

```
1 "C:\Users\asied\OneDrive\Documents\Coding Related Things\Garch Volatility  
Forecasting\venv\Scripts\python.exe" "C:/Users/asied/OneDrive/OneDrive/Coding Related Things/Garch Volatility Forecasting/FTSELSTM.py"  
2 Epoch 1/598  
3 30/30 [=====] - 0s 2ms/step - loss: 44456084.  
0000 - mean_absolute_error: 6632.2129 - val_loss: 33106732.0000 -  
val_mean_absolute_error: 5750.5015  
4 Epoch 2/598  
5 30/30 [=====] - 0s 2ms/step - loss: 9166444.0000  
- mean_absolute_error: 2489.9919 - val_loss: 72095.0625 -  
val_mean_absolute_error: 206.4026  
6 Epoch 3/598  
7 30/30 [=====] - 0s 2ms/step - loss: 1599090.1250  
- mean_absolute_error: 1025.7277 - val_loss: 58995.8672 -  
val_mean_absolute_error: 210.2298  
8 Epoch 4/598  
9 30/30 [=====] - 0s 2ms/step - loss: 1515014.0000  
- mean_absolute_error: 999.7424 - val_loss: 331771.9688 -  
val_mean_absolute_error: 545.4733  
10 Epoch 5/598  
11 30/30 [=====] - 0s 2ms/step - loss: 1371900.6250  
- mean_absolute_error: 949.8220 - val_loss: 339919.5625 -  
val_mean_absolute_error: 553.7157
```

```
12 Epoch 6/598
13 30/30 [=====] - 0s 2ms/step - loss: 1309031.8750
    - mean_absolute_error: 933.8295 - val_loss: 524978.2500 -
    val_mean_absolute_error: 702.2723
14 Epoch 7/598
15 30/30 [=====] - 0s 2ms/step - loss: 1443520.7500
    - mean_absolute_error: 970.8979 - val_loss: 263920.8438 -
    val_mean_absolute_error: 485.9301
16 Epoch 8/598
17 30/30 [=====] - 0s 2ms/step - loss: 1347672.3750
    - mean_absolute_error: 935.9822 - val_loss: 646869.7500 -
    val_mean_absolute_error: 793.1575
18 Epoch 9/598
19 30/30 [=====] - 0s 2ms/step - loss: 1190174.6250
    - mean_absolute_error: 885.7523 - val_loss: 1480370.8750 -
    val_mean_absolute_error: 1136.1593
20 Epoch 10/598
21 30/30 [=====] - 0s 2ms/step - loss: 1180038.5000
    - mean_absolute_error: 865.1080 - val_loss: 986766.5625 -
    val_mean_absolute_error: 852.8117
22 Epoch 11/598
23 30/30 [=====] - 0s 2ms/step - loss: 1202223.0000
    - mean_absolute_error: 868.3553 - val_loss: 1128518.8750 -
```

```
23 val_mean_absolute_error: 864.8261
24 Epoch 12/598
25 30/30 [=====] - 0s 2ms/step - loss: 1170879.2500
- mean_absolute_error: 858.6998 - val_loss: 980796.1250 -
val_mean_absolute_error: 842.3886
26 Epoch 13/598
27 30/30 [=====] - 0s 2ms/step - loss: 1137656.2500
- mean_absolute_error: 852.1796 - val_loss: 1776297.2500 -
val_mean_absolute_error: 1142.6770
28 Epoch 14/598
29 30/30 [=====] - 0s 2ms/step - loss: 1029296.3750
- mean_absolute_error: 817.3275 - val_loss: 1240632.7500 -
val_mean_absolute_error: 1162352.2500 -
val_mean_absolute_error: 948.9001
30 Epoch 15/598
31 30/30 [=====] - 0s 2ms/step - loss: 1040625.3750
- mean_absolute_error: 808.0966 - val_loss: 1162352.2500 -
val_mean_absolute_error: 901.3793
32 Epoch 16/598
33 30/30 [=====] - 0s 2ms/step - loss: 1159995.5000
- mean_absolute_error: 852.2302 - val_loss: 510930.0625 -
val_mean_absolute_error: 487.8604
34 Epoch 17/598
35 30/30 [=====] - 0s 2ms/step - loss: 1112423.1250
```

```
