_mean_absolute_error: 2.1952

2377 Epoch 1059/10000

2378 - 0s - loss: 10.6374 - mean_absolute_error: 2.3785 - val_loss: 8.5105 - val_mean_absolute_error: 2.1952

```
2379  Epoch 1060/10000
2380   - 0s - loss: 12.4037 -
      mean_absolute_error: 2.6199 - val_loss
      : 8.5105 - val_mean_absolute_error: 2.
      1954
2381
2382  Epoch 01060: saving model to ./model/
      model_best.h5
2383  Epoch 1061/10000
2384   - 0s - loss: 11.8111 -
      mean_absolute_error: 2.3885 - val_loss
      : 8.5103 - val_mean_absolute_error: 2.
      1954
2385  Epoch 1062/10000
2386   - 0s - loss: 11.3448 -
      mean_absolute_error: 2.3822 - val_loss
      : 8.5102 - val_mean_absolute_error: 2.
      1954
2387  Epoch 1063/10000
2388   - 0s - loss: 12.1426 -
      mean_absolute_error: 2.4704 - val_loss
      : 8.5106 - val_mean_absolute_error: 2.
      1956
2389  Epoch 1064/10000
```

2390 - 0s - loss: 10.0211 - mean_absolute_error: 2.3318 - val_loss: 8.5101 - val_mean_absolute_error: 2.1953

2391 Epoch 1065/10000

2392 - 0s - loss: 12.3511 - mean_absolute_error: 2.4375 - val_loss: 8.5092 - val_mean_absolute_error: 2.1954

2393 Epoch 1066/10000

2394 - 0s - loss: 9.2995 - mean_absolute_error: 2.3196 - val_loss: 8.5089 - val_mean_absolute_error: 2.1954

2395 Epoch 1067/10000

2396 - 0s - loss: 11.9251 - mean_absolute_error: 2.4585 - val_loss: 8.5097 - val_mean_absolute_error: 2.1954

2397 Epoch 1068/10000

2398 - 0s - loss: 13.0839 - mean_absolute_error: 2.5158 - val_loss: 8.5097 - val_mean_absolute_error: 2.1953

```
2399  Epoch 1069/10000
2400   - 0s - loss: 11.4237 -
       mean_absolute_error: 2.3684 - val_loss
       : 8.5103 - val_mean_absolute_error: 2.
       1954
2401  Epoch 1070/10000
2402   - 0s - loss: 11.8541 -
       mean_absolute_error: 2.3825 - val_loss
       : 8.5105 - val_mean_absolute_error: 2.
       1955
2403
2404  Epoch 01070: saving model to ./model/
       model_best.h5
2405  Epoch 1071/10000
2406   - 0s - loss: 11.9166 -
       mean_absolute_error: 2.4852 - val_loss
       : 8.5107 - val_mean_absolute_error: 2.
       1956
2407  Epoch 1072/10000
2408   - 0s - loss: 9.8653 -
       mean_absolute_error: 2.3578 - val_loss
       : 8.5114 - val_mean_absolute_error: 2.
       1957
2409  Epoch 1073/10000
```

2410 - 0s - loss: 9.9127 - mean_absolute_error: 2.3120 - val_loss: 8.5117 - val_mean_absolute_error: 2.1956

2411 Epoch 1074/10000

2412 - 0s - loss: 10.5799 - mean_absolute_error: 2.4191 - val_loss: 8.5114 - val_mean_absolute_error: 2.1955

2413 Epoch 1075/10000

2414 - 0s - loss: 11.4627 - mean_absolute_error: 2.3626 - val_loss: 8.5114 - val_mean_absolute_error: 2.1955

2415 Epoch 1076/10000

2416 - 0s - loss: 11.4577 - mean_absolute_error: 2.3998 - val_loss: 8.5117 - val_mean_absolute_error: 2.1956

2417 Epoch 1077/10000

2418 - 0s - loss: 9.4841 - mean_absolute_error: 2.2326 - val_loss: 8.5123 - val_mean_absolute_error: 2.1956

```
2419  Epoch 1078/10000
2420   - 0s - loss: 11.7202 -
       mean_absolute_error: 2.4126 - val_loss
       : 8.5115 - val_mean_absolute_error: 2.
       1957
2421  Epoch 1079/10000
2422   - 0s - loss: 9.6599 -
       mean_absolute_error: 2.3420 - val_loss
       : 8.5119 - val_mean_absolute_error: 2.
       1958
2423  Epoch 1080/10000
2424   - 0s - loss: 12.2367 -
       mean_absolute_error: 2.5615 - val_loss
       : 8.5124 - val_mean_absolute_error: 2.
       1957
2425
2426  Epoch 01080: saving model to ./model/
       model_best.h5
2427  Epoch 1081/10000
2428   - 0s - loss: 10.7102 -
       mean_absolute_error: 2.3930 - val_loss
       : 8.5125 - val_mean_absolute_error: 2.
       1957
2429  Epoch 1082/10000
```

2430　 - 0s - loss: 11.0925 - mean_absolute_error: 2.4153 - val_loss: 8.5123 - val_mean_absolute_error: 2.1955

2431 Epoch 1083/10000

2432　 - 0s - loss: 12.2388 - mean_absolute_error: 2.5838 - val_loss: 8.5124 - val_mean_absolute_error: 2.1956

2433 Epoch 1084/10000

2434　 - 0s - loss: 9.7327 - mean_absolute_error: 2.3036 - val_loss: 8.5124 - val_mean_absolute_error: 2.1955

2435 Epoch 1085/10000

2436　 - 0s - loss: 11.4223 - mean_absolute_error: 2.4731 - val_loss: 8.5121 - val_mean_absolute_error: 2.1955

2437 Epoch 1086/10000

2438　 - 0s - loss: 10.8352 - mean_absolute_error: 2.3707 - val_loss: 8.5129 - val_mean_absolute_error: 2.1955

2439 Epoch 1087/10000

2440 - 0s - loss: 9.9071 - mean_absolute_error: 2.3760 - val_loss: 8.5127 - val_mean_absolute_error: 2.1955

2441 Epoch 1088/10000

2442 - 0s - loss: 9.9015 - mean_absolute_error: 2.3238 - val_loss: 8.5111 - val_mean_absolute_error: 2.1954

2443

2444 Epoch 01088: ReduceLROnPlateau reducing learning rate to 1e-06.

2445 Epoch 1089/10000

2446 - 0s - loss: 8.2365 - mean_absolute_error: 2.2144 - val_loss: 8.5119 - val_mean_absolute_error: 2.1955

2447 Epoch 1090/10000

2448 - 0s - loss: 11.9057 - mean_absolute_error: 2.5272 - val_loss: 8.5116 - val_mean_absolute_error: 2.1956

2449

2450 Epoch 01090: saving model to ./model/model_best.h5

2451 Epoch 1091/10000

2452 - 0s - loss: 8.6405 - mean_absolute_error: 2.2672 - val_loss: 8.5111 - val_mean_absolute_error: 2.1956

2453 Epoch 1092/10000

2454 - 0s - loss: 9.9938 - mean_absolute_error: 2.3353 - val_loss: 8.5115 - val_mean_absolute_error: 2.1957

2455 Epoch 1093/10000

2456 - 0s - loss: 11.7155 - mean_absolute_error: 2.5187 - val_loss: 8.5104 - val_mean_absolute_error: 2.1955

2457 Epoch 1094/10000

2458 - 0s - loss: 13.7812 - mean_absolute_error: 2.7031 - val_loss: 8.5113 - val_mean_absolute_error: 2.1955

2459 Epoch 1095/10000

2460 - 0s - loss: 11.4413 -

2460 mean_absolute_error: 2.4873 - val_loss: 8.5104 - val_mean_absolute_error: 2.1955

2461 Epoch 1096/10000

2462 - 0s - loss: 11.4126 - mean_absolute_error: 2.3625 - val_loss: 8.5104 - val_mean_absolute_error: 2.1957

2463 Epoch 1097/10000

2464 - 0s - loss: 12.1116 - mean_absolute_error: 2.4413 - val_loss: 8.5099 - val_mean_absolute_error: 2.1956

2465 Epoch 1098/10000

2466 - 0s - loss: 11.8230 - mean_absolute_error: 2.3375 - val_loss: 8.5098 - val_mean_absolute_error: 2.1958

2467 Epoch 1099/10000

2468 - 0s - loss: 12.6226 - mean_absolute_error: 2.6275 - val_loss: 8.5099 - val_mean_absolute_error: 2.1959

2469 Epoch 1100/10000

2470　　- 0s - loss: 10.2559 - mean_absolute_error: 2.3206 - val_loss: 8.5103 - val_mean_absolute_error: 2.1960

2471

2472　Epoch 01100: saving model to ./model/model_best.h5

2473　Epoch 1101/10000

2474　　- 0s - loss: 11.3534 - mean_absolute_error: 2.4356 - val_loss: 8.5111 - val_mean_absolute_error: 2.1961

2475　Epoch 1102/10000

2476　　- 0s - loss: 11.1756 - mean_absolute_error: 2.4622 - val_loss: 8.5115 - val_mean_absolute_error: 2.1962

2477　Epoch 1103/10000

2478　　- 0s - loss: 12.5276 - mean_absolute_error: 2.4691 - val_loss: 8.5117 - val_mean_absolute_error: 2.1960

2479　Epoch 1104/10000

2480　　- 0s - loss: 10.1647 -

2480 mean_absolute_error: 2.3111 - val_loss: 8.5123 - val_mean_absolute_error: 2.1962

2481 Epoch 1105/10000

2482 - 0s - loss: 13.4850 - mean_absolute_error: 2.5688 - val_loss: 8.5122 - val_mean_absolute_error: 2.1962

2483 Epoch 1106/10000

2484 - 0s - loss: 12.3780 - mean_absolute_error: 2.4886 - val_loss: 8.5126 - val_mean_absolute_error: 2.1963

2485 Epoch 1107/10000

2486 - 0s - loss: 12.3936 - mean_absolute_error: 2.4077 - val_loss: 8.5119 - val_mean_absolute_error: 2.1963

2487 Epoch 1108/10000

2488 - 0s - loss: 13.4315 - mean_absolute_error: 2.4071 - val_loss: 8.5125 - val_mean_absolute_error: 2.1963

2489 Epoch 1109/10000

2490   - 0s - loss: 11.1897 - mean_absolute_error: 2.4475 - val_loss: 8.5125 - val_mean_absolute_error: 2.1964

2491 Epoch 1110/10000

2492   - 0s - loss: 10.2081 - mean_absolute_error: 2.3756 - val_loss: 8.5132 - val_mean_absolute_error: 2.1965

2493

2494 Epoch 01110: saving model to ./model/model_best.h5

2495 Epoch 1111/10000

2496   - 0s - loss: 9.9864 - mean_absolute_error: 2.2974 - val_loss: 8.5135 - val_mean_absolute_error: 2.1966

2497 Epoch 1112/10000

2498   - 0s - loss: 10.6685 - mean_absolute_error: 2.4007 - val_loss: 8.5141 - val_mean_absolute_error: 2.1966

2499 Epoch 1113/10000

2500   - 0s - loss: 11.5165 -

2500 mean_absolute_error: 2.4778 - val_loss: 8.5138 - val_mean_absolute_error: 2.1966

2501 Epoch 1114/10000

2502   - 0s - loss: 10.6688 - mean_absolute_error: 2.3780 - val_loss: 8.5137 - val_mean_absolute_error: 2.1965

2503 Epoch 1115/10000

2504   - 0s - loss: 11.4009 - mean_absolute_error: 2.4328 - val_loss: 8.5136 - val_mean_absolute_error: 2.1966

2505 Epoch 1116/10000

2506   - 0s - loss: 10.2770 - mean_absolute_error: 2.3245 - val_loss: 8.5137 - val_mean_absolute_error: 2.1966

2507 Epoch 1117/10000

2508   - 0s - loss: 11.1566 - mean_absolute_error: 2.4267 - val_loss: 8.5136 - val_mean_absolute_error: 2.1964

2509 Epoch 1118/10000

2510   - 0s - loss: 11.3039 - mean_absolute_error: 2.3388 - val_loss: 8.5131 - val_mean_absolute_error: 2.1967

2511 Epoch 1119/10000

2512   - 0s - loss: 10.5839 - mean_absolute_error: 2.3879 - val_loss: 8.5128 - val_mean_absolute_error: 2.1967

2513 Epoch 1120/10000

2514   - 0s - loss: 11.1689 - mean_absolute_error: 2.3854 - val_loss: 8.5135 - val_mean_absolute_error: 2.1969

2515

2516 Epoch 01120: saving model to ./model/model_best.h5

2517 Epoch 1121/10000

2518   - 0s - loss: 10.8001 - mean_absolute_error: 2.3967 - val_loss: 8.5137 - val_mean_absolute_error: 2.1969

2519 Epoch 1122/10000

2520   - 0s - loss: 11.1211 -

2520 mean_absolute_error: 2.3611 - val_loss: 8.5140 - val_mean_absolute_error: 2.1967

2521 Epoch 1123/10000

2522 - 0s - loss: 14.0664 - mean_absolute_error: 2.5055 - val_loss: 8.5136 - val_mean_absolute_error: 2.1967

2523 Epoch 1124/10000

2524 - 0s - loss: 9.6796 - mean_absolute_error: 2.3480 - val_loss: 8.5133 - val_mean_absolute_error: 2.1965

2525 Epoch 1125/10000

2526 - 0s - loss: 9.1877 - mean_absolute_error: 2.1672 - val_loss: 8.5140 - val_mean_absolute_error: 2.1968

2527 Epoch 1126/10000

2528 - 0s - loss: 10.8261 - mean_absolute_error: 2.4719 - val_loss: 8.5146 - val_mean_absolute_error: 2.1969

2529 Epoch 1127/10000

```
2530  - 0s - loss: 12.5563 -
      mean_absolute_error: 2.4993 - val_loss
      : 8.5150 - val_mean_absolute_error: 2.
      1968
2531  Epoch 1128/10000
2532  - 0s - loss: 12.5672 -
      mean_absolute_error: 2.4968 - val_loss
      : 8.5152 - val_mean_absolute_error: 2.
      1968
2533  Epoch 1129/10000
2534  - 0s - loss: 10.9874 -
      mean_absolute_error: 2.4241 - val_loss
      : 8.5156 - val_mean_absolute_error: 2.
      1968
2535  Epoch 1130/10000
2536  - 0s - loss: 11.9614 -
      mean_absolute_error: 2.5036 - val_loss
      : 8.5155 - val_mean_absolute_error: 2.
      1968
2537
2538  Epoch 01130: saving model to ./model/
      model_best.h5
2539  Epoch 1131/10000
2540  - 0s - loss: 12.5537 -
```

```
2540  mean_absolute_error: 2.5667 - val_loss
      : 8.5158 - val_mean_absolute_error: 2.
      1966
2541  Epoch 1132/10000
2542   - 0s - loss: 10.5316 -
      mean_absolute_error: 2.3632 - val_loss
      : 8.5156 - val_mean_absolute_error: 2.
      1964
2543  Epoch 1133/10000
2544   - 0s - loss: 12.2633 -
      mean_absolute_error: 2.5183 - val_loss
      : 8.5166 - val_mean_absolute_error: 2.
      1966
2545  Epoch 1134/10000
2546   - 0s - loss: 12.5652 -
      mean_absolute_error: 2.5761 - val_loss
      : 8.5163 - val_mean_absolute_error: 2.
      1966
2547  Epoch 1135/10000
2548   - 0s - loss: 13.8422 -
      mean_absolute_error: 2.5873 - val_loss
      : 8.5164 - val_mean_absolute_error: 2.
      1967
2549  Epoch 1136/10000
```

2550 - 0s - loss: 11.5284 - mean_absolute_error: 2.4954 - val_loss: 8.5168 - val_mean_absolute_error: 2.1967

2551 Epoch 1137/10000

2552 - 0s - loss: 10.9852 - mean_absolute_error: 2.4013 - val_loss: 8.5165 - val_mean_absolute_error: 2.1968