35   - mean_absolute_error: 846.7526 - val_loss: 10000397.3750 -
    val_mean_absolute_error: 880.6611
36 Epoch 18/598
37 30/30 [=====] - 0s 2ms/step - loss: 1041648.2500
    - mean_absolute_error: 811.1544 - val_loss: 1096596.8750 -
    val_mean_absolute_error: 892.9970
38 Epoch 19/598
39 30/30 [=====] - 0s 2ms/step - loss: 1099453.0000
    - mean_absolute_error: 840.3362 - val_loss: 790886.1250 -
    val_mean_absolute_error: 674.5207
40 Epoch 20/598
41 30/30 [=====] - 0s 2ms/step - loss: 1007960.8125
    - mean_absolute_error: 803.1935 - val_loss: 841938.4375 -
    val_mean_absolute_error: 722.9883
42 Epoch 21/598
43 30/30 [=====] - 0s 2ms/step - loss: 1033376.6875
    - mean_absolute_error: 818.6904 - val_loss: 927845.1250 -
    val_mean_absolute_error: 810.7532
44 Epoch 22/598
45 30/30 [=====] - 0s 2ms/step - loss: 917069.2500
    - mean_absolute_error: 762.2789 - val_loss: 1236281.2500 -
    val_mean_absolute_error: 974.4121
46 Epoch 23/598
```

```
47 30/30 [=====] - 0s 2ms/step - loss: 973437.9375
  - mean_absolute_error: 794.0538 - val_loss: 907624.0000 -
    val_mean_absolute_error: 775.4478

48 Epoch 24/598
49 30/30 [=====] - 0s 2ms/step - loss: 1030868.6875
  - mean_absolute_error: 809.7771 - val_loss: 697109.0625 -
    val_mean_absolute_error: 699.1124

50 Epoch 25/598
51 30/30 [=====] - 0s 2ms/step - loss: 1000205.8125
  - mean_absolute_error: 786.8532 - val_loss: 1245120.2500 -
    val_mean_absolute_error: 992.1293

52 Epoch 26/598
53 30/30 [=====] - 0s 2ms/step - loss: 901353.7500
  - mean_absolute_error: 756.1925 - val_loss: 817154.0000 -
    val_mean_absolute_error: 673.1136

54 Epoch 27/598
55 30/30 [=====] - 0s 2ms/step - loss: 952541.9375
  - mean_absolute_error: 776.2047 - val_loss: 761015.1250 -
    val_mean_absolute_error: 660.6230

56 Epoch 28/598
57 30/30 [=====] - 0s 2ms/step - loss: 852244.1250
  - mean_absolute_error: 739.1989 - val_loss: 881165.5625 -
    val_mean_absolute_error: 748.4267
```

```
58 Epoch 29/598
59 30/30 [=====] - 0s 2ms/step - loss: 842461.6875
    - mean_absolute_error: 731.6757 - val_loss: 903695.5625
    val_mean_absolute_error: 847.2719
60 Epoch 30/598
61 30/30 [=====] - 0s 2ms/step - loss: 903695.5625
    - mean_absolute_error: 750.6295 - val_loss: 878050.1250 -
    val_mean_absolute_error: 611.7616
62 Epoch 31/598
63 30/30 [=====] - 0s 2ms/step - loss: 821280.1875
    - mean_absolute_error: 726.2426 - val_loss: 695581.3125 -
    val_mean_absolute_error: 634.1345
64 Epoch 32/598
65 30/30 [=====] - 0s 2ms/step - loss: 797677.1875
    - mean_absolute_error: 716.5620 - val_loss: 607930.7500 -
    val_mean_absolute_error: 634.4861
66 Epoch 33/598
67 30/30 [=====] - 0s 2ms/step - loss: 791393.4375
    - mean_absolute_error: 713.8799 - val_loss: 607930.7500 -
    val_mean_absolute_error: 625.6546
68 Epoch 34/598
69 30/30 [=====] - 0s 2ms/step - loss: 833341.8750
    - mean_absolute_error: 725.0975 - val_loss: 1133306.5000 -
```

```
69 val_mean_absolute_error: 926.4299
70 Epoch 35/598
71 30/30 [=====] - 0s 2ms/step - loss: 658369.2500
- mean_absolute_error: 645.2187 - val_loss: 971337.5000 -
val_mean_absolute_error: 863.7592
72 Epoch 36/598
73 30/30 [=====] - 0s 2ms/step - loss: 708246.3750
- mean_absolute_error: 673.3720 - val_loss: 913840.1875 -
val_mean_absolute_error: 804.896
74 Epoch 37/598
75 30/30 [=====] - 0s 2ms/step - loss: 888485.0625 -
- mean_absolute_error: 630.6547 - val_loss: 889277.5000 -
val_mean_absolute_error: 805.3588
76 Epoch 38/598
77 30/30 [=====] - 0s 2ms/step - loss: 590175.7500
- mean_absolute_error: 563.1775 - val_loss: 844616.6250 -
val_mean_absolute_error: 816.0546
78 Epoch 39/598
79 30/30 [=====] - 0s 2ms/step - loss: 507812.0625
- mean_absolute_error: 563.0321 - val_loss: 6120.0321 -
val_mean_absolute_error: 842.5663
80 Epoch 40/598
81 30/30 [=====] - 0s 2ms/step - loss: 545050.6250
```

```
81 - mean_absolute_error: 592.8830 - val_loss: 891432.4375 -
val_mean_absolute_error: 832.5871
82 Epoch 41/598
83 30/30 [=====] - 0s 2ms/step - Loss: 472225.3750
- mean_absolute_error: 537.0128 - val_loss: 1070908.5000 -
val_mean_absolute_error: 912.6492
84 Epoch 42/598
85 30/30 [=====] - 0s 2ms/step - Loss: 428199.6562
- mean_absolute_error: 512.3694 - val_loss: 723685.8750 -
val_mean_absolute_error: 704.9193
86 Epoch 43/598
87 30/30 [=====] - 0s 2ms/step - Loss: 365145.0938
- mean_absolute_error: 481.4357 - val_loss: 938121.6875 -
val_mean_absolute_error: 876.3936
88 Epoch 44/598
89 30/30 [=====] - 0s 2ms/step - Loss: 305458.2812
- mean_absolute_error: 436.3287 - val_loss: 814935.7500 -
val_mean_absolute_error: 726.4561
90 Epoch 45/598
91 30/30 [=====] - 0s 2ms/step - Loss: 276390.6875
- mean_absolute_error: 420.4254 - val_loss: 525684.0625 -
val_mean_absolute_error: 608.0049
92 Epoch 46/598
```

```
93 30/30 [=====] - 0s 2ms/step - loss: 226219.7188
- mean_absolute_error: 381.7940 - val_loss: 827626.7500 -
val_mean_absolute_error: 749.8909

94 Epoch 47/598
95 30/30 [=====] - 0s 2ms/step - loss: 160506.0469
- mean_absolute_error: 315.1512 - val_loss: 834101.1875 -
val_mean_absolute_error: 757.4119

96 Epoch 48/598
97 30/30 [=====] - 0s 2ms/step - loss: 143527.6094
- mean_absolute_error: 296.7139 - val_loss: 650926.0625 -
val_mean_absolute_error: 678.1420

98 Epoch 49/598
99 30/30 [=====] - 0s 2ms/step - loss: 103229.4219
- mean_absolute_error: 250.9434 - val_loss: 654640.6250 -
val_mean_absolute_error: 660.2650

100 Epoch 50/598
101 30/30 [=====] - 0s 2ms/step - loss: 87332.2266
- mean_absolute_error: 231.6197 - val_loss: 673065.4375 -
val_mean_absolute_error: 681.0995

102 Epoch 51/598
103 30/30 [=====] - 0s 2ms/step - loss: 73122.1484
- mean_absolute_error: 212.1460 - val_loss: 630657.7500 -
val_mean_absolute_error: 656.5830
```

```
104 Epoch 52/598
105 30/30 [=====] - 0s 2ms/step - loss: 57143.6445
    - mean_absolute_error: 187.7015 - val_loss: 599006.0000 -
    val_mean_absolute_error: 616.9426
106 Epoch 53/598
107 30/30 [=====] - 0s 2ms/step - loss: 47480.6289
    - mean_absolute_error: 168.5036 - val_loss: 619996.8750 -