2553 Epoch 1138/10000

2554 - 0s - loss: 11.3600 - mean_absolute_error: 2.3070 - val_loss: 8.5160 - val_mean_absolute_error: 2.1966

2555 Epoch 1139/10000

2556 - 0s - loss: 12.6001 - mean_absolute_error: 2.5127 - val_loss: 8.5152 - val_mean_absolute_error: 2.1965

2557 Epoch 1140/10000

2558 - 0s - loss: 10.7702 - mean_absolute_error: 2.4011 - val_loss: 8.5152 - val_mean_absolute_error: 2.1963

2559

2560 Epoch 01140: saving model to ./model/
model_best.h5

2561 Epoch 1141/10000

2562 - 0s - loss: 12.3276 -
mean_absolute_error: 2.5143 - val_loss
: 8.5149 - val_mean_absolute_error: 2.
1962

2563 Epoch 1142/10000

2564 - 0s - loss: 11.2301 -
mean_absolute_error: 2.2741 - val_loss
: 8.5165 - val_mean_absolute_error: 2.
1964

2565 Epoch 1143/10000

2566 - 0s - loss: 11.4571 -
mean_absolute_error: 2.4224 - val_loss
: 8.5168 - val_mean_absolute_error: 2.
1964

2567 Epoch 1144/10000

2568 - 0s - loss: 9.3154 -
mean_absolute_error: 2.2228 - val_loss
: 8.5166 - val_mean_absolute_error: 2.
1967

2569 Epoch 1145/10000

2570 - 0s - loss: 9.6209 - mean_absolute_error: 2.4246 - val_loss: 8.5169 - val_mean_absolute_error: 2.1966

2571 Epoch 1146/10000

2572 - 0s - loss: 11.2090 - mean_absolute_error: 2.5005 - val_loss: 8.5179 - val_mean_absolute_error: 2.1967

2573 Epoch 1147/10000

2574 - 0s - loss: 10.1029 - mean_absolute_error: 2.3265 - val_loss: 8.5166 - val_mean_absolute_error: 2.1965

2575 Epoch 1148/10000

2576 - 0s - loss: 13.3683 - mean_absolute_error: 2.6823 - val_loss: 8.5161 - val_mean_absolute_error: 2.1965

2577 Epoch 1149/10000

2578 - 0s - loss: 9.7320 - mean_absolute_error: 2.3361 - val_loss: 8.5156 - val_mean_absolute_error: 2.1964

```
2579 Epoch 1150/10000
2580  - 0s - loss: 12.3402 -
     mean_absolute_error: 2.4257 - val_loss
     : 8.5160 - val_mean_absolute_error: 2.
     1964

2581

2582 Epoch 01150: saving model to ./model/
     model_best.h5
2583 Epoch 1151/10000
2584  - 0s - loss: 10.7072 -
     mean_absolute_error: 2.3964 - val_loss
     : 8.5163 - val_mean_absolute_error: 2.
     1965
2585 Epoch 1152/10000
2586  - 0s - loss: 12.6409 -
     mean_absolute_error: 2.4736 - val_loss
     : 8.5156 - val_mean_absolute_error: 2.
     1966
2587 Epoch 1153/10000
2588  - 0s - loss: 9.8401 -
     mean_absolute_error: 2.3114 - val_loss
     : 8.5163 - val_mean_absolute_error: 2.
     1969
2589 Epoch 1154/10000
```

2590   - 0s - loss: 11.7694 - mean_absolute_error: 2.3609 - val_loss: 8.5168 - val_mean_absolute_error: 2.1970

2591 Epoch 1155/10000

2592   - 0s - loss: 10.7191 - mean_absolute_error: 2.3777 - val_loss: 8.5162 - val_mean_absolute_error: 2.1971

2593 Epoch 1156/10000

2594   - 0s - loss: 11.8528 - mean_absolute_error: 2.3644 - val_loss: 8.5156 - val_mean_absolute_error: 2.1970

2595 Epoch 1157/10000

2596   - 0s - loss: 10.9929 - mean_absolute_error: 2.4521 - val_loss: 8.5155 - val_mean_absolute_error: 2.1969

2597 Epoch 1158/10000

2598   - 0s - loss: 11.7369 - mean_absolute_error: 2.5118 - val_loss: 8.5147 - val_mean_absolute_error: 2.1969

2599 Epoch 1159/10000

2600 - 0s - loss: 8.6822 - mean_absolute_error: 2.2941 - val_loss: 8.5143 - val_mean_absolute_error: 2.1969

2601 Epoch 1160/10000

2602 - 0s - loss: 12.1035 - mean_absolute_error: 2.5463 - val_loss: 8.5140 - val_mean_absolute_error: 2.1967

2603

2604 Epoch 01160: saving model to ./model/model_best.h5

2605 Epoch 1161/10000

2606 - 0s - loss: 11.2590 - mean_absolute_error: 2.4507 - val_loss: 8.5141 - val_mean_absolute_error: 2.1966

2607 Epoch 1162/10000

2608 - 0s - loss: 10.8062 - mean_absolute_error: 2.3756 - val_loss: 8.5140 - val_mean_absolute_error: 2.1966

2609 Epoch 1163/10000

2610 - 0s - loss: 10.8097 - mean_absolute_error: 2.3917 - val_loss: 8.5158 - val_mean_absolute_error: 2.1970

2611 Epoch 1164/10000

2612 - 0s - loss: 12.7488 - mean_absolute_error: 2.3866 - val_loss: 8.5158 - val_mean_absolute_error: 2.1971

2613 Epoch 1165/10000

2614 - 0s - loss: 11.5545 - mean_absolute_error: 2.3289 - val_loss: 8.5160 - val_mean_absolute_error: 2.1971

2615 Epoch 1166/10000

2616 - 0s - loss: 10.4513 - mean_absolute_error: 2.3933 - val_loss: 8.5164 - val_mean_absolute_error: 2.1971

2617 Epoch 1167/10000

2618 - 0s - loss: 11.0563 - mean_absolute_error: 2.4766 - val_loss: 8.5170 - val_mean_absolute_error: 2.1970

```
2619  Epoch 1168/10000
2620   - 0s - loss: 11.7320 -
      mean_absolute_error: 2.3966 - val_loss
      : 8.5164 - val_mean_absolute_error: 2.
      1969
2621  Epoch 1169/10000
2622   - 0s - loss: 12.1929 -
      mean_absolute_error: 2.4860 - val_loss
      : 8.5168 - val_mean_absolute_error: 2.
      1969
2623  Epoch 1170/10000
2624   - 0s - loss: 10.4140 -
      mean_absolute_error: 2.4446 - val_loss
      : 8.5173 - val_mean_absolute_error: 2.
      1970
2625
2626  Epoch 01170: saving model to ./model/
      model_best.h5
2627  Epoch 1171/10000
2628   - 0s - loss: 11.1684 -
      mean_absolute_error: 2.3554 - val_loss
      : 8.5180 - val_mean_absolute_error: 2.
      1971
2629  Epoch 1172/10000
```

2630 - 0s - loss: 12.0471 - mean_absolute_error: 2.4553 - val_loss: 8.5178 - val_mean_absolute_error: 2.1971

2631 Epoch 1173/10000

2632 - 0s - loss: 11.5225 - mean_absolute_error: 2.4730 - val_loss: 8.5171 - val_mean_absolute_error: 2.1971

2633 Epoch 1174/10000

2634 - 0s - loss: 10.0193 - mean_absolute_error: 2.3566 - val_loss: 8.5161 - val_mean_absolute_error: 2.1971

2635 Epoch 1175/10000

2636 - 0s - loss: 12.2347 - mean_absolute_error: 2.4064 - val_loss: 8.5163 - val_mean_absolute_error: 2.1972

2637 Epoch 1176/10000

2638 - 0s - loss: 11.1623 - mean_absolute_error: 2.3855 - val_loss: 8.5155 - val_mean_absolute_error: 2.1970

2639 Epoch 1177/10000

2640 - 0s - loss: 11.6205 - mean_absolute_error: 2.4991 - val_loss: 8.5161 - val_mean_absolute_error: 2.1968

2641 Epoch 1178/10000

2642 - 0s - loss: 12.5820 - mean_absolute_error: 2.5842 - val_loss: 8.5166 - val_mean_absolute_error: 2.1969

2643 Epoch 1179/10000

2644 - 0s - loss: 11.8293 - mean_absolute_error: 2.4915 - val_loss: 8.5177 - val_mean_absolute_error: 2.1971

2645 Epoch 1180/10000

2646 - 0s - loss: 13.5224 - mean_absolute_error: 2.5639 - val_loss: 8.5170 - val_mean_absolute_error: 2.1970

2647

2648 Epoch 01180: saving model to ./model/model_best.h5

2649 Epoch 1181/10000

2650   - 0s - loss: 11.7087 - mean_absolute_error: 2.4922 - val_loss: 8.5168 - val_mean_absolute_error: 2.1968

2651 Epoch 1182/10000

2652   - 0s - loss: 12.0557 - mean_absolute_error: 2.4302 - val_loss: 8.5174 - val_mean_absolute_error: 2.1969

2653 Epoch 1183/10000

2654   - 0s - loss: 11.8726 - mean_absolute_error: 2.4527 - val_loss: 8.5171 - val_mean_absolute_error: 2.1970

2655 Epoch 1184/10000

2656   - 0s - loss: 12.7159 - mean_absolute_error: 2.4314 - val_loss: 8.5181 - val_mean_absolute_error: 2.1970

2657 Epoch 1185/10000

2658   - 0s - loss: 12.8532 - mean_absolute_error: 2.4625 - val_loss: 8.5180 - val_mean_absolute_error: 2.1969

2659 Epoch 1186/10000

2660 - 0s - loss: 11.3053 - mean_absolute_error: 2.4273 - val_loss: 8.5178 - val_mean_absolute_error: 2.1972

2661 Epoch 1187/10000

2662 - 0s - loss: 11.5669 - mean_absolute_error: 2.4704 - val_loss: 8.5183 - val_mean_absolute_error: 2.1974

2663 Epoch 1188/10000

2664 - 0s - loss: 11.9015 - mean_absolute_error: 2.4236 - val_loss: 8.5173 - val_mean_absolute_error: 2.1972

2665 Epoch 1189/10000

2666 - 0s - loss: 10.4866 - mean_absolute_error: 2.4078 - val_loss: 8.5178 - val_mean_absolute_error: 2.1973

2667 Epoch 1190/10000

2668 - 0s - loss: 9.8939 - mean_absolute_error: 2.3007 - val_loss: 8.5176 - val_mean_absolute_error: 2.

2668 1972

2669

2670 Epoch 01190: saving model to ./model/model_best.h5

2671 Epoch 1191/10000

2672 - 0s - loss: 11.6490 - mean_absolute_error: 2.4901 - val_loss: 8.5174 - val_mean_absolute_error: 2.1971

2673 Epoch 1192/10000

2674 - 0s - loss: 11.4407 - mean_absolute_error: 2.4493 - val_loss: 8.5170 - val_mean_absolute_error: 2.1972

2675 Epoch 1193/10000

2676 - 0s - loss: 11.1681 - mean_absolute_error: 2.4018 - val_loss: 8.5169 - val_mean_absolute_error: 2.1971

2677 Epoch 1194/10000

2678 - 0s - loss: 9.6464 - mean_absolute_error: 2.2279 - val_loss: 8.5165 - val_mean_absolute_error: 2.1972

2679 Epoch 1195/10000
2680   - 0s - loss: 11.6273 - mean_absolute_error: 2.3035 - val_loss: 8.5159 - val_mean_absolute_error: 2.1970
2681 Epoch 1196/10000
2682   - 0s - loss: 11.2814 - mean_absolute_error: 2.3861 - val_loss: 8.5154 - val_mean_absolute_error: 2.1971
2683 Epoch 1197/10000
2684   - 0s - loss: 12.5088 - mean_absolute_error: 2.6489 - val_loss: 8.5150 - val_mean_absolute_error: 2.1970
2685 Epoch 1198/10000
2686   - 0s - loss: 10.5326 - mean_absolute_error: 2.3866 - val_loss: 8.5157 - val_mean_absolute_error: 2.1970
2687 Epoch 1199/10000
2688   - 0s - loss: 10.7116 - mean_absolute_error: 2.4500 - val_loss: 8.5158 - val_mean_absolute_error: 2.

2688 1969
2689 Epoch 1200/10000
2690 - 0s - loss: 11.8790 - mean_absolute_error: 2.4073 - val_loss: 8.5156 - val_mean_absolute_error: 2.1969

2691

2692 Epoch 01200: saving model to ./model/model_best.h5
2693 Epoch 1201/10000
2694 - 0s - loss: 10.7028 - mean_absolute_error: 2.3468 - val_loss: 8.5155 - val_mean_absolute_error: 2.1968

2695 Epoch 1202/10000
2696 - 0s - loss: 9.1998 - mean_absolute_error: 2.2403 - val_loss: 8.5144 - val_mean_absolute_error: 2.1967

2697 Epoch 1203/10000
2698 - 0s - loss: 11.2385 - mean_absolute_error: 2.3602 - val_loss: 8.5155 - val_mean_absolute_error: 2.1968

```
2699  Epoch 1204/10000
2700   - 0s - loss: 9.2753 -
      mean_absolute_error: 2.2300 - val_loss
      : 8.5143 - val_mean_absolute_error: 2.
      1967
2701  Epoch 1205/10000
2702   - 0s - loss: 13.3922 -
      mean_absolute_error: 2.6287 - val_loss
      : 8.5136 - val_mean_absolute_error: 2.
      1965
2703  Epoch 1206/10000
2704   - 0s - loss: 10.7397 -
      mean_absolute_error: 2.4021 - val_loss
      : 8.5137 - val_mean_absolute_error: 2.
      1965
2705  Epoch 1207/10000
2706   - 0s - loss: 12.6493 -
      mean_absolute_error: 2.5156 - val_loss
      : 8.5132 - val_mean_absolute_error: 2.
      1963
2707  Epoch 1208/10000
2708   - 0s - loss: 10.4471 -
      mean_absolute_error: 2.4260 - val_loss
      : 8.5133 - val_mean_absolute_error: 2.
```

2708 1962

2709 Epoch 1209/10000

2710 - 0s - loss: 12.4992 - mean_absolute_error: 2.4864 - val_loss: 8.5135 - val_mean_absolute_error: 2.1963

2711 Epoch 1210/10000

2712 - 0s - loss: 10.9369 - mean_absolute_error: 2.4234 - val_loss: 8.5139 - val_mean_absolute_error: 2.1964

2713

2714 Epoch 01210: saving model to ./model/model_best.h5

2715 Epoch 1211/10000

2716 - 0s - loss: 11.9443 - mean_absolute_error: 2.4087 - val_loss: 8.5143 - val_mean_absolute_error: 2.1964

2717 Epoch 1212/10000

2718 - 0s - loss: 10.6805 - mean_absolute_error: 2.4328 - val_loss: 8.5133 - val_mean_absolute_error: 2.1962

2719 Epoch 1213/10000

2720 - 0s - loss: 10.5389 - mean_absolute_error: 2.3836 - val_loss: 8.5141 - val_mean_absolute_error: 2.1962

2721 Epoch 1214/10000

2722 - 0s - loss: 12.3690 - mean_absolute_error: 2.5563 - val_loss: 8.5154 - val_mean_absolute_error: 2.1965

2723 Epoch 1215/10000

2724 - 0s - loss: 11.1976 - mean_absolute_error: 2.4426 - val_loss: 8.5159 - val_mean_absolute_error: 2.1964

2725 Epoch 1216/10000

2726 - 0s - loss: 11.8601 - mean_absolute_error: 2.5284 - val_loss: 8.5158 - val_mean_absolute_error: 2.1963

2727 Epoch 1217/10000

2728 - 0s - loss: 9.7348 - mean_absolute_error: 2.3182 - val_loss: 8.5163 - val_mean_absolute_error: 2.