    val_mean_absolute_error: 639.8077
108 Epoch 54/598
109 30/30 [=====] - 0s 2ms/step - loss: 39449.6406
    - mean_absolute_error: 153.5787 - val_loss: 714652.5000 -
    val_mean_absolute_error: 706.2338
110 Epoch 55/598
111 30/30 [=====] - 0s 2ms/step - loss: 33275.4883
    - mean_absolute_error: 138.0452 - val_loss: 657837.1250 -
    val_mean_absolute_error: 670.0759
112 Epoch 56/598
113 30/30 [=====] - 0s 2ms/step - loss: 31729.8223
    - mean_absolute_error: 137.0352 - val_loss: 687455.6875 -
    val_mean_absolute_error: 695.4987
114 Epoch 57/598
115 30/30 [=====] - 0s 2ms/step - loss: 31234.8203
    - mean_absolute_error: 131.7123 - val_loss: 631335.4375 -
```

```
115 val_mean_absolute_error: 659.1442
116 Epoch 58/598
117 30/30 [=====] - 0s 2ms/step - loss: 28036.5586
    - mean_absolute_error: 125.9519 - val_loss: 632371.8125 -
        val_mean_absolute_error: 652.4368
118 Epoch 59/598
119 30/30 [=====] - 0s 2ms/step - loss: 28747.7031
    - mean_absolute_error: 128.7024 - val_loss: 736549.9375 -
        val_mean_absolute_error: 718.4083
120 Epoch 60/598
121 30/30 [=====] - 0s 2ms/step - loss: 30060.5566
    - mean_absolute_error: 128.7888 - val_loss: 658189.6250 -
        val_mean_absolute_error: 678.0889
122 Epoch 61/598
123 30/30 [=====] - 0s 2ms/step - loss: 622535.3125 -
    - mean_absolute_error: 118.2884 - val_loss: 62451.7461
        val_mean_absolute_error: 639.2374
124 Epoch 62/598
125 30/30 [=====] - 0s 2ms/step - loss: 28590.9648
    - mean_absolute_error: 122.5946 - val_loss: 646288.2500 -
        val_mean_absolute_error: 657.4379
126 Epoch 63/598
127 30/30 [=====] - 0s 2ms/step - loss: 25772.7227
```

```
127  - mean_absolute_error: 117.4264 - val_loss: 664363.6250 -
    val_mean_absolute_error: 672.7421
128 Epoch 64/598
129 30/30 [=====] - 0s 2ms/step - Loss: 23925.3418
    - mean_absolute_error: 112.4836 - val_loss: 723734.2500 -
    val_mean_absolute_error: 711.6639
130 Epoch 65/598
131 30/30 [=====] - 0s 2ms/step - Loss: 23356.7949
    - mean_absolute_error: 111.4411 - val_loss: 687229.0625 -
    val_mean_absolute_error: 671.3123
132 Epoch 66/598
133 30/30 [=====] - 0s 2ms/step - Loss: 24423.7422
    - mean_absolute_error: 113.2635 - val_loss: 633584.1250 -
    val_mean_absolute_error: 647.3622
134 Epoch 67/598
135 30/30 [=====] - 0s 2ms/step - Loss: 24106.7578
    - mean_absolute_error: 114.9819 - val_loss: 688806.4375 -
    val_mean_absolute_error: 678.3724
136 Epoch 68/598
137 30/30 [=====] - 0s 2ms/step - Loss: 28001.5781
    - mean_absolute_error: 125.1711 - val_loss: 653742.2500 -
    val_mean_absolute_error: 649.8479
138 Epoch 69/598
```

139	30 / 30	[=====] - 0s 2ms/step - loss: 25997.0996 - mean_absolute_error: 115.2543 - val_loss: 720465.7500 - val_mean_absolute_error: 701.5504
140	Epoch 70 / 598	
141	30 / 30	[=====] - 0s 2ms/step - loss: 24221.8516 - mean_absolute_error: 113.0784 - val_loss: 703436.5625 - val_mean_absolute_error: 697.2697
142	Epoch 71 / 598	