2728 1963

2729 Epoch 1218/10000

2730 - 0s - loss: 11.2062 - mean_absolute_error: 2.4171 - val_loss: 8.5152 - val_mean_absolute_error: 2.1962

2731 Epoch 1219/10000

2732 - 0s - loss: 13.2093 - mean_absolute_error: 2.5664 - val_loss: 8.5162 - val_mean_absolute_error: 2.1964

2733 Epoch 1220/10000

2734 - 0s - loss: 11.1100 - mean_absolute_error: 2.3782 - val_loss: 8.5161 - val_mean_absolute_error: 2.1963

2735

2736 Epoch 01220: saving model to ./model/model_best.h5

2737 Epoch 1221/10000

2738 - 0s - loss: 13.3256 - mean_absolute_error: 2.4900 - val_loss: 8.5163 - val_mean_absolute_error: 2.1964

2739 Epoch 1222/10000

2740 - 0s - loss: 10.4824 - mean_absolute_error: 2.3866 - val_loss: 8.5160 - val_mean_absolute_error: 2.1963

2741 Epoch 1223/10000

2742 - 0s - loss: 11.0345 - mean_absolute_error: 2.4715 - val_loss: 8.5168 - val_mean_absolute_error: 2.1963

2743 Epoch 1224/10000

2744 - 0s - loss: 9.5941 - mean_absolute_error: 2.2646 - val_loss: 8.5170 - val_mean_absolute_error: 2.1962

2745 Epoch 1225/10000

2746 - 0s - loss: 9.9356 - mean_absolute_error: 2.3708 - val_loss: 8.5170 - val_mean_absolute_error: 2.1962

2747 Epoch 1226/10000

2748 - 0s - loss: 8.8826 - mean_absolute_error: 2.2169 - val_loss: 8.5160 - val_mean_absolute_error: 2.

2748 1962

2749 Epoch 1227/10000

2750 - 0s - loss: 12.7416 - mean_absolute_error: 2.5213 - val_loss: 8.5164 - val_mean_absolute_error: 2.1962

2751 Epoch 1228/10000

2752 - 0s - loss: 11.0872 - mean_absolute_error: 2.3552 - val_loss: 8.5168 - val_mean_absolute_error: 2.1961

2753 Epoch 1229/10000

2754 - 0s - loss: 10.8699 - mean_absolute_error: 2.3897 - val_loss: 8.5164 - val_mean_absolute_error: 2.1961

2755 Epoch 1230/10000

2756 - 0s - loss: 11.7226 - mean_absolute_error: 2.5082 - val_loss: 8.5151 - val_mean_absolute_error: 2.1960

2757

2758 Epoch 01230: saving model to ./model/model_best.h5

```
2759  Epoch 1231/10000
2760   - 0s - loss: 11.6934 -
      mean_absolute_error: 2.5505 - val_loss
      : 8.5145 - val_mean_absolute_error: 2.
      1961
2761  Epoch 1232/10000
2762   - 0s - loss: 12.1907 -
      mean_absolute_error: 2.4344 - val_loss
      : 8.5134 - val_mean_absolute_error: 2.
      1958
2763  Epoch 1233/10000
2764   - 0s - loss: 12.3264 -
      mean_absolute_error: 2.5033 - val_loss
      : 8.5136 - val_mean_absolute_error: 2.
      1959
2765  Epoch 1234/10000
2766   - 0s - loss: 13.6188 -
      mean_absolute_error: 2.6650 - val_loss
      : 8.5139 - val_mean_absolute_error: 2.
      1960
2767  Epoch 1235/10000
2768   - 0s - loss: 12.2495 -
      mean_absolute_error: 2.5264 - val_loss
      : 8.5150 - val_mean_absolute_error: 2.
```

2768 1962

2769 Epoch 1236/10000

2770 - 0s - loss: 10.7268 - mean_absolute_error: 2.3418 - val_loss: 8.5154 - val_mean_absolute_error: 2.1963

2771 Epoch 1237/10000

2772 - 0s - loss: 10.0668 - mean_absolute_error: 2.3400 - val_loss: 8.5150 - val_mean_absolute_error: 2.1960

2773 Epoch 1238/10000

2774 - 0s - loss: 9.5368 - mean_absolute_error: 2.3996 - val_loss: 8.5156 - val_mean_absolute_error: 2.1960

2775 Epoch 1239/10000

2776 - 0s - loss: 13.2626 - mean_absolute_error: 2.5488 - val_loss: 8.5156 - val_mean_absolute_error: 2.1960

2777 Epoch 1240/10000

2778 - 0s - loss: 12.0914 - mean_absolute_error: 2.6201 - val_loss

2778 : 8.5153 - val_mean_absolute_error: 2.1959

2779

2780 Epoch 01240: saving model to ./model/model_best.h5

2781 Epoch 1241/10000

2782 - 0s - loss: 10.0540 - mean_absolute_error: 2.3154 - val_loss: 8.5156 - val_mean_absolute_error: 2.1958

2783 Epoch 1242/10000

2784 - 0s - loss: 11.7258 - mean_absolute_error: 2.4626 - val_loss: 8.5158 - val_mean_absolute_error: 2.1958

2785 Epoch 1243/10000

2786 - 0s - loss: 10.4234 - mean_absolute_error: 2.3378 - val_loss: 8.5164 - val_mean_absolute_error: 2.1960

2787 Epoch 1244/10000

2788 - 0s - loss: 10.8863 - mean_absolute_error: 2.3615 - val_loss: 8.5163 - val_mean_absolute_error: 2.

2788 1959

2789 Epoch 1245/10000

2790 - 0s - loss: 10.3107 - mean_absolute_error: 2.2526 - val_loss: 8.5155 - val_mean_absolute_error: 2.1959

2791 Epoch 1246/10000

2792 - 0s - loss: 10.6695 - mean_absolute_error: 2.4368 - val_loss: 8.5145 - val_mean_absolute_error: 2.1958

2793 Epoch 1247/10000

2794 - 0s - loss: 13.5795 - mean_absolute_error: 2.5586 - val_loss: 8.5142 - val_mean_absolute_error: 2.1956

2795 Epoch 1248/10000

2796 - 0s - loss: 12.9179 - mean_absolute_error: 2.4837 - val_loss: 8.5140 - val_mean_absolute_error: 2.1956

2797 Epoch 1249/10000

2798 - 0s - loss: 10.5733 - mean_absolute_error: 2.4403 - val_loss

2798 : 8.5138 - val_mean_absolute_error: 2.1956

2799 Epoch 1250/10000

2800 - 0s - loss: 11.6339 - mean_absolute_error: 2.4421 - val_loss: 8.5134 - val_mean_absolute_error: 2.1957

2801

2802 Epoch 01250: saving model to ./model/model_best.h5

2803 Epoch 1251/10000

2804 - 0s - loss: 10.2686 - mean_absolute_error: 2.3545 - val_loss: 8.5123 - val_mean_absolute_error: 2.1955

2805 Epoch 1252/10000

2806 - 0s - loss: 13.3052 - mean_absolute_error: 2.5460 - val_loss: 8.5126 - val_mean_absolute_error: 2.1957

2807 Epoch 1253/10000

2808 - 0s - loss: 11.8209 - mean_absolute_error: 2.4618 - val_loss: 8.5133 - val_mean_absolute_error: 2.

2808 1958

2809 Epoch 1254/10000

2810 - 0s - loss: 12.8636 - mean_absolute_error: 2.5757 - val_loss: 8.5126 - val_mean_absolute_error: 2.1954

2811 Epoch 1255/10000

2812 - 0s - loss: 13.0520 - mean_absolute_error: 2.5395 - val_loss: 8.5126 - val_mean_absolute_error: 2.1951

2813 Epoch 1256/10000

2814 - 0s - loss: 12.4337 - mean_absolute_error: 2.5969 - val_loss: 8.5125 - val_mean_absolute_error: 2.1949

2815 Epoch 1257/10000

2816 - 0s - loss: 10.6204 - mean_absolute_error: 2.3776 - val_loss: 8.5124 - val_mean_absolute_error: 2.1948

2817 Epoch 1258/10000

2818 - 0s - loss: 11.2170 - mean_absolute_error: 2.4397 - val_loss

2818 : 8.5116 - val_mean_absolute_error: 2.1947

2819 Epoch 1259/10000

2820 - 0s - loss: 11.4376 - mean_absolute_error: 2.4186 - val_loss: 8.5107 - val_mean_absolute_error: 2.1948

2821 Epoch 1260/10000

2822 - 0s - loss: 12.1923 - mean_absolute_error: 2.4913 - val_loss: 8.5103 - val_mean_absolute_error: 2.1947

2823

2824 Epoch 01260: saving model to ./model/model_best.h5

2825 Epoch 1261/10000

2826 - 0s - loss: 12.4744 - mean_absolute_error: 2.5579 - val_loss: 8.5109 - val_mean_absolute_error: 2.1949

2827 Epoch 1262/10000

2828 - 0s - loss: 10.5226 - mean_absolute_error: 2.4674 - val_loss: 8.5107 - val_mean_absolute_error: 2.

2828 1950

2829 Epoch 1263/10000

2830 - 0s - loss: 12.7463 - mean_absolute_error: 2.5563 - val_loss: 8.5107 - val_mean_absolute_error: 2.1948

2831 Epoch 1264/10000

2832 - 0s - loss: 11.9876 - mean_absolute_error: 2.4496 - val_loss: 8.5112 - val_mean_absolute_error: 2.1949

2833 Epoch 1265/10000

2834 - 0s - loss: 11.2446 - mean_absolute_error: 2.3795 - val_loss: 8.5104 - val_mean_absolute_error: 2.1948

2835 Epoch 1266/10000

2836 - 0s - loss: 11.2489 - mean_absolute_error: 2.4542 - val_loss: 8.5096 - val_mean_absolute_error: 2.1945

2837 Epoch 1267/10000

2838 - 0s - loss: 11.8328 - mean_absolute_error: 2.5329 - val_loss

```
2838  : 8.5088 - val_mean_absolute_error: 2.
      1944
2839  Epoch 1268/10000
2840   - 0s - loss: 12.2834 -
      mean_absolute_error: 2.5066 - val_loss
      : 8.5085 - val_mean_absolute_error: 2.
      1942
2841  Epoch 1269/10000
2842   - 0s - loss: 11.4953 -
      mean_absolute_error: 2.3951 - val_loss
      : 8.5094 - val_mean_absolute_error: 2.
      1944
2843  Epoch 1270/10000
2844   - 0s - loss: 11.7155 -
      mean_absolute_error: 2.5715 - val_loss
      : 8.5087 - val_mean_absolute_error: 2.
      1943

2845

2846  Epoch 01270: saving model to ./model/
      model_best.h5
2847  Epoch 1271/10000
2848   - 0s - loss: 10.3706 -
      mean_absolute_error: 2.4385 - val_loss
      : 8.5079 - val_mean_absolute_error: 2.
```

```
2848  1942
2849  Epoch 1272/10000
2850   - 0s - loss: 11.9710 -
      mean_absolute_error: 2.5310 - val_loss
      : 8.5078 - val_mean_absolute_error: 2.
      1942
2851  Epoch 1273/10000
2852   - 0s - loss: 10.4629 -
      mean_absolute_error: 2.3959 - val_loss
      : 8.5082 - val_mean_absolute_error: 2.
      1943
2853  Epoch 1274/10000
2854   - 0s - loss: 13.7763 -
      mean_absolute_error: 2.6942 - val_loss
      : 8.5088 - val_mean_absolute_error: 2.
      1944
2855  Epoch 1275/10000
2856   - 0s - loss: 10.6960 -
      mean_absolute_error: 2.3999 - val_loss
      : 8.5089 - val_mean_absolute_error: 2.
      1945
2857  Epoch 1276/10000
2858   - 0s - loss: 12.1087 -
      mean_absolute_error: 2.4374 - val_loss
```

2858 : 8.5085 - val_mean_absolute_error: 2.
1945

2859 Epoch 1277/10000

2860 - 0s - loss: 10.6265 -
mean_absolute_error: 2.3828 - val_loss
: 8.5084 - val_mean_absolute_error: 2.
1945

2861 Epoch 1278/10000

2862 - 0s - loss: 9.9552 -
mean_absolute_error: 2.2948 - val_loss
: 8.5091 - val_mean_absolute_error: 2.
1947

2863 Epoch 1279/10000

2864 - 0s - loss: 12.1427 -
mean_absolute_error: 2.5255 - val_loss
: 8.5088 - val_mean_absolute_error: 2.
1946

2865 Epoch 1280/10000

2866 - 0s - loss: 14.0944 -
mean_absolute_error: 2.5609 - val_loss
: 8.5079 - val_mean_absolute_error: 2.
1944

2867

2868 Epoch 01280: saving model to ./model/

```
2868  model_best.h5
2869  Epoch 1281/10000
2870   - 0s - loss: 13.5236 -
      mean_absolute_error: 2.5870 - val_loss
      : 8.5069 - val_mean_absolute_error: 2.
      1943
2871  Epoch 1282/10000
2872   - 0s - loss: 11.9645 -
      mean_absolute_error: 2.4272 - val_loss
      : 8.5075 - val_mean_absolute_error: 2.
      1944
2873  Epoch 1283/10000
2874   - 0s - loss: 10.8112 -
      mean_absolute_error: 2.4598 - val_loss
      : 8.5063 - val_mean_absolute_error: 2.
      1944
2875  Epoch 1284/10000
2876   - 0s - loss: 11.1286 -
      mean_absolute_error: 2.4835 - val_loss
      : 8.5058 - val_mean_absolute_error: 2.
      1946
2877  Epoch 1285/10000
2878   - 0s - loss: 11.4113 -
      mean_absolute_error: 2.5170 - val_loss
```

2878 : 8.5057 - val_mean_absolute_error: 2.1946

2879 Epoch 1286/10000

2880 - 0s - loss: 11.2816 - mean_absolute_error: 2.3890 - val_loss: 8.5058 - val_mean_absolute_error: 2.1947

2881 Epoch 1287/10000

2882 - 0s - loss: 11.7341 - mean_absolute_error: 2.3975 - val_loss: 8.5053 - val_mean_absolute_error: 2.1946

2883 Epoch 1288/10000

2884 - 0s - loss: 11.5975 - mean_absolute_error: 2.4112 - val_loss: 8.5058 - val_mean_absolute_error: 2.1944

2885 Epoch 1289/10000

2886 - 0s - loss: 10.8150 - mean_absolute_error: 2.4196 - val_loss: 8.5057 - val_mean_absolute_error: 2.1944

2887 Epoch 1290/10000

2888 - 0s - loss: 11.3866 -

2888 mean_absolute_error: 2.5043 - val_loss: 8.5058 - val_mean_absolute_error: 2.1942

2889

2890 Epoch 01290: saving model to ./model/model_best.h5

2891 Epoch 1291/10000

2892 - 0s - loss: 10.6679 - mean_absolute_error: 2.4049 - val_loss: 8.5061 - val_mean_absolute_error: 2.1944

2893 Epoch 1292/10000

2894 - 0s - loss: 10.6361 - mean_absolute_error: 2.3368 - val_loss: 8.5061 - val_mean_absolute_error: 2.1944

2895 Epoch 1293/10000

2896 - 0s - loss: 11.5607 - mean_absolute_error: 2.3882 - val_loss: 8.5055 - val_mean_absolute_error: 2.1944

2897 Epoch 1294/10000

2898 - 0s - loss: 11.1215 - mean_absolute_error: 2.4160 - val_loss

2898 : 8.5060 - val_mean_absolute_error: 2.1947

2899 Epoch 1295/10000

2900 - 0s - loss: 12.5298 - mean_absolute_error: 2.4412 - val_loss: 8.5062 - val_mean_absolute_error: 2.1948

2901 Epoch 1296/10000

2902 - 0s - loss: 9.7821 - mean_absolute_error: 2.2848 - val_loss: 8.5062 - val_mean_absolute_error: 2.1947

2903 Epoch 1297/10000

2904 - 0s - loss: 12.8795 - mean_absolute_error: 2.6093 - val_loss: 8.5052 - val_mean_absolute_error: 2.1946

2905 Epoch 1298/10000

2906 - 0s - loss: 10.9327 - mean_absolute_error: 2.3884 - val_loss: 8.5055 - val_mean_absolute_error: 2.1946

2907 Epoch 1299/10000

2908 - 0s - loss: 11.1665 -

2908 mean_absolute_error: 2.3887 - val_loss: 8.5068 - val_mean_absolute_error: 2.1950

2909 Epoch 1300/10000

2910 - 0s - loss: 8.7605 - mean_absolute_error: 2.2002 - val_loss: 8.5060 - val_mean_absolute_error: 2.1948

2911

2912 Epoch 01300: saving model to ./model/model_best.h5

2913 Epoch 1301/10000

2914 - 0s - loss: 11.9832 - mean_absolute_error: 2.5784 - val_loss: 8.5052 - val_mean_absolute_error: 2.1947

2915 Epoch 1302/10000

2916 - 0s - loss: 11.2329 - mean_absolute_error: 2.3612 - val_loss: 8.5060 - val_mean_absolute_error: 2.1948

2917 Epoch 1303/10000

2918 - 0s - loss: 10.4084 - mean_absolute_error: 2.3166 - val_loss

2918 : 8.5070 - val_mean_absolute_error: 2.1948

2919 Epoch 1304/10000

2920 - 0s - loss: 11.8504 - mean_absolute_error: 2.4590 - val_loss: 8.5074 - val_mean_absolute_error: 2.1948

2921 Epoch 1305/10000

2922 - 0s - loss: 11.2296 - mean_absolute_error: 2.5214 - val_loss: 8.5085 - val_mean_absolute_error: 2.1949

2923 Epoch 1306/10000

2924 - 0s - loss: 10.4078 - mean_absolute_error: 2.3988 - val_loss: 8.5085 - val_mean_absolute_error: 2.1948

2925 Epoch 1307/10000

2926 - 0s - loss: 12.7099 - mean_absolute_error: 2.5572 - val_loss: 8.5084 - val_mean_absolute_error: 2.1946

2927 Epoch 1308/10000

2928 - 0s - loss: 10.1582 -

2928 mean_absolute_error: 2.3114 - val_loss: 8.5083 - val_mean_absolute_error: 2.1945

2929 Epoch 1309/10000

2930 - 0s - loss: 12.9959 - mean_absolute_error: 2.6050 - val_loss: 8.5082 - val_mean_absolute_error: 2.1942

2931 Epoch 1310/10000

2932 - 0s - loss: 11.8834 - mean_absolute_error: 2.4634 - val_loss: 8.5082 - val_mean_absolute_error: 2.1941

2933

2934 Epoch 01310: saving model to ./model/model_best.h5

2935 Epoch 1311/10000

2936 - 0s - loss: 12.2782 - mean_absolute_error: 2.4837 - val_loss: 8.5085 - val_mean_absolute_error: 2.1940

2937 Epoch 1312/10000

2938 - 0s - loss: 13.4503 - mean_absolute_error: 2.6301 - val_loss

2938 : 8.5089 - val_mean_absolute_error: 2.1940

2939 Epoch 1313/10000

2940 - 0s - loss: 9.8114 - mean_absolute_error: 2.2425 - val_loss: 8.5093 - val_mean_absolute_error: 2.1942

2941 Epoch 1314/10000

2942 - 0s - loss: 10.8269 - mean_absolute_error: 2.4300 - val_loss: 8.5088 - val_mean_absolute_error: 2.1942

2943 Epoch 1315/10000

2944 - 0s - loss: 10.6926 - mean_absolute_error: 2.3627 - val_loss: 8.5083 - val_mean_absolute_error: 2.1941

2945 Epoch 1316/10000

2946 - 0s - loss: 11.8332 - mean_absolute_error: 2.4361 - val_loss: 8.5079 - val_mean_absolute_error: 2.1941

2947 Epoch 1317/10000

2948 - 0s - loss: 10.7534 -

2948 mean_absolute_error: 2.3227 - val_loss: 8.5070 - val_mean_absolute_error: 2.1940

2949 Epoch 1318/10000

2950 - 0s - loss: 11.4106 - mean_absolute_error: 2.4371 - val_loss: 8.5074 - val_mean_absolute_error: 2.1939

2951 Epoch 1319/10000

2952 - 0s - loss: 10.1592 - mean_absolute_error: 2.3437 - val_loss: 8.5073 - val_mean_absolute_error: 2.1940

2953 Epoch 1320/10000

2954 - 0s - loss: 12.1381 - mean_absolute_error: 2.3861 - val_loss: 8.5064 - val_mean_absolute_error: 2.1939

2955

2956 Epoch 01320: saving model to ./model/model_best.h5

2957 Epoch 1321/10000

2958 - 0s - loss: 11.3392 - mean_absolute_error: 2.4278 - val_loss

```
2958  : 8.5061 - val_mean_absolute_error: 2.
      1938
2959  Epoch 1322/10000
2960   - 0s - loss: 10.7365 -
      mean_absolute_error: 2.4429 - val_loss
      : 8.5062 - val_mean_absolute_error: 2.
      1938
2961  Epoch 1323/10000
2962   - 0s - loss: 11.7898 -
      mean_absolute_error: 2.4651 - val_loss
      : 8.5062 - val_mean_absolute_error: 2.
      1937
2963  Epoch 1324/10000
2964   - 0s - loss: 11.4308 -
      mean_absolute_error: 2.4392 - val_loss
      : 8.5067 - val_mean_absolute_error: 2.
      1938
2965  Epoch 1325/10000
2966   - 0s - loss: 10.6662 -
      mean_absolute_error: 2.4050 - val_loss
      : 8.5073 - val_mean_absolute_error: 2.
      1939
2967  Epoch 1326/10000
2968   - 0s - loss: 12.0525 -
```

2968 mean_absolute_error: 2.5259 - val_loss: 8.5075 - val_mean_absolute_error: 2.1938

2969 Epoch 1327/10000

2970 - 0s - loss: 12.8318 - mean_absolute_error: 2.4792 - val_loss: 8.5066 - val_mean_absolute_error: 2.1937

2971 Epoch 1328/10000

2972 - 0s - loss: 10.0786 - mean_absolute_error: 2.4215 - val_loss: 8.5058 - val_mean_absolute_error: 2.1936

2973 Epoch 1329/10000

2974 - 0s - loss: 10.1625 - mean_absolute_error: 2.2908 - val_loss: 8.5062 - val_mean_absolute_error: 2.1937

2975 Epoch 1330/10000

2976 - 0s - loss: 11.7935 - mean_absolute_error: 2.5167 - val_loss: 8.5062 - val_mean_absolute_error: 2.1939

2977

```
2978  Epoch 01330: saving model to ./model/
      model_best.h5
2979  Epoch 1331/10000
2980   - 0s - loss: 12.3414 -
      mean_absolute_error: 2.5065 - val_loss
      : 8.5068 - val_mean_absolute_error: 2.
      1939
2981  Epoch 1332/10000
2982   - 0s - loss: 12.9936 -
      mean_absolute_error: 2.5738 - val_loss
      : 8.5080 - val_mean_absolute_error: 2.
      1938
2983  Epoch 1333/10000
2984   - 0s - loss: 13.3454 -
      mean_absolute_error: 2.5275 - val_loss
      : 8.5075 - val_mean_absolute_error: 2.
      1939
2985  Epoch 1334/10000
2986   - 0s - loss: 12.9128 -
      mean_absolute_error: 2.4847 - val_loss
      : 8.5080 - val_mean_absolute_error: 2.
      1938
2987  Epoch 1335/10000
2988   - 0s - loss: 13.6671 -
```

2988 mean_absolute_error: 2.5640 - val_loss: 8.5076 - val_mean_absolute_error: 2.1937

2989 Epoch 1336/10000

2990 - 0s - loss: 10.4602 - mean_absolute_error: 2.4032 - val_loss: 8.5071 - val_mean_absolute_error: 2.1935

2991 Epoch 1337/10000

2992 - 0s - loss: 12.8112 - mean_absolute_error: 2.5328 - val_loss: 8.5069 - val_mean_absolute_error: 2.1933

2993 Epoch 1338/10000

2994 - 0s - loss: 11.6455 - mean_absolute_error: 2.4374 - val_loss: 8.5079 - val_mean_absolute_error: 2.1933

2995 Epoch 1339/10000

2996 - 0s - loss: 11.4496 - mean_absolute_error: 2.3665 - val_loss: 8.5072 - val_mean_absolute_error: 2.1933

2997 Epoch 1340/10000

2998 - 0s - loss: 10.7642 - mean_absolute_error: 2.3819 - val_loss: 8.5072 - val_mean_absolute_error: 2.1932

2999

3000 Epoch 01340: saving model to ./model/model_best.h5

3001 Epoch 1341/10000

3002 - 0s - loss: 10.4121 - mean_absolute_error: 2.3812 - val_loss: 8.5067 - val_mean_absolute_error: 2.1932

3003 Epoch 1342/10000

3004 - 0s - loss: 11.4194 - mean_absolute_error: 2.3725 - val_loss: 8.5069 - val_mean_absolute_error: 2.1931

3005 Epoch 1343/10000

3006 - 0s - loss: 11.4601 - mean_absolute_error: 2.4332 - val_loss: 8.5060 - val_mean_absolute_error: 2.1930

3007 Epoch 1344/10000

3008 - 0s - loss: 11.0431 -

3008 mean_absolute_error: 2.3438 - val_loss: 8.5069 - val_mean_absolute_error: 2.1931

3009 Epoch 1345/10000

3010 - 0s - loss: 9.2444 - mean_absolute_error: 2.3246 - val_loss: 8.5064 - val_mean_absolute_error: 2.1931

3011 Epoch 1346/10000

3012 - 0s - loss: 11.7651 - mean_absolute_error: 2.4600 - val_loss: 8.5066 - val_mean_absolute_error: 2.1930

3013 Epoch 1347/10000

3014 - 0s - loss: 12.5191 - mean_absolute_error: 2.4546 - val_loss: 8.5068 - val_mean_absolute_error: 2.1931

3015 Epoch 1348/10000

3016 - 0s - loss: 12.9167 - mean_absolute_error: 2.6258 - val_loss: 8.5079 - val_mean_absolute_error: 2.1932

3017 Epoch 1349/10000

3018   - 0s - loss: 10.9537 - mean_absolute_error: 2.5166 - val_loss: 8.5078 - val_mean_absolute_error: 2.1930

3019 Epoch 1350/10000

3020   - 0s - loss: 11.6497 - mean_absolute_error: 2.3664 - val_loss: 8.5076 - val_mean_absolute_error: 2.1930

3021

3022 Epoch 01350: saving model to ./model/model_best.h5

3023 Epoch 1351/10000

3024   - 0s - loss: 12.9409 - mean_absolute_error: 2.4845 - val_loss: 8.5073 - val_mean_absolute_error: 2.1929

3025 Epoch 1352/10000

3026   - 0s - loss: 13.6726 - mean_absolute_error: 2.4794 - val_loss: 8.5070 - val_mean_absolute_error: 2.1929

3027 Epoch 1353/10000

3028   - 0s - loss: 9.6441 -

3028 mean_absolute_error: 2.2124 - val_loss: 8.5068 - val_mean_absolute_error: 2.1929

3029 Epoch 1354/10000

3030 - 0s - loss: 11.0290 - mean_absolute_error: 2.4036 - val_loss: 8.5079 - val_mean_absolute_error: 2.1930

3031 Epoch 1355/10000

3032 - 0s - loss: 11.9488 - mean_absolute_error: 2.4066 - val_loss: 8.5070 - val_mean_absolute_error: 2.1929

3033 Epoch 1356/10000

3034 - 0s - loss: 11.8036 - mean_absolute_error: 2.4971 - val_loss: 8.5074 - val_mean_absolute_error: 2.1930

3035 Epoch 1357/10000

3036 - 0s - loss: 10.9974 - mean_absolute_error: 2.4154 - val_loss: 8.5083 - val_mean_absolute_error: 2.1932

3037 Epoch 1358/10000

3038 - 0s - loss: 11.4505 - mean_absolute_error: 2.3771 - val_loss: 8.5083 - val_mean_absolute_error: 2.1932

3039 Epoch 1359/10000

3040 - 0s - loss: 12.0435 - mean_absolute_error: 2.5139 - val_loss: 8.5087 - val_mean_absolute_error: 2.1932

3041 Epoch 1360/10000

3042 - 0s - loss: 10.0798 - mean_absolute_error: 2.3412 - val_loss: 8.5090 - val_mean_absolute_error: 2.1930

3043

3044 Epoch 01360: saving model to ./model/model_best.h5

3045 Epoch 1361/10000

3046 - 0s - loss: 12.1622 - mean_absolute_error: 2.5617 - val_loss: 8.5090 - val_mean_absolute_error: 2.1931

3047 Epoch 1362/10000

3048 - 0s - loss: 13.4532 -

3048 mean_absolute_error: 2.5307 - val_loss: 8.5092 - val_mean_absolute_error: 2.1932

3049 Epoch 1363/10000

3050 - 0s - loss: 11.8247 - mean_absolute_error: 2.3844 - val_loss: 8.5098 - val_mean_absolute_error: 2.1933

3051 Epoch 1364/10000

3052 - 0s - loss: 10.5830 - mean_absolute_error: 2.3497 - val_loss: 8.5095 - val_mean_absolute_error: 2.1932

3053 Epoch 1365/10000

3054 - 0s - loss: 11.9888 - mean_absolute_error: 2.4861 - val_loss: 8.5090 - val_mean_absolute_error: 2.1930

3055 Epoch 1366/10000

3056 - 0s - loss: 10.6614 - mean_absolute_error: 2.4251 - val_loss: 8.5101 - val_mean_absolute_error: 2.1931

3057 Epoch 1367/10000

3058 - 0s - loss: 12.3767 - mean_absolute_error: 2.4646 - val_loss: 8.5103 - val_mean_absolute_error: 2.1933

3059 Epoch 1368/10000

3060 - 0s - loss: 10.6740 - mean_absolute_error: 2.3311 - val_loss: 8.5110 - val_mean_absolute_error: 2.1935

3061 Epoch 1369/10000

3062 - 0s - loss: 11.1675 - mean_absolute_error: 2.4402 - val_loss: 8.5112 - val_mean_absolute_error: 2.1936

3063 Epoch 1370/10000

3064 - 0s - loss: 10.9869 - mean_absolute_error: 2.4543 - val_loss: 8.5106 - val_mean_absolute_error: 2.1935

3065

3066 Epoch 01370: saving model to ./model/model_best.h5

3067 Epoch 1371/10000

3068 - 0s - loss: 12.8236 -

3068 mean_absolute_error: 2.5322 - val_loss: 8.5106 - val_mean_absolute_error: 2.1935

3069 Epoch 1372/10000

3070 - 0s - loss: 12.8513 - mean_absolute_error: 2.5061 - val_loss: 8.5116 - val_mean_absolute_error: 2.1935

3071 Epoch 1373/10000

3072 - 0s - loss: 9.7613 - mean_absolute_error: 2.3667 - val_loss: 8.5110 - val_mean_absolute_error: 2.1934

3073 Epoch 1374/10000

3074 - 0s - loss: 13.5923 - mean_absolute_error: 2.5186 - val_loss: 8.5104 - val_mean_absolute_error: 2.1935

3075 Epoch 1375/10000

3076 - 0s - loss: 11.8745 - mean_absolute_error: 2.4720 - val_loss: 8.5115 - val_mean_absolute_error: 2.1937

3077 Epoch 1376/10000

3078　- 0s - loss: 10.9396 - mean_absolute_error: 2.4682 - val_loss: 8.5124 - val_mean_absolute_error: 2.1939