143	30 / 30	[=====] - 0s 2ms/step - loss: 25971.4199 - mean_absolute_error: 118.7484 - val_loss: 716390.5000 - val_mean_absolute_error: 686.5339
144	Epoch 72 / 598	
145	30 / 30	[=====] - 0s 2ms/step - loss: 25112.5762 - mean_absolute_error: 114.2361 - val_loss: 702008.0625 - val_mean_absolute_error: 676.4672
146	Epoch 73 / 598	
147	30 / 30	[=====] - 0s 2ms/step - loss: 23266.5391 - mean_absolute_error: 109.6409 - val_loss: 730537.6250 - val_mean_absolute_error: 708.0816
148	Epoch 74 / 598	
149	30 / 30	[=====] - 0s 2ms/step - loss: 26166.2793 - mean_absolute_error: 117.4259 - val_loss: 693172.9375 - val_mean_absolute_error: 688.8785

```
150 Epoch 75/598
151 30/30 [=====] - 0s 2ms/step - loss: 24394.7207
    - mean_absolute_error: 115.0369 - val_loss: 745871.2500 -
    val_mean_absolute_error: 716.9614
152 Epoch 76/598
153 30/30 [=====] - 0s 2ms/step - val_loss: 25511.1328
    - mean_absolute_error: 116.4302 - val_mean_absolute_error: 659.1855
154 Epoch 77/598
155 30/30 [=====] - 0s 2ms/step - val_loss: 612189.7500 -
    val_mean_absolute_error: 109.8910 - val_mean_absolute_error: 633.3459
156 Epoch 78/598
157 30/30 [=====] - 0s 2ms/step - val_loss: 22623.1914
    - mean_absolute_error: 111.2725 - val_mean_absolute_error: 651.3073
158 Epoch 79/598
159 30/30 [=====] - 0s 2ms/step - val_loss: 23961.1309
    - mean_absolute_error: 111.2228 - val_mean_absolute_error: 743235.5625 -
    val_mean_absolute_error: 696.2266
160 Epoch 80/598
161 30/30 [=====] - 0s 2ms/step - val_loss: 23828.5156
    - mean_absolute_error: 112.5582 - val_mean_absolute_error: 591164.8125 -
```

```
161 val_mean_absolute_error: 621.6237
162 Epoch 81/598
163 30/30 [=====] - 0s 2ms/step - Loss: 22621.1270
    - mean_absolute_error: 110.4648 - val_loss: 638974.6250 -
    val_mean_absolute_error: 675.0173
164 Epoch 82/598
165 30/30 [=====] - 0s 2ms/step - Loss: 24386.4336
    - mean_absolute_error: 112.7751 - val_loss: 681706.1875 -
    val_mean_absolute_error: 687.6854
166 Epoch 83/598
167 30/30 [=====] - 0s 2ms/step - Loss: 24242.3320
    - mean_absolute_error: 110.8734 - val_loss: 687621.2500 -
    val_mean_absolute_error: 706.9830
168 Epoch 84/598
169 30/30 [=====] - 0s 2ms/step - Loss: 22221.2598
    - mean_absolute_error: 109.3998 - val_loss: 669657.0000 -
    val_mean_absolute_error: 669.7331
170 Epoch 85/598
171 30/30 [=====] - 0s 2ms/step - Loss: 23748.3125
    - mean_absolute_error: 112.9188 - val_loss: 669655.0000 -
    val_mean_absolute_error: 662.9865
172 Epoch 86/598
173 30/30 [=====] - 0s 2ms/step - Loss: 25777.8633
```

```
173 - mean_absolute_error: 116.4735 - val_loss: 606737.1875 -
    val_mean_absolute_error: 625.0846
174 Epoch 87/598
175 30/30 [=====] - 0s 2ms/step - Loss: 26258.4316
    - mean_absolute_error: 121.9243 - val_loss: 767556.5000 -
    val_mean_absolute_error: 699.5869
176 Epoch 88/598
177 30/30 [=====] - 0s 2ms/step - Loss: 21982.4004
    - mean_absolute_error: 103.8102 - val_loss: 815098.0000 -
    val_mean_absolute_error: 759.4537
178 Epoch 89/598
179 30/30 [=====] - 0s 2ms/step - Loss: 26545.1680