3079　Epoch 1377/10000

3080　- 0s - loss: 11.1351 - mean_absolute_error: 2.3751 - val_loss: 8.5133 - val_mean_absolute_error: 2.1940

3081　Epoch 1378/10000

3082　- 0s - loss: 10.1100 - mean_absolute_error: 2.3264 - val_loss: 8.5141 - val_mean_absolute_error: 2.1941

3083　Epoch 1379/10000

3084　- 0s - loss: 10.6757 - mean_absolute_error: 2.3765 - val_loss: 8.5138 - val_mean_absolute_error: 2.1942

3085　Epoch 1380/10000

3086　- 0s - loss: 13.6932 - mean_absolute_error: 2.5059 - val_loss: 8.5140 - val_mean_absolute_error: 2.1944

3087

3088 Epoch 01380: saving model to ./model/model_best.h5

3089 Epoch 1381/10000

3090 - 0s - loss: 11.9732 - mean_absolute_error: 2.3864 - val_loss: 8.5133 - val_mean_absolute_error: 2.1943

3091 Epoch 1382/10000

3092 - 0s - loss: 12.7888 - mean_absolute_error: 2.6400 - val_loss: 8.5135 - val_mean_absolute_error: 2.1944

3093 Epoch 1383/10000

3094 - 0s - loss: 11.3178 - mean_absolute_error: 2.4634 - val_loss: 8.5125 - val_mean_absolute_error: 2.1943

3095 Epoch 1384/10000

3096 - 0s - loss: 10.8575 - mean_absolute_error: 2.3129 - val_loss: 8.5120 - val_mean_absolute_error: 2.1943

3097 Epoch 1385/10000

3098 - 0s - loss: 11.2312 - mean_absolute_error: 2.4612 - val_loss: 8.5129 - val_mean_absolute_error: 2.1947

3099 Epoch 1386/10000

3100 - 0s - loss: 10.8292 - mean_absolute_error: 2.4367 - val_loss: 8.5125 - val_mean_absolute_error: 2.1948

3101 Epoch 1387/10000

3102 - 0s - loss: 10.6681 - mean_absolute_error: 2.4583 - val_loss: 8.5124 - val_mean_absolute_error: 2.1948

3103 Epoch 1388/10000

3104 - 0s - loss: 10.0836 - mean_absolute_error: 2.3411 - val_loss: 8.5126 - val_mean_absolute_error: 2.1950

3105 Epoch 1389/10000

3106 - 0s - loss: 12.5847 - mean_absolute_error: 2.5273 - val_loss: 8.5123 - val_mean_absolute_error: 2.1952

3107 Epoch 1390/10000

3108 - 0s - loss: 10.3202 - mean_absolute_error: 2.4085 - val_loss: 8.5114 - val_mean_absolute_error: 2.1951

3109

3110 Epoch 01390: saving model to ./model/model_best.h5

3111 Epoch 1391/10000

3112 - 0s - loss: 13.5178 - mean_absolute_error: 2.5302 - val_loss: 8.5119 - val_mean_absolute_error: 2.1951

3113 Epoch 1392/10000

3114 - 0s - loss: 11.6668 - mean_absolute_error: 2.4529 - val_loss: 8.5131 - val_mean_absolute_error: 2.1953

3115 Epoch 1393/10000

3116 - 0s - loss: 11.9645 - mean_absolute_error: 2.4944 - val_loss: 8.5127 - val_mean_absolute_error: 2.1953

3117 Epoch 1394/10000

3118 - 0s - loss: 10.3684 - mean_absolute_error: 2.3353 - val_loss: 8.5127 - val_mean_absolute_error: 2.1954

3119 Epoch 1395/10000

3120 - 0s - loss: 13.1602 - mean_absolute_error: 2.5468 - val_loss: 8.5130 - val_mean_absolute_error: 2.1952

3121 Epoch 1396/10000

3122 - 0s - loss: 11.6295 - mean_absolute_error: 2.5018 - val_loss: 8.5130 - val_mean_absolute_error: 2.1952

3123 Epoch 1397/10000

3124 - 0s - loss: 11.2065 - mean_absolute_error: 2.4315 - val_loss: 8.5137 - val_mean_absolute_error: 2.1952

3125 Epoch 1398/10000

3126 - 0s - loss: 12.2653 - mean_absolute_error: 2.5597 - val_loss: 8.5140 - val_mean_absolute_error: 2.1953

```
3127  Epoch 1399/10000
3128   - 0s - loss: 11.0780 -
      mean_absolute_error: 2.4002 - val_loss
      : 8.5139 - val_mean_absolute_error: 2.
      1953
3129  Epoch 1400/10000
3130   - 0s - loss: 11.0783 -
      mean_absolute_error: 2.4831 - val_loss
      : 8.5136 - val_mean_absolute_error: 2.
      1952
3131
3132  Epoch 01400: saving model to ./model/
      model_best.h5
3133  Epoch 1401/10000
3134   - 0s - loss: 11.0859 -
      mean_absolute_error: 2.5057 - val_loss
      : 8.5119 - val_mean_absolute_error: 2.
      1950
3135  Epoch 1402/10000
3136   - 0s - loss: 12.4765 -
      mean_absolute_error: 2.5589 - val_loss
      : 8.5113 - val_mean_absolute_error: 2.
      1949
3137  Epoch 1403/10000
```

3138 - 0s - loss: 10.9577 - mean_absolute_error: 2.4054 - val_loss: 8.5122 - val_mean_absolute_error: 2.1950

3139 Epoch 1404/10000

3140 - 0s - loss: 9.8950 - mean_absolute_error: 2.2629 - val_loss: 8.5117 - val_mean_absolute_error: 2.1947

3141 Epoch 1405/10000

3142 - 0s - loss: 13.1353 - mean_absolute_error: 2.5522 - val_loss: 8.5110 - val_mean_absolute_error: 2.1948

3143 Epoch 1406/10000

3144 - 0s - loss: 12.1277 - mean_absolute_error: 2.5302 - val_loss: 8.5105 - val_mean_absolute_error: 2.1947

3145 Epoch 1407/10000

3146 - 0s - loss: 14.6575 - mean_absolute_error: 2.5922 - val_loss: 8.5112 - val_mean_absolute_error: 2.1947

```
3147  Epoch 1408/10000
3148   - 0s - loss: 10.2972 -
      mean_absolute_error: 2.2889 - val_loss
      : 8.5101 - val_mean_absolute_error: 2.
      1947
3149  Epoch 1409/10000
3150   - 0s - loss: 11.0813 -
      mean_absolute_error: 2.4079 - val_loss
      : 8.5102 - val_mean_absolute_error: 2.
      1946
3151  Epoch 1410/10000
3152   - 0s - loss: 11.2024 -
      mean_absolute_error: 2.3583 - val_loss
      : 8.5096 - val_mean_absolute_error: 2.
      1944
3153
3154  Epoch 01410: saving model to ./model/
      model_best.h5
3155  Epoch 1411/10000
3156   - 0s - loss: 12.8277 -
      mean_absolute_error: 2.5592 - val_loss
      : 8.5095 - val_mean_absolute_error: 2.
      1942
3157  Epoch 1412/10000
```

3158 - 0s - loss: 11.9164 - mean_absolute_error: 2.3234 - val_loss: 8.5100 - val_mean_absolute_error: 2.1942

3159 Epoch 1413/10000

3160 - 0s - loss: 11.0896 - mean_absolute_error: 2.4184 - val_loss: 8.5093 - val_mean_absolute_error: 2.1942

3161 Epoch 1414/10000

3162 - 0s - loss: 10.0662 - mean_absolute_error: 2.2971 - val_loss: 8.5095 - val_mean_absolute_error: 2.1942

3163 Epoch 1415/10000

3164 - 0s - loss: 11.8046 - mean_absolute_error: 2.4879 - val_loss: 8.5079 - val_mean_absolute_error: 2.1941

3165 Epoch 1416/10000

3166 - 0s - loss: 11.2551 - mean_absolute_error: 2.5058 - val_loss: 8.5084 - val_mean_absolute_error: 2.1941

```
3167  Epoch 1417/10000
3168   - 0s - loss: 11.0624 -
      mean_absolute_error: 2.3856 - val_loss
      : 8.5085 - val_mean_absolute_error: 2.
      1944
3169  Epoch 1418/10000
3170   - 0s - loss: 11.9361 -
      mean_absolute_error: 2.4834 - val_loss
      : 8.5083 - val_mean_absolute_error: 2.
      1944
3171  Epoch 1419/10000
3172   - 0s - loss: 13.7442 -
      mean_absolute_error: 2.6204 - val_loss
      : 8.5080 - val_mean_absolute_error: 2.
      1944
3173  Epoch 1420/10000
3174   - 0s - loss: 10.3789 -
      mean_absolute_error: 2.4616 - val_loss
      : 8.5088 - val_mean_absolute_error: 2.
      1946
3175
3176  Epoch 01420: saving model to ./model/
      model_best.h5
3177  Epoch 1421/10000
```

3178 - 0s - loss: 8.0281 - mean_absolute_error: 2.1314 - val_loss: 8.5090 - val_mean_absolute_error: 2.1947

3179 Epoch 1422/10000

3180 - 0s - loss: 11.9144 - mean_absolute_error: 2.4763 - val_loss: 8.5089 - val_mean_absolute_error: 2.1946

3181 Epoch 1423/10000

3182 - 0s - loss: 12.1801 - mean_absolute_error: 2.5263 - val_loss: 8.5094 - val_mean_absolute_error: 2.1946

3183 Epoch 1424/10000

3184 - 0s - loss: 12.1927 - mean_absolute_error: 2.3753 - val_loss: 8.5089 - val_mean_absolute_error: 2.1947

3185 Epoch 1425/10000

3186 - 0s - loss: 10.7993 - mean_absolute_error: 2.3716 - val_loss: 8.5098 - val_mean_absolute_error: 2.1948

3187 Epoch 1426/10000

3188 - 0s - loss: 11.8764 - mean_absolute_error: 2.4875 - val_loss: 8.5107 - val_mean_absolute_error: 2.1948

3189 Epoch 1427/10000

3190 - 0s - loss: 10.7127 - mean_absolute_error: 2.4586 - val_loss: 8.5102 - val_mean_absolute_error: 2.1946

3191 Epoch 1428/10000

3192 - 0s - loss: 12.3292 - mean_absolute_error: 2.4555 - val_loss: 8.5095 - val_mean_absolute_error: 2.1945

3193 Epoch 1429/10000

3194 - 0s - loss: 11.9607 - mean_absolute_error: 2.4557 - val_loss: 8.5107 - val_mean_absolute_error: 2.1945

3195 Epoch 1430/10000

3196 - 0s - loss: 12.9372 - mean_absolute_error: 2.4866 - val_loss: 8.5115 - val_mean_absolute_error: 2.

3196 1944

3197

3198 Epoch 01430: saving model to ./model/model_best.h5

3199 Epoch 1431/10000

3200 - 0s - loss: 11.4347 - mean_absolute_error: 2.4520 - val_loss: 8.5111 - val_mean_absolute_error: 2.1943

3201 Epoch 1432/10000

3202 - 0s - loss: 10.7622 - mean_absolute_error: 2.4211 - val_loss: 8.5104 - val_mean_absolute_error: 2.1943

3203 Epoch 1433/10000

3204 - 0s - loss: 9.0883 - mean_absolute_error: 2.2094 - val_loss: 8.5110 - val_mean_absolute_error: 2.1944

3205 Epoch 1434/10000

3206 - 0s - loss: 11.1324 - mean_absolute_error: 2.4279 - val_loss: 8.5124 - val_mean_absolute_error: 2.1944

3207 Epoch 1435/10000

3208 - 0s - loss: 11.2726 - mean_absolute_error: 2.4229 - val_loss: 8.5125 - val_mean_absolute_error: 2.1943

3209 Epoch 1436/10000

3210 - 0s - loss: 10.9666 - mean_absolute_error: 2.4010 - val_loss: 8.5128 - val_mean_absolute_error: 2.1945

3211 Epoch 1437/10000

3212 - 0s - loss: 9.8271 - mean_absolute_error: 2.3723 - val_loss: 8.5133 - val_mean_absolute_error: 2.1946

3213 Epoch 1438/10000

3214 - 0s - loss: 14.5442 - mean_absolute_error: 2.6048 - val_loss: 8.5122 - val_mean_absolute_error: 2.1944

3215 Epoch 1439/10000

3216 - 0s - loss: 11.5559 - mean_absolute_error: 2.4582 - val_loss: 8.5117 - val_mean_absolute_error: 2.

```
3216  1942
3217  Epoch 1440/10000
3218   - 0s - loss: 10.4327 -
      mean_absolute_error: 2.3579 - val_loss
      : 8.5111 - val_mean_absolute_error: 2.
      1942
3219
3220  Epoch 01440: saving model to ./model/
      model_best.h5
3221  Epoch 1441/10000
3222   - 0s - loss: 12.8936 -
      mean_absolute_error: 2.5124 - val_loss
      : 8.5114 - val_mean_absolute_error: 2.
      1940
3223  Epoch 1442/10000
3224   - 0s - loss: 11.0012 -
      mean_absolute_error: 2.4470 - val_loss
      : 8.5114 - val_mean_absolute_error: 2.
      1941
3225  Epoch 1443/10000
3226   - 0s - loss: 10.0509 -
      mean_absolute_error: 2.3668 - val_loss
      : 8.5123 - val_mean_absolute_error: 2.
      1943
```

```
3227  Epoch 1444/10000
3228   - 0s - loss: 10.7237 -
      mean_absolute_error: 2.3624 - val_loss
      : 8.5128 - val_mean_absolute_error: 2.
      1943
3229  Epoch 1445/10000
3230   - 0s - loss: 10.9009 -
      mean_absolute_error: 2.4658 - val_loss
      : 8.5136 - val_mean_absolute_error: 2.
      1947
3231  Epoch 1446/10000
3232   - 0s - loss: 10.4675 -
      mean_absolute_error: 2.3939 - val_loss
      : 8.5136 - val_mean_absolute_error: 2.
      1947
3233  Epoch 1447/10000
3234   - 0s - loss: 11.8495 -
      mean_absolute_error: 2.5093 - val_loss
      : 8.5132 - val_mean_absolute_error: 2.
      1948
3235  Epoch 1448/10000
3236   - 0s - loss: 11.7386 -
      mean_absolute_error: 2.5403 - val_loss
      : 8.5128 - val_mean_absolute_error: 2.
```

3236 1948

3237 Epoch 1449/10000

3238 - 0s - loss: 11.5529 - mean_absolute_error: 2.5094 - val_loss: 8.5125 - val_mean_absolute_error: 2.1948

3239 Epoch 1450/10000

3240 - 0s - loss: 12.0888 - mean_absolute_error: 2.3968 - val_loss: 8.5122 - val_mean_absolute_error: 2.1948

3241

3242 Epoch 01450: saving model to ./model/model_best.h5

3243 Epoch 1451/10000

3244 - 0s - loss: 11.3792 - mean_absolute_error: 2.3562 - val_loss: 8.5124 - val_mean_absolute_error: 2.1948

3245 Epoch 1452/10000

3246 - 0s - loss: 9.5467 - mean_absolute_error: 2.2492 - val_loss: 8.5121 - val_mean_absolute_error: 2.1951

```
3247  Epoch 1453/10000
3248   - 0s - loss: 9.9696 -
       mean_absolute_error: 2.2971 - val_loss
       : 8.5127 - val_mean_absolute_error: 2.
       1949
3249  Epoch 1454/10000
3250   - 0s - loss: 10.3967 -
       mean_absolute_error: 2.2978 - val_loss
       : 8.5132 - val_mean_absolute_error: 2.
       1951
3251  Epoch 1455/10000
3252   - 0s - loss: 11.5224 -
       mean_absolute_error: 2.4658 - val_loss
       : 8.5134 - val_mean_absolute_error: 2.
       1950
3253  Epoch 1456/10000
3254   - 0s - loss: 12.5895 -
       mean_absolute_error: 2.4888 - val_loss
       : 8.5141 - val_mean_absolute_error: 2.
       1951
3255  Epoch 1457/10000
3256   - 0s - loss: 11.3726 -
       mean_absolute_error: 2.4075 - val_loss
       : 8.5139 - val_mean_absolute_error: 2.
```

3256 1952

3257 Epoch 1458/10000

3258 - 0s - loss: 10.1073 - mean_absolute_error: 2.3514 - val_loss: 8.5142 - val_mean_absolute_error: 2.1952

3259 Epoch 1459/10000

3260 - 0s - loss: 13.8681 - mean_absolute_error: 2.5603 - val_loss: 8.5145 - val_mean_absolute_error: 2.1952

3261 Epoch 1460/10000

3262 - 0s - loss: 11.3569 - mean_absolute_error: 2.4257 - val_loss: 8.5142 - val_mean_absolute_error: 2.1953

3263

3264 Epoch 01460: saving model to ./model/model_best.h5

3265 Epoch 1461/10000

3266 - 0s - loss: 11.6084 - mean_absolute_error: 2.4241 - val_loss: 8.5155 - val_mean_absolute_error: 2.1954

3267 Epoch 1462/10000

3268 - 0s - loss: 10.3793 - mean_absolute_error: 2.3717 - val_loss: 8.5159 - val_mean_absolute_error: 2.1952

3269 Epoch 1463/10000

3270 - 0s - loss: 11.6132 - mean_absolute_error: 2.4045 - val_loss: 8.5154 - val_mean_absolute_error: 2.1952

3271 Epoch 1464/10000

3272 - 0s - loss: 11.7194 - mean_absolute_error: 2.4404 - val_loss: 8.5159 - val_mean_absolute_error: 2.1951

3273 Epoch 1465/10000

3274 - 0s - loss: 10.3745 - mean_absolute_error: 2.3785 - val_loss: 8.5152 - val_mean_absolute_error: 2.1950

3275 Epoch 1466/10000

3276 - 0s - loss: 13.2713 - mean_absolute_error: 2.5820 - val_loss: 8.5169 - val_mean_absolute_error: 2.

```
3276  1951
3277  Epoch 1467/10000
3278   - 0s - loss: 14.6430 -
      mean_absolute_error: 2.6369 - val_loss
      : 8.5160 - val_mean_absolute_error: 2.
      1950
3279  Epoch 1468/10000
3280   - 0s - loss: 10.8838 -
      mean_absolute_error: 2.4580 - val_loss
      : 8.5167 - val_mean_absolute_error: 2.
      1949
3281  Epoch 1469/10000
3282   - 0s - loss: 11.7250 -
      mean_absolute_error: 2.4629 - val_loss
      : 8.5169 - val_mean_absolute_error: 2.
      1950
3283  Epoch 1470/10000
3284   - 0s - loss: 12.1785 -
      mean_absolute_error: 2.5496 - val_loss
      : 8.5168 - val_mean_absolute_error: 2.
      1950
3285
3286  Epoch 01470: saving model to ./model/
      model_best.h5
```

```
3287   Epoch 1471/10000
3288    - 0s - loss: 10.7680 -
       mean_absolute_error: 2.4731 - val_loss
       : 8.5180 - val_mean_absolute_error: 2.
       1952
3289   Epoch 1472/10000
3290    - 0s - loss: 12.2873 -
       mean_absolute_error: 2.4971 - val_loss
       : 8.5173 - val_mean_absolute_error: 2.
       1952
3291   Epoch 1473/10000
3292    - 0s - loss: 9.7809 -
       mean_absolute_error: 2.3625 - val_loss
       : 8.5173 - val_mean_absolute_error: 2.
       1952
3293   Epoch 1474/10000
3294    - 0s - loss: 9.7661 -
       mean_absolute_error: 2.3130 - val_loss
       : 8.5156 - val_mean_absolute_error: 2.
       1950
3295   Epoch 1475/10000
3296    - 0s - loss: 12.0218 -
       mean_absolute_error: 2.3983 - val_loss
       : 8.5146 - val_mean_absolute_error: 2.
```

3296 1948

3297 Epoch 1476/10000

3298 - 0s - loss: 11.4003 - mean_absolute_error: 2.2903 - val_loss: 8.5155 - val_mean_absolute_error: 2.1949

3299 Epoch 1477/10000

3300 - 0s - loss: 11.1557 - mean_absolute_error: 2.4677 - val_loss: 8.5151 - val_mean_absolute_error: 2.1949

3301 Epoch 1478/10000

3302 - 0s - loss: 11.1179 - mean_absolute_error: 2.4675 - val_loss: 8.5146 - val_mean_absolute_error: 2.1948

3303 Epoch 1479/10000

3304 - 0s - loss: 11.1958 - mean_absolute_error: 2.4375 - val_loss: 8.5150 - val_mean_absolute_error: 2.1948

3305 Epoch 1480/10000

3306 - 0s - loss: 9.3493 - mean_absolute_error: 2.2232 - val_loss

3306 : 8.5155 - val_mean_absolute_error: 2.1950

3307

3308 Epoch 01480: saving model to ./model/model_best.h5

3309 Epoch 1481/10000

3310 - 0s - loss: 12.2736 - mean_absolute_error: 2.4747 - val_loss: 8.5153 - val_mean_absolute_error: 2.1948

3311 Epoch 1482/10000

3312 - 0s - loss: 12.3850 - mean_absolute_error: 2.4439 - val_loss: 8.5150 - val_mean_absolute_error: 2.1947

3313 Epoch 1483/10000

3314 - 0s - loss: 11.7384 - mean_absolute_error: 2.5311 - val_loss: 8.5155 - val_mean_absolute_error: 2.1948

3315 Epoch 1484/10000

3316 - 0s - loss: 12.9243 - mean_absolute_error: 2.5252 - val_loss: 8.5155 - val_mean_absolute_error: 2.

```
3316  1947
3317  Epoch 1485/10000
3318   - 0s - loss: 10.3047 -
      mean_absolute_error: 2.3069 - val_loss
      : 8.5163 - val_mean_absolute_error: 2.
      1950
3319  Epoch 1486/10000
3320   - 0s - loss: 11.7191 -
      mean_absolute_error: 2.4791 - val_loss
      : 8.5165 - val_mean_absolute_error: 2.
      1950
3321  Epoch 1487/10000
3322   - 0s - loss: 11.0062 -
      mean_absolute_error: 2.4165 - val_loss
      : 8.5156 - val_mean_absolute_error: 2.
      1948
3323  Epoch 1488/10000
3324   - 0s - loss: 10.4768 -
      mean_absolute_error: 2.3693 - val_loss
      : 8.5167 - val_mean_absolute_error: 2.
      1949
3325  Epoch 1489/10000
3326   - 0s - loss: 13.2108 -
      mean_absolute_error: 2.5194 - val_loss
```

```
3326  : 8.5170 - val_mean_absolute_error: 2.
      1949
3327  Epoch 1490/10000
3328   - 0s - loss: 12.3031 -
      mean_absolute_error: 2.5708 - val_loss
      : 8.5173 - val_mean_absolute_error: 2.
      1950
3329
3330  Epoch 01490: saving model to ./model/
      model_best.h5
3331  Epoch 1491/10000
3332   - 0s - loss: 11.3973 -
      mean_absolute_error: 2.5188 - val_loss
      : 8.5178 - val_mean_absolute_error: 2.
      1951
3333  Epoch 1492/10000
3334   - 0s - loss: 10.7090 -
      mean_absolute_error: 2.3895 - val_loss
      : 8.5173 - val_mean_absolute_error: 2.
      1949
3335  Epoch 1493/10000
3336   - 0s - loss: 10.8312 -
      mean_absolute_error: 2.3794 - val_loss
      : 8.5169 - val_mean_absolute_error: 2.
```

3336 1949

3337 Epoch 1494/10000

3338 - 0s - loss: 12.1630 - mean_absolute_error: 2.5025 - val_loss: 8.5167 - val_mean_absolute_error: 2.1949

3339 Epoch 1495/10000

3340 - 0s - loss: 11.8930 - mean_absolute_error: 2.4595 - val_loss: 8.5160 - val_mean_absolute_error: 2.1950

3341 Epoch 1496/10000

3342 - 0s - loss: 8.3432 - mean_absolute_error: 2.2021 - val_loss: 8.5162 - val_mean_absolute_error: 2.1950

3343 Epoch 1497/10000

3344 - 0s - loss: 10.3438 - mean_absolute_error: 2.4438 - val_loss: 8.5174 - val_mean_absolute_error: 2.1951

3345 Epoch 1498/10000

3346 - 0s - loss: 9.9406 - mean_absolute_error: 2.2023 - val_loss

```
3346  : 8.5175 - val_mean_absolute_error: 2.
      1952
3347  Epoch 1499/10000
3348   - 0s - loss: 13.3734 -
      mean_absolute_error: 2.5863 - val_loss
      : 8.5169 - val_mean_absolute_error: 2.
      1952
3349  Epoch 1500/10000
3350   - 0s - loss: 13.7459 -
      mean_absolute_error: 2.5193 - val_loss
      : 8.5173 - val_mean_absolute_error: 2.
      1952
3351
3352  Epoch 01500: saving model to ./model/
      model_best.h5
3353  Epoch 1501/10000
3354   - 0s - loss: 10.5310 -
      mean_absolute_error: 2.3403 - val_loss
      : 8.5169 - val_mean_absolute_error: 2.
      1952
3355  Epoch 1502/10000
3356   - 0s - loss: 9.0795 -
      mean_absolute_error: 2.2705 - val_loss
      : 8.5171 - val_mean_absolute_error: 2.
```

3356 1953

3357 Epoch 1503/10000

3358 - 0s - loss: 9.0642 - mean_absolute_error: 2.1730 - val_loss: 8.5168 - val_mean_absolute_error: 2.1953

3359 Epoch 1504/10000

3360 - 0s - loss: 10.3840 - mean_absolute_error: 2.3574 - val_loss: 8.5173 - val_mean_absolute_error: 2.1953

3361 Epoch 1505/10000

3362 - 0s - loss: 11.4338 - mean_absolute_error: 2.4767 - val_loss: 8.5186 - val_mean_absolute_error: 2.1955

3363 Epoch 1506/10000

3364 - 0s - loss: 14.8649 - mean_absolute_error: 2.6559 - val_loss: 8.5184 - val_mean_absolute_error: 2.1956

3365 Epoch 1507/10000

3366 - 0s - loss: 9.8515 - mean_absolute_error: 2.2716 - val_loss

```
3366  : 8.5181 - val_mean_absolute_error: 2.
      1956
3367  Epoch 1508/10000
3368   - 0s - loss: 12.4574 -
      mean_absolute_error: 2.4214 - val_loss
      : 8.5184 - val_mean_absolute_error: 2.
      1956
3369  Epoch 1509/10000
3370   - 0s - loss: 10.4990 -
      mean_absolute_error: 2.3177 - val_loss
      : 8.5186 - val_mean_absolute_error: 2.
      1956
3371  Epoch 1510/10000
3372   - 0s - loss: 12.5781 -
      mean_absolute_error: 2.6216 - val_loss
      : 8.5180 - val_mean_absolute_error: 2.
      1955

3373
3374  Epoch 01510: saving model to ./model/
      model_best.h5
3375  Epoch 1511/10000
3376   - 0s - loss: 9.3154 -
      mean_absolute_error: 2.1903 - val_loss
      : 8.5173 - val_mean_absolute_error: 2.
```

3376 1953

3377 Epoch 1512/10000

3378 - 0s - loss: 13.6122 - mean_absolute_error: 2.6359 - val_loss: 8.5173 - val_mean_absolute_error: 2.1953

3379 Epoch 1513/10000

3380 - 0s - loss: 12.8570 - mean_absolute_error: 2.5855 - val_loss: 8.5166 - val_mean_absolute_error: 2.1953

3381 Epoch 1514/10000

3382 - 0s - loss: 10.2649 - mean_absolute_error: 2.4127 - val_loss: 8.5164 - val_mean_absolute_error: 2.1952

3383 Epoch 1515/10000

3384 - 0s - loss: 14.5613 - mean_absolute_error: 2.5127 - val_loss: 8.5157 - val_mean_absolute_error: 2.1951

3385 Epoch 1516/10000

3386 - 0s - loss: 10.6517 - mean_absolute_error: 2.3195 - val_loss

3386 : 8.5157 - val_mean_absolute_error: 2.1952

3387 Epoch 1517/10000

3388 - 0s - loss: 10.7047 - mean_absolute_error: 2.3728 - val_loss: 8.5149 - val_mean_absolute_error: 2.1951

3389 Epoch 1518/10000

3390 - 0s - loss: 12.9452 - mean_absolute_error: 2.4658 - val_loss: 8.5147 - val_mean_absolute_error: 2.1950

3391 Epoch 1519/10000

3392 - 0s - loss: 12.4019 - mean_absolute_error: 2.3863 - val_loss: 8.5146 - val_mean_absolute_error: 2.1953

3393 Epoch 1520/10000

3394 - 0s - loss: 12.0046 - mean_absolute_error: 2.4461 - val_loss: 8.5138 - val_mean_absolute_error: 2.1951

3395

3396 Epoch 01520: saving model to ./model/

```
3396  model_best.h5
3397  Epoch 1521/10000
3398   - 0s - loss: 11.5299 -
      mean_absolute_error: 2.5385 - val_loss
      : 8.5138 - val_mean_absolute_error: 2.
      1952
3399  Epoch 1522/10000
3400   - 0s - loss: 11.5845 -
      mean_absolute_error: 2.4107 - val_loss
      : 8.5128 - val_mean_absolute_error: 2.
      1950
3401  Epoch 1523/10000
3402   - 0s - loss: 13.0978 -
      mean_absolute_error: 2.4991 - val_loss
      : 8.5120 - val_mean_absolute_error: 2.
      1950
3403  Epoch 1524/10000
3404   - 0s - loss: 10.2316 -
      mean_absolute_error: 2.3956 - val_loss
      : 8.5130 - val_mean_absolute_error: 2.
      1953
3405  Epoch 1525/10000
3406   - 0s - loss: 9.2376 -
      mean_absolute_error: 2.2730 - val_loss
```

3406 : 8.5138 - val_mean_absolute_error: 2.1952

3407 Epoch 1526/10000

3408 - 0s - loss: 10.3277 - mean_absolute_error: 2.2581 - val_loss: 8.5141 - val_mean_absolute_error: 2.1953

3409 Epoch 1527/10000

3410 - 0s - loss: 13.0107 - mean_absolute_error: 2.6108 - val_loss: 8.5138 - val_mean_absolute_error: 2.1954

3411 Epoch 1528/10000

3412 - 0s - loss: 10.6522 - mean_absolute_error: 2.4193 - val_loss: 8.5134 - val_mean_absolute_error: 2.1954

3413 Epoch 1529/10000

3414 - 0s - loss: 11.3482 - mean_absolute_error: 2.3802 - val_loss: 8.5127 - val_mean_absolute_error: 2.1953

3415 Epoch 1530/10000

3416 - 0s - loss: 11.3918 -

3416   mean_absolute_error: 2.3548 - val_loss: 8.5122 - val_mean_absolute_error: 2.1952

3417

3418   Epoch 01530: saving model to ./model/model_best.h5

3419   Epoch 1531/10000

3420   - 0s - loss: 9.5564 - mean_absolute_error: 2.2307 - val_loss: 8.5128 - val_mean_absolute_error: 2.1952

3421   Epoch 1532/10000

3422   - 0s - loss: 10.2001 - mean_absolute_error: 2.3359 - val_loss: 8.5129 - val_mean_absolute_error: 2.1951

3423   Epoch 1533/10000

3424   - 0s - loss: 10.7549 - mean_absolute_error: 2.3964 - val_loss: 8.5124 - val_mean_absolute_error: 2.1950