    - mean_absolute_error: 118.6076 - val_loss: 729237.3750 -
    val_mean_absolute_error: 715.7379
180 Epoch 90/598
181 30/30 [=====] - 0s 2ms/step - Loss: 24373.6328
    - mean_absolute_error: 115.2579 - val_loss: 750483.7500 -
    val_mean_absolute_error: 736.7962
182 Epoch 91/598
183 30/30 [=====] - 0s 2ms/step - Loss: 23656.3867
    - mean_absolute_error: 115.1157 - val_loss: 742007.5625 -
    val_mean_absolute_error: 698.1525
184 Epoch 92/598
```

185	30 / 30	[=====] - 0s 2ms/step - loss: 20037.2734
	- mean_absolute_error: 104.9022 - val_loss: 682200.9375 -	
186	Epoch 93 / 598	val_mean_absolute_error: 661.2948
187	30 / 30	[=====] - 0s 2ms/step - loss: 21994.6152
	- mean_absolute_error: 108.1252 - val_loss: 712175.0000 -	
188	Epoch 94 / 598	val_mean_absolute_error: 684.6257
189	30 / 30	[=====] - 0s 2ms/step - loss: 20613.3613
	- mean_absolute_error: 104.9611 - val_loss: 705305.5000 -	
190	Epoch 95 / 598	val_mean_absolute_error: 683.8218
191	30 / 30	[=====] - 0s 2ms/step - loss: 21757.4297
	- mean_absolute_error: 107.1152 - val_loss: 683636.6875 -	
192	Epoch 96 / 598	val_mean_absolute_error: 676.2206
193	30 / 30	[=====] - 0s 2ms/step - loss: 22715.1797
	- mean_absolute_error: 109.5935 - val_loss: 675412.2500 -	
194	Epoch 97 / 598	val_mean_absolute_error: 680.2762
195	30 / 30	[=====] - 0s 2ms/step - loss: 22605.5273
	- mean_absolute_error: 106.2227 - val_loss: 669723.6875 -	
	val_mean_absolute_error: 649.6867	

```
196 Epoch 98/598
197 30/30 [=====] - 0s 2ms/step - loss: 20448.7305
    - mean_absolute_error: 104.6213 - val_loss: 728796.4375 -
    val_mean_absolute_error: 689.4030
198 Epoch 99/598
199 30/30 [=====] - 0s 2ms/step - loss: 18842.9688
    - mean_absolute_error: 99.2472 - val_loss: 773064.8750 -
    val_mean_absolute_error: 712.5303
200 Epoch 100/598
201 30/30 [=====] - 0s 2ms/step - loss: 21175.5410
    - mean_absolute_error: 105.7794 - val_loss: 831827.8750 -
    val_mean_absolute_error: 747.0964
202 Epoch 101/598
203 30/30 [=====] - 0s 2ms/step - loss: 22705.5449
    - mean_absolute_error: 110.3449 - val_loss: 690370.1875 -
    val_mean_absolute_error: 688.1106
204 Epoch 102/598
205 30/30 [=====] - 0s 2ms/step - loss: 20691.9062
    - mean_absolute_error: 107.4056 - val_loss: 787648.0000 -
    val_mean_absolute_error: 724.5272
206 Epoch 103/598
207 30/30 [=====] - 0s 2ms/step - loss: 21172.0508
    - mean_absolute_error: 102.2311 - val_loss: 776438.3750 -
```

```
207 val_mean_absolute_error: 736.4935
208 Epoch 104/598
209 30/30 [=====] - 0s 2ms/step - Loss: 24628.6113
    - mean_absolute_error: 116.9423 - val_loss: 768125.8125 -
    val_mean_absolute_error: 734.9022
210 Epoch 105/598
211 30/30 [=====] - 0s 2ms/step - Loss: 21826.1621
    - mean_absolute_error: 111.2690 - val_loss: 651618.6250 -
    val_mean_absolute_error: 659.9116
212 Epoch 106/598
213 30/30 [=====] - 0s 2ms/step - Loss: 19217.2500
    - mean_absolute_error: 101.0807 - val_loss: 584320.6875 -
    val_mean_absolute_error: 623.7023
214 Epoch 107/598