3425   Epoch 1534/10000

3426   - 0s - loss: 11.3956 - mean_absolute_error: 2.4741 - val_loss

3426 : 8.5129 - val_mean_absolute_error: 2.1951

3427 Epoch 1535/10000

3428 - 0s - loss: 10.1330 - mean_absolute_error: 2.3546 - val_loss: 8.5127 - val_mean_absolute_error: 2.1951

3429 Epoch 1536/10000

3430 - 0s - loss: 9.7680 - mean_absolute_error: 2.2758 - val_loss: 8.5128 - val_mean_absolute_error: 2.1952

3431 Epoch 1537/10000

3432 - 0s - loss: 10.7217 - mean_absolute_error: 2.2471 - val_loss: 8.5124 - val_mean_absolute_error: 2.1951

3433 Epoch 1538/10000

3434 - 0s - loss: 10.3746 - mean_absolute_error: 2.3251 - val_loss: 8.5132 - val_mean_absolute_error: 2.1951

3435 Epoch 1539/10000

3436 - 0s - loss: 11.2126 -

3436 mean_absolute_error: 2.2892 - val_loss: 8.5133 - val_mean_absolute_error: 2.1950

3437 Epoch 1540/10000

3438 - 0s - loss: 12.9405 - mean_absolute_error: 2.6396 - val_loss: 8.5127 - val_mean_absolute_error: 2.1950

3439

3440 Epoch 01540: saving model to ./model/model_best.h5

3441 Epoch 1541/10000

3442 - 0s - loss: 12.4005 - mean_absolute_error: 2.5776 - val_loss: 8.5130 - val_mean_absolute_error: 2.1952

3443 Epoch 1542/10000

3444 - 0s - loss: 11.8047 - mean_absolute_error: 2.4238 - val_loss: 8.5132 - val_mean_absolute_error: 2.1952

3445 Epoch 1543/10000

3446 - 0s - loss: 11.8788 - mean_absolute_error: 2.5112 - val_loss

3446 : 8.5138 - val_mean_absolute_error: 2.1953

3447 Epoch 1544/10000

3448 - 0s - loss: 9.5015 - mean_absolute_error: 2.2678 - val_loss: 8.5132 - val_mean_absolute_error: 2.1951

3449 Epoch 1545/10000

3450 - 0s - loss: 12.5979 - mean_absolute_error: 2.6039 - val_loss: 8.5131 - val_mean_absolute_error: 2.1950

3451 Epoch 1546/10000

3452 - 0s - loss: 9.0293 - mean_absolute_error: 2.2115 - val_loss: 8.5126 - val_mean_absolute_error: 2.1951

3453 Epoch 1547/10000

3454 - 0s - loss: 9.1197 - mean_absolute_error: 2.1338 - val_loss: 8.5124 - val_mean_absolute_error: 2.1952

3455 Epoch 1548/10000

3456 - 0s - loss: 12.8034 -

3456 mean_absolute_error: 2.5605 - val_loss: 8.5131 - val_mean_absolute_error: 2.1954

3457 Epoch 1549/10000

3458 - 0s - loss: 12.6614 - mean_absolute_error: 2.4300 - val_loss: 8.5147 - val_mean_absolute_error: 2.1955

3459 Epoch 1550/10000

3460 - 0s - loss: 13.2391 - mean_absolute_error: 2.5578 - val_loss: 8.5154 - val_mean_absolute_error: 2.1955

3461

3462 Epoch 01550: saving model to ./model/model_best.h5

3463 Epoch 1551/10000

3464 - 0s - loss: 11.4497 - mean_absolute_error: 2.3424 - val_loss: 8.5150 - val_mean_absolute_error: 2.1954

3465 Epoch 1552/10000

3466 - 0s - loss: 10.6433 - mean_absolute_error: 2.3958 - val_loss

3466 : 8.5153 - val_mean_absolute_error: 2.1952

3467 Epoch 1553/10000

3468 - 0s - loss: 11.2709 - mean_absolute_error: 2.4591 - val_loss: 8.5158 - val_mean_absolute_error: 2.1954

3469 Epoch 1554/10000

3470 - 0s - loss: 11.8044 - mean_absolute_error: 2.5275 - val_loss: 8.5155 - val_mean_absolute_error: 2.1954

3471 Epoch 1555/10000

3472 - 0s - loss: 10.6470 - mean_absolute_error: 2.3557 - val_loss: 8.5144 - val_mean_absolute_error: 2.1956

3473 Epoch 1556/10000

3474 - 0s - loss: 10.4683 - mean_absolute_error: 2.4182 - val_loss: 8.5145 - val_mean_absolute_error: 2.1957

3475 Epoch 1557/10000

3476 - 0s - loss: 13.8738 -

3476 mean_absolute_error: 2.4507 - val_loss: 8.5131 - val_mean_absolute_error: 2.1957

3477 Epoch 1558/10000

3478 - 0s - loss: 10.7928 - mean_absolute_error: 2.4941 - val_loss: 8.5126 - val_mean_absolute_error: 2.1955

3479 Epoch 1559/10000

3480 - 0s - loss: 10.8070 - mean_absolute_error: 2.3773 - val_loss: 8.5125 - val_mean_absolute_error: 2.1956

3481 Epoch 1560/10000

3482 - 0s - loss: 12.1991 - mean_absolute_error: 2.5218 - val_loss: 8.5112 - val_mean_absolute_error: 2.1957

3483

3484 Epoch 01560: saving model to ./model/model_best.h5

3485 Epoch 1561/10000

3486 - 0s - loss: 10.2927 - mean_absolute_error: 2.3002 - val_loss

3486 : 8.5121 - val_mean_absolute_error: 2.1958

3487 Epoch 1562/10000

3488 - 0s - loss: 10.1401 - mean_absolute_error: 2.2881 - val_loss: 8.5112 - val_mean_absolute_error: 2.1957

3489 Epoch 1563/10000

3490 - 0s - loss: 11.5606 - mean_absolute_error: 2.4119 - val_loss: 8.5117 - val_mean_absolute_error: 2.1957

3491 Epoch 1564/10000

3492 - 0s - loss: 11.2777 - mean_absolute_error: 2.3274 - val_loss: 8.5124 - val_mean_absolute_error: 2.1960

3493 Epoch 1565/10000

3494 - 0s - loss: 11.5677 - mean_absolute_error: 2.4769 - val_loss: 8.5122 - val_mean_absolute_error: 2.1960

3495 Epoch 1566/10000

3496 - 0s - loss: 11.7245 -

3496 mean_absolute_error: 2.4401 - val_loss: 8.5126 - val_mean_absolute_error: 2.1960

3497 Epoch 1567/10000

3498 - 0s - loss: 13.4166 - mean_absolute_error: 2.5994 - val_loss: 8.5119 - val_mean_absolute_error: 2.1956

3499 Epoch 1568/10000

3500 - 0s - loss: 10.6755 - mean_absolute_error: 2.3219 - val_loss: 8.5122 - val_mean_absolute_error: 2.1959

3501 Epoch 1569/10000

3502 - 0s - loss: 13.0627 - mean_absolute_error: 2.6600 - val_loss: 8.5117 - val_mean_absolute_error: 2.1957

3503 Epoch 1570/10000

3504 - 0s - loss: 12.5097 - mean_absolute_error: 2.5026 - val_loss: 8.5112 - val_mean_absolute_error: 2.1957

3505

3506 Epoch 01570: saving model to ./model/model_best.h5

3507 Epoch 1571/10000

3508 - 0s - loss: 10.6903 - mean_absolute_error: 2.3847 - val_loss: 8.5110 - val_mean_absolute_error: 2.1958

3509 Epoch 1572/10000

3510 - 0s - loss: 12.1788 - mean_absolute_error: 2.4652 - val_loss: 8.5114 - val_mean_absolute_error: 2.1958

3511 Epoch 1573/10000

3512 - 0s - loss: 10.1940 - mean_absolute_error: 2.3110 - val_loss: 8.5114 - val_mean_absolute_error: 2.1957

3513 Epoch 1574/10000

3514 - 0s - loss: 9.9943 - mean_absolute_error: 2.2655 - val_loss: 8.5112 - val_mean_absolute_error: 2.1956

3515 Epoch 1575/10000

3516 - 0s - loss: 11.1819 -

3516 mean_absolute_error: 2.4813 - val_loss: 8.5105 - val_mean_absolute_error: 2.1956

3517 Epoch 1576/10000

3518 - 0s - loss: 9.6232 - mean_absolute_error: 2.3451 - val_loss: 8.5106 - val_mean_absolute_error: 2.1956

3519 Epoch 1577/10000

3520 - 0s - loss: 11.3153 - mean_absolute_error: 2.3836 - val_loss: 8.5107 - val_mean_absolute_error: 2.1958

3521 Epoch 1578/10000

3522 - 0s - loss: 10.8311 - mean_absolute_error: 2.4118 - val_loss: 8.5103 - val_mean_absolute_error: 2.1957

3523 Epoch 1579/10000

3524 - 0s - loss: 10.7886 - mean_absolute_error: 2.4323 - val_loss: 8.5099 - val_mean_absolute_error: 2.1956

3525 Epoch 1580/10000

3526 - 0s - loss: 12.5346 - mean_absolute_error: 2.4237 - val_loss: 8.5104 - val_mean_absolute_error: 2.1957

3527

3528 Epoch 01580: saving model to ./model/model_best.h5

3529 Epoch 1581/10000

3530 - 0s - loss: 11.0818 - mean_absolute_error: 2.4489 - val_loss: 8.5108 - val_mean_absolute_error: 2.1958

3531 Epoch 1582/10000

3532 - 0s - loss: 12.6005 - mean_absolute_error: 2.4275 - val_loss: 8.5108 - val_mean_absolute_error: 2.1958

3533 Epoch 1583/10000

3534 - 0s - loss: 11.2753 - mean_absolute_error: 2.4630 - val_loss: 8.5102 - val_mean_absolute_error: 2.1956

3535 Epoch 1584/10000

3536 - 0s - loss: 13.2112 -

3536 mean_absolute_error: 2.4659 - val_loss: 8.5098 - val_mean_absolute_error: 2.1954

3537 Epoch 1585/10000

3538 - 0s - loss: 10.0457 - mean_absolute_error: 2.3261 - val_loss: 8.5104 - val_mean_absolute_error: 2.1955

3539 Epoch 1586/10000

3540 - 0s - loss: 10.8065 - mean_absolute_error: 2.3154 - val_loss: 8.5097 - val_mean_absolute_error: 2.1954

3541 Epoch 1587/10000

3542 - 0s - loss: 9.5670 - mean_absolute_error: 2.1907 - val_loss: 8.5095 - val_mean_absolute_error: 2.1954

3543 Epoch 1588/10000

3544 - 0s - loss: 12.0062 - mean_absolute_error: 2.4775 - val_loss: 8.5099 - val_mean_absolute_error: 2.1953

3545 Epoch 1589/10000

```
3546    - 0s - loss: 10.6648 -
mean_absolute_error: 2.3847 - val_loss
: 8.5101 - val_mean_absolute_error: 2.
1955
3547  Epoch 1590/10000
3548    - 0s - loss: 10.1334 -
mean_absolute_error: 2.2230 - val_loss
: 8.5112 - val_mean_absolute_error: 2.
1956
3549
3550  Epoch 01590: saving model to ./model/
model_best.h5
3551  Epoch 1591/10000
3552    - 0s - loss: 10.9925 -
mean_absolute_error: 2.4229 - val_loss
: 8.5106 - val_mean_absolute_error: 2.
1954
3553  Epoch 1592/10000
3554    - 0s - loss: 12.4565 -
mean_absolute_error: 2.5223 - val_loss
: 8.5108 - val_mean_absolute_error: 2.
1953
3555  Epoch 1593/10000
3556    - 0s - loss: 10.3791 -
```

3556 mean_absolute_error: 2.3696 - val_loss: 8.5116 - val_mean_absolute_error: 2.1953

3557 Epoch 1594/10000

3558 - 0s - loss: 12.1316 - mean_absolute_error: 2.4254 - val_loss: 8.5110 - val_mean_absolute_error: 2.1951

3559 Epoch 1595/10000

3560 - 0s - loss: 12.0827 - mean_absolute_error: 2.4933 - val_loss: 8.5118 - val_mean_absolute_error: 2.1951

3561 Epoch 1596/10000

3562 - 0s - loss: 11.9017 - mean_absolute_error: 2.5024 - val_loss: 8.5113 - val_mean_absolute_error: 2.1952

3563 Epoch 1597/10000

3564 - 0s - loss: 11.4493 - mean_absolute_error: 2.4693 - val_loss: 8.5119 - val_mean_absolute_error: 2.1951

3565 Epoch 1598/10000

```
3566  - 0s - loss: 10.0986 -
      mean_absolute_error: 2.2257 - val_loss
      : 8.5121 - val_mean_absolute_error: 2.
      1952
3567  Epoch 1599/10000
3568   - 0s - loss: 11.9872 -
      mean_absolute_error: 2.4381 - val_loss
      : 8.5133 - val_mean_absolute_error: 2.
      1953
3569  Epoch 1600/10000
3570   - 0s - loss: 11.0004 -
      mean_absolute_error: 2.4227 - val_loss
      : 8.5133 - val_mean_absolute_error: 2.
      1954

3571
3572  Epoch 01600: saving model to ./model/
      model_best.h5
3573  Epoch 1601/10000
3574   - 0s - loss: 11.3211 -
      mean_absolute_error: 2.4273 - val_loss
      : 8.5145 - val_mean_absolute_error: 2.
      1954
3575  Epoch 1602/10000
3576   - 0s - loss: 10.7740 -
```

3576 mean_absolute_error: 2.3331 - val_loss: 8.5150 - val_mean_absolute_error: 2.1953

3577 Epoch 1603/10000

3578 - 0s - loss: 11.5984 - mean_absolute_error: 2.3876 - val_loss: 8.5147 - val_mean_absolute_error: 2.1952

3579 Epoch 1604/10000

3580 - 0s - loss: 12.6419 - mean_absolute_error: 2.5926 - val_loss: 8.5154 - val_mean_absolute_error: 2.1951

3581 Epoch 1605/10000

3582 - 0s - loss: 11.4256 - mean_absolute_error: 2.5331 - val_loss: 8.5142 - val_mean_absolute_error: 2.1949

3583 Epoch 1606/10000

3584 - 0s - loss: 11.4451 - mean_absolute_error: 2.4348 - val_loss: 8.5139 - val_mean_absolute_error: 2.1949

3585 Epoch 1607/10000

3586 - 0s - loss: 9.5819 - mean_absolute_error: 2.3082 - val_loss: 8.5143 - val_mean_absolute_error: 2.1951

3587 Epoch 1608/10000

3588 - 0s - loss: 10.7975 - mean_absolute_error: 2.3050 - val_loss: 8.5149 - val_mean_absolute_error: 2.1951

3589 Epoch 1609/10000

3590 - 0s - loss: 10.4133 - mean_absolute_error: 2.3605 - val_loss: 8.5154 - val_mean_absolute_error: 2.1952

3591 Epoch 1610/10000

3592 - 0s - loss: 11.2097 - mean_absolute_error: 2.4134 - val_loss: 8.5143 - val_mean_absolute_error: 2.1951

3593

3594 Epoch 01610: saving model to ./model/model_best.h5

3595 Epoch 1611/10000

3596 - 0s - loss: 12.9547 -

3596 mean_absolute_error: 2.6076 - val_loss: 8.5134 - val_mean_absolute_error: 2.1950

3597 Epoch 1612/10000

3598 - 0s - loss: 11.5269 - mean_absolute_error: 2.4316 - val_loss: 8.5129 - val_mean_absolute_error: 2.1949

3599 Epoch 1613/10000

3600 - 0s - loss: 12.3816 - mean_absolute_error: 2.4945 - val_loss: 8.5135 - val_mean_absolute_error: 2.1949

3601 Epoch 1614/10000

3602 - 0s - loss: 11.0318 - mean_absolute_error: 2.4166 - val_loss: 8.5135 - val_mean_absolute_error: 2.1950

3603 Epoch 1615/10000

3604 - 0s - loss: 9.7265 - mean_absolute_error: 2.3181 - val_loss: 8.5145 - val_mean_absolute_error: 2.1951

3605 Epoch 1616/10000

3606 - 0s - loss: 11.9899 - mean_absolute_error: 2.4781 - val_loss: 8.5145 - val_mean_absolute_error: 2.1952

3607 Epoch 1617/10000

3608 - 0s - loss: 10.2370 - mean_absolute_error: 2.4073 - val_loss: 8.5140 - val_mean_absolute_error: 2.1951

3609 Epoch 1618/10000

3610 - 0s - loss: 9.6012 - mean_absolute_error: 2.1922 - val_loss: 8.5141 - val_mean_absolute_error: 2.1951

3611 Epoch 1619/10000

3612 - 0s - loss: 12.6257 - mean_absolute_error: 2.5803 - val_loss: 8.5134 - val_mean_absolute_error: 2.1948

3613 Epoch 1620/10000

3614 - 0s - loss: 11.6927 - mean_absolute_error: 2.5384 - val_loss: 8.5132 - val_mean_absolute_error: 2.1948

3615

3616 Epoch 01620: saving model to ./model/model_best.h5

3617 Epoch 1621/10000

3618 - 0s - loss: 12.0183 - mean_absolute_error: 2.4505 - val_loss: 8.5131 - val_mean_absolute_error: 2.1949

3619 Epoch 1622/10000

3620 - 0s - loss: 12.3343 - mean_absolute_error: 2.5647 - val_loss: 8.5129 - val_mean_absolute_error: 2.1948

3621 Epoch 1623/10000

3622 - 0s - loss: 11.1233 - mean_absolute_error: 2.4769 - val_loss: 8.5128 - val_mean_absolute_error: 2.1946

3623 Epoch 1624/10000

3624 - 0s - loss: 11.2865 - mean_absolute_error: 2.3649 - val_loss: 8.5128 - val_mean_absolute_error: 2.1946

3625 Epoch 1625/10000

3626   - 0s - loss: 10.6567 - mean_absolute_error: 2.3068 - val_loss: 8.5122 - val_mean_absolute_error: 2.1946

3627 Epoch 1626/10000

3628   - 0s - loss: 9.7528 - mean_absolute_error: 2.2017 - val_loss: 8.5120 - val_mean_absolute_error: 2.1946

3629 Epoch 1627/10000

3630   - 0s - loss: 12.4362 - mean_absolute_error: 2.4698 - val_loss: 8.5124 - val_mean_absolute_error: 2.1949

3631 Epoch 1628/10000

3632   - 0s - loss: 12.7314 - mean_absolute_error: 2.5190 - val_loss: 8.5121 - val_mean_absolute_error: 2.1948

3633 Epoch 1629/10000

3634   - 0s - loss: 11.1972 - mean_absolute_error: 2.4632 - val_loss: 8.5124 - val_mean_absolute_error: 2.1946

3635 Epoch 1630/10000

3636 - 0s - loss: 11.1773 - mean_absolute_error: 2.4551 - val_loss: 8.5131 - val_mean_absolute_error: 2.1947

3637

3638 Epoch 01630: saving model to ./model/model_best.h5

3639 Epoch 1631/10000

3640 - 0s - loss: 11.3757 - mean_absolute_error: 2.5232 - val_loss: 8.5135 - val_mean_absolute_error: 2.1946

3641 Epoch 1632/10000

3642 - 0s - loss: 11.6443 - mean_absolute_error: 2.4366 - val_loss: 8.5119 - val_mean_absolute_error: 2.1946

3643 Epoch 1633/10000

3644 - 0s - loss: 9.8299 - mean_absolute_error: 2.3317 - val_loss: 8.5119 - val_mean_absolute_error: 2.1947

3645 Epoch 1634/10000

3646 - 0s - loss: 12.5519 - mean_absolute_error: 2.4782 - val_loss: 8.5119 - val_mean_absolute_error: 2.1946

3647 Epoch 1635/10000

3648 - 0s - loss: 9.2857 - mean_absolute_error: 2.3001 - val_loss: 8.5116 - val_mean_absolute_error: 2.1947

3649 Epoch 1636/10000

3650 - 0s - loss: 12.1407 - mean_absolute_error: 2.5138 - val_loss: 8.5109 - val_mean_absolute_error: 2.1946

3651 Epoch 1637/10000

3652 - 0s - loss: 10.5028 - mean_absolute_error: 2.3790 - val_loss: 8.5101 - val_mean_absolute_error: 2.1946

3653 Epoch 1638/10000

3654 - 0s - loss: 11.3742 - mean_absolute_error: 2.3759 - val_loss: 8.5110 - val_mean_absolute_error: 2.1947

```
3655  Epoch 1639/10000
3656   - 0s - loss: 10.4795 -
      mean_absolute_error: 2.3587 - val_loss
      : 8.5115 - val_mean_absolute_error: 2.
      1948
3657  Epoch 1640/10000
3658   - 0s - loss: 13.7229 -
      mean_absolute_error: 2.5614 - val_loss
      : 8.5112 - val_mean_absolute_error: 2.
      1948
3659
3660  Epoch 01640: saving model to ./model/
      model_best.h5
3661  Epoch 1641/10000
3662   - 0s - loss: 12.8964 -
      mean_absolute_error: 2.5178 - val_loss
      : 8.5124 - val_mean_absolute_error: 2.
      1950
3663  Epoch 1642/10000
3664   - 0s - loss: 13.8346 -
      mean_absolute_error: 2.5616 - val_loss
      : 8.5122 - val_mean_absolute_error: 2.
      1950
3665  Epoch 1643/10000
```

```
3666    - 0s - loss: 12.9697 -
mean_absolute_error: 2.6262 - val_loss
: 8.5124 - val_mean_absolute_error: 2.
1950
3667  Epoch 1644/10000
3668    - 0s - loss: 12.4783 -
mean_absolute_error: 2.4644 - val_loss
: 8.5128 - val_mean_absolute_error: 2.
1951
3669  Epoch 1645/10000
3670    - 0s - loss: 11.6045 -
mean_absolute_error: 2.5337 - val_loss
: 8.5136 - val_mean_absolute_error: 2.
1953
3671  Epoch 1646/10000
3672    - 0s - loss: 12.1265 -
mean_absolute_error: 2.3481 - val_loss
: 8.5131 - val_mean_absolute_error: 2.
1952
3673  Epoch 1647/10000
3674    - 0s - loss: 11.8958 -
mean_absolute_error: 2.4235 - val_loss
: 8.5131 - val_mean_absolute_error: 2.
1953
```

```
3675  Epoch 1648/10000
3676   - 0s - loss: 10.2739 -
       mean_absolute_error: 2.3836 - val_loss
       : 8.5129 - val_mean_absolute_error: 2.
       1951
3677  Epoch 1649/10000
3678   - 0s - loss: 12.6599 -
       mean_absolute_error: 2.5603 - val_loss
       : 8.5127 - val_mean_absolute_error: 2.
       1949
3679  Epoch 1650/10000
3680   - 0s - loss: 11.1029 -
       mean_absolute_error: 2.3275 - val_loss
       : 8.5127 - val_mean_absolute_error: 2.
       1949
3681
3682  Epoch 01650: saving model to ./model/
       model_best.h5
3683  Epoch 1651/10000
3684   - 0s - loss: 13.5233 -
       mean_absolute_error: 2.5365 - val_loss
       : 8.5116 - val_mean_absolute_error: 2.
       1947
3685  Epoch 1652/10000
```

3686 - 0s - loss: 12.8953 - mean_absolute_error: 2.5607 - val_loss: 8.5123 - val_mean_absolute_error: 2.1948

3687 Epoch 1653/10000

3688 - 0s - loss: 11.2209 - mean_absolute_error: 2.4373 - val_loss: 8.5125 - val_mean_absolute_error: 2.1946

3689 Epoch 1654/10000

3690 - 0s - loss: 11.8903 - mean_absolute_error: 2.4564 - val_loss: 8.5122 - val_mean_absolute_error: 2.1946

3691 Epoch 1655/10000

3692 - 0s - loss: 10.4558 - mean_absolute_error: 2.3506 - val_loss: 8.5113 - val_mean_absolute_error: 2.1944

3693 Epoch 1656/10000

3694 - 0s - loss: 12.6855 - mean_absolute_error: 2.5308 - val_loss: 8.5107 - val_mean_absolute_error: 2.1945

```
3695  Epoch 1657/10000
3696   - 0s - loss: 13.4796 -
      mean_absolute_error: 2.4770 - val_loss
      : 8.5096 - val_mean_absolute_error: 2.
      1944
3697  Epoch 1658/10000
3698   - 0s - loss: 10.8526 -
      mean_absolute_error: 2.3709 - val_loss
      : 8.5087 - val_mean_absolute_error: 2.
      1942
3699  Epoch 1659/10000
3700   - 0s - loss: 10.7007 -
      mean_absolute_error: 2.3028 - val_loss
      : 8.5081 - val_mean_absolute_error: 2.
      1940
3701  Epoch 1660/10000
3702   - 0s - loss: 10.0069 -
      mean_absolute_error: 2.3260 - val_loss
      : 8.5080 - val_mean_absolute_error: 2.
      1939
3703
3704  Epoch 01660: saving model to ./model/
      model_best.h5
3705  Epoch 1661/10000
```

3706 - 0s - loss: 11.2911 - mean_absolute_error: 2.4237 - val_loss: 8.5082 - val_mean_absolute_error: 2.1939

3707 Epoch 1662/10000

3708 - 0s - loss: 10.6765 - mean_absolute_error: 2.3995 - val_loss: 8.5077 - val_mean_absolute_error: 2.1938

3709 Epoch 1663/10000

3710 - 0s - loss: 11.3472 - mean_absolute_error: 2.5459 - val_loss: 8.5087 - val_mean_absolute_error: 2.1940

3711 Epoch 1664/10000

3712 - 0s - loss: 10.7383 - mean_absolute_error: 2.3557 - val_loss: 8.5081 - val_mean_absolute_error: 2.1940

3713 Epoch 1665/10000

3714 - 0s - loss: 12.8737 - mean_absolute_error: 2.5682 - val_loss: 8.5086 - val_mean_absolute_error: 2.1941

```
3715  Epoch 1666/10000
3716   - 0s - loss: 12.0599 -
      mean_absolute_error: 2.4240 - val_loss
      : 8.5089 - val_mean_absolute_error: 2.
      1940
3717  Epoch 1667/10000
3718   - 0s - loss: 12.7448 -
      mean_absolute_error: 2.4857 - val_loss
      : 8.5076 - val_mean_absolute_error: 2.
      1939
3719  Epoch 1668/10000
3720   - 0s - loss: 11.4845 -
      mean_absolute_error: 2.4857 - val_loss
      : 8.5066 - val_mean_absolute_error: 2.
      1938
3721  Epoch 1669/10000
3722   - 0s - loss: 10.8277 -
      mean_absolute_error: 2.3537 - val_loss
      : 8.5065 - val_mean_absolute_error: 2.
      1937
3723  Epoch 1670/10000
3724   - 0s - loss: 11.9224 -
      mean_absolute_error: 2.5035 - val_loss
      : 8.5062 - val_mean_absolute_error: 2.
```

3724 1939

3725

3726 Epoch 01670: saving model to ./model/model_best.h5

3727 Epoch 1671/10000

3728 - 0s - loss: 11.8833 - mean_absolute_error: 2.4940 - val_loss: 8.5068 - val_mean_absolute_error: 2.1939

3729 Epoch 1672/10000

3730 - 0s - loss: 8.6518 - mean_absolute_error: 2.2717 - val_loss: 8.5078 - val_mean_absolute_error: 2.1939

3731 Epoch 1673/10000

3732 - 0s - loss: 12.0491 - mean_absolute_error: 2.5485 - val_loss: 8.5080 - val_mean_absolute_error: 2.1940

3733 Epoch 1674/10000

3734 - 0s - loss: 10.7840 - mean_absolute_error: 2.4380 - val_loss: 8.5075 - val_mean_absolute_error: 2.1939

```
3735  Epoch 1675/10000
3736   - 0s - loss: 9.1085 -
      mean_absolute_error: 2.2819 - val_loss
      : 8.5075 - val_mean_absolute_error: 2.
      1941
3737  Epoch 1676/10000
3738   - 0s - loss: 11.6456 -
      mean_absolute_error: 2.4891 - val_loss
      : 8.5082 - val_mean_absolute_error: 2.
      1940
3739  Epoch 1677/10000
3740   - 0s - loss: 11.5226 -
      mean_absolute_error: 2.4894 - val_loss
      : 8.5077 - val_mean_absolute_error: 2.
      1940
3741  Epoch 1678/10000
3742   - 0s - loss: 9.2140 -
      mean_absolute_error: 2.2458 - val_loss
      : 8.5083 - val_mean_absolute_error: 2.
      1940
3743  Epoch 1679/10000
3744   - 0s - loss: 10.2868 -
      mean_absolute_error: 2.3167 - val_loss
      : 8.5083 - val_mean_absolute_error: 2.
```

3744 1940

3745 Epoch 1680/10000

3746 - 0s - loss: 10.6047 - mean_absolute_error: 2.3616 - val_loss: 8.5088 - val_mean_absolute_error: 2.1942

3747

3748 Epoch 01680: saving model to ./model/model_best.h5

3749 Epoch 1681/10000

3750 - 0s - loss: 12.6558 - mean_absolute_error: 2.5414 - val_loss: 8.5087 - val_mean_absolute_error: 2.1941

3751 Epoch 1682/10000

3752 - 0s - loss: 10.2814 - mean_absolute_error: 2.3841 - val_loss: 8.5086 - val_mean_absolute_error: 2.1939

3753 Epoch 1683/10000

3754 - 0s - loss: 10.4346 - mean_absolute_error: 2.4122 - val_loss: 8.5088 - val_mean_absolute_error: 2.1940

3755 Epoch 1684/10000

3756 - 0s - loss: 12.4291 - mean_absolute_error: 2.5492 - val_loss: 8.5092 - val_mean_absolute_error: 2.1941

3757 Epoch 1685/10000

3758 - 0s - loss: 12.6512 - mean_absolute_error: 2.4528 - val_loss: 8.5092 - val_mean_absolute_error: 2.1940

3759 Epoch 1686/10000

3760 - 0s - loss: 9.2938 - mean_absolute_error: 2.3037 - val_loss: 8.5090 - val_mean_absolute_error: 2.1938

3761 Epoch 1687/10000

3762 - 0s - loss: 13.4262 - mean_absolute_error: 2.5437 - val_loss: 8.5095 - val_mean_absolute_error: 2.1939

3763 Epoch 1688/10000

3764 - 0s - loss: 12.5430 - mean_absolute_error: 2.4663 - val_loss: 8.5097 - val_mean_absolute_error: 2.

3764 1939

3765 Epoch 01688: early stopping

3766 history.history.keys = ['val_mean_absolute_error', 'loss', 'lr', 'mean_absolute_error', 'val_loss']

3767 history.history = {'val_mean_absolute_error': [18.624451955159504, 12.071830820154261, 6.6575580879494, 5.10514372366461, 4.472230722874771, 3.9459771756772644, 3.55280489980436, 3.5632814242516035, 3.439535140991211, 3.57672761987568, 3.3021330892303844, 3.28706286865987 9, 3.2874117957221136, 3.3056653811607832, 3.1729283509431063, 3.1399348459126037, 3.11267473668228, 3.165028183548539, 3.298063537220896, 3.069348252849814, 3.008233551696024, 3.1128504953266662, 3.18331002600399 06, 2.8729097813735773, 2.920870839813609, 2.769825287807135, 2.8073404335681302, 2.79511425818926, 2.8275013676396124, 2.811552236109604, 2.709633674150632, 2.8750052275481046,

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3769 load the trained model

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3772 results test_mean_absolute_error: 2.794966875338087
3773 ################model predict ##############

3774

3775 Process finished with exit code 0

3776
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