215 30/30 [=====] - 0s 2ms/step - Loss: 19120.2031
    - mean_absolute_error: 100.8902 - val_loss: 622661.8125 -
    val_mean_absolute_error: 623.0306
216 Epoch 108/598
217 30/30 [=====] - 0s 2ms/step - Loss: 20060.1973
    - mean_absolute_error: 105.1245 - val_loss: 679715.3125 -
    val_mean_absolute_error: 654.8012
218 Epoch 109/598
219 30/30 [=====] - 0s 2ms/step - Loss: 19777.5020
```

```
219  - mean_absolute_error: 102.0947 - val_loss: 766556.5000 -
    val_mean_absolute_error: 722.6041
220 Epoch 110/598
221 30/30 [=====] - 0s 2ms/step - Loss: 19877.4395
    - mean_absolute_error: 101.3532 - val_loss: 619032.8125 -
    val_mean_absolute_error: 634.1947
222 Epoch 111/598
223 30/30 [=====] - 0s 2ms/step - Loss: 18695.2012
    - mean_absolute_error: 98.7703 - val_loss: 627803.6250 -
    val_mean_absolute_error: 648.1743
224 Epoch 112/598
225 30/30 [=====] - 0s 2ms/step - Loss: 21549.9238
    - mean_absolute_error: 106.5373 - val_loss: 644373.0000 -
    val_mean_absolute_error: 630.2303
226 Epoch 113/598
227 30/30 [=====] - 0s 2ms/step - Loss: 20055.8398
    - mean_absolute_error: 99.9374 - val_loss: 801261.6875 -
    val_mean_absolute_error: 740.0264
228 Epoch 114/598
229 30/30 [=====] - 0s 2ms/step - Loss: 17758.1660
    - mean_absolute_error: 94.9077 - val_loss: 596305.3750 -
    val_mean_absolute_error: 630.3401
230 Epoch 115/598
```

231	30/30	[=====]	- 0s 2ms/step - loss: 18193.2441
		- mean_absolute_error: 96.7095 - val_loss: 634320.7500 -	
		val_mean_absolute_error: 662.7651	
232	Epoch 116/598	[=====]	- 0s 2ms/step - loss: 16925.0312
		- mean_absolute_error: 95.6427 - val_loss: 773137.5000 -	
		val_mean_absolute_error: 717.3058	
234	Epoch 117/598	[=====]	- 0s 2ms/step - loss: 17161.6016
		- mean_absolute_error: 95.7484 - val_loss: 678763.1250 -	
		val_mean_absolute_error: 669.4077	
236	Epoch 118/598	[=====]	- 0s 2ms/step - loss: 16976.5352
		- mean_absolute_error: 92.7700 - val_loss: 693432.4375 -	
		val_mean_absolute_error: 674.5380	
238	Epoch 119/598	[=====]	- 0s 2ms/step - loss: 17082.5098
		- mean_absolute_error: 94.7022 - val_loss: 621235.3750 -	
		val_mean_absolute_error: 642.5833	
240	Epoch 120/598	[=====]	- 0s 2ms/step - loss: 15948.1934
		- mean_absolute_error: 93.6415 - val_loss: 678461.0000 -	
		val_mean_absolute_error: 663.7894	

```
242 Epoch 121/598
243 30/30 [=====] - 0s 2ms/step - loss: 17358.7949
      - mean_absolute_error: 96.0641 - val_loss: 719053.5000 -
      val_mean_absolute_error: 691.6484
244 Epoch 122/598
245 30/30 [=====] - 0s 2ms/step - loss: 15672.8115
      - mean_absolute_error: 92.1641 - val_loss: 707554.4375 -
      val_mean_absolute_error: 667.5677
246 Epoch 123/598
247 30/30 [=====] - 0s 2ms/step - loss: 15761.8857
      - mean_absolute_error: 91.1604 - val_loss: 659451.6875 -
      val_mean_absolute_error: 644.0405
248 Epoch 124/598
249 30/30 [=====] - 0s 2ms/step - loss: 15885.6025
      - mean_absolute_error: 93.1158 - val_loss: 726212.2500 -
      val_mean_absolute_error: 694.2687
250 Epoch 125/598
251 30/30 [=====] - 0s 2ms/step - loss: 17983.8594
      - mean_absolute_error: 94.9772 - val_loss: 735921.2500 -
      val_mean_absolute_error: 689.8460
252 Epoch 126/598
253 30/30 [=====] - 0s 2ms/step - loss: 17821.8652
      - mean_absolute_error: 97.4655 - val_loss: 593844.0625 -
```

```
253 val_mean_absolute_error: 604.9764
254 Epoch 127/598
255 30/30 [=====] - 0s 2ms/step - loss: 20195.8301
    - mean_absolute_error: 104.5102 - val_loss: 586106.0000 -
        val_mean_absolute_error: 618.6358
256 Epoch 128/598
257 30/30 [=====] - 0s 2ms/step - loss: 18778.4043
    - mean_absolute_error: 98.7805 - val_loss: 716995.8750 -
        val_mean_absolute_error: 690.1677
258 Epoch 129/598
259 30/30 [=====] - 0s 2ms/step - loss: 15952.3213
    - mean_absolute_error: 92.7274 - val_loss: 737440.0000 -
        val_mean_absolute_error: 680.0512
260 Epoch 130/598
261 30/30 [=====] - 0s 2ms/step - loss: 17216.1484
    - mean_absolute_error: 95.0991 - val_loss: 625017.1250 -
        val_mean_absolute_error: 652.4854
262 Epoch 131/598
263 30/30 [=====] - 0s 2ms/step - loss: 15381.0439
    - mean_absolute_error: 91.1002 - val_loss: 818691.1875 -
        val_mean_absolute_error: 733.2074
264 Epoch 132/598
265 30/30 [=====] - 0s 2ms/step - loss: 15552.5146
```

```
265  - mean_absolute_error: 90.6573 - val_loss: 747593.1875 -
    val_mean_absolute_error: 695.7712
266 Epoch 133/598
267 30/30 [=====] - 0s 2ms/step - Loss: 16299.0566
    - mean_absolute_error: 89.3130 - val_loss: 687638.5000 -
    val_mean_absolute_error: 687.1906
268 Epoch 134/598
269 30/30 [=====] - 0s 2ms/step - Loss: 16334.3555
    - mean_absolute_error: 93.0857 - val_loss: 730277.9375 -
    val_mean_absolute_error: 680.0981
270 Epoch 135/598
271 30/30 [=====] - 0s 2ms/step - Loss: 14889.7139
    - mean_absolute_error: 88.5366 - val_loss: 917373.9375 -
    val_mean_absolute_error: 774.4583
272 Epoch 136/598
273 30/30 [=====] - 0s 2ms/step - Loss: 18825.2051
    - mean_absolute_error: 102.6615 - val_loss: 759084.0625 -
    val_mean_absolute_error: 688.2559
274 Epoch 137/598
275 30/30 [=====] - 0s 2ms/step - Loss: 15356.3916
    - mean_absolute_error: 91.0838 - val_loss: 733449.4375 -
    val_mean_absolute_error: 725.2259
276 Epoch 138/598
```

```
277 30/30 [=====] - 0s 2ms/step - loss: 18132.7637
  - mean_absolute_error: 99.5637 - val_loss: 669713.8750 -
  val_mean_absolute_error: 654.7173
278 Epoch 139/598
279 30/30 [=====] - 0s 2ms/step - loss: 138883.9873
  - mean_absolute_error: 84.0093 - val_loss: 722978.8750 -
  val_mean_absolute_error: 680.3852
280 Epoch 140/598
281 30/30 [=====] - 0s 2ms/step - loss: 15732.6797
  - mean_absolute_error: 90.8575 - val_loss: 727531.7500 -
  val_mean_absolute_error: 694.4260
282 Epoch 141/598
283 30/30 [=====] - 0s 2ms/step - loss: 13364.1875
  - mean_absolute_error: 85.8703 - val_loss: 678806.5625 -
  val_mean_absolute_error: 664.3940
284 Epoch 142/598
285 30/30 [=====] - 0s 2ms/step - loss: 15357.1699
  - mean_absolute_error: 89.9891 - val_loss: 580107.1875 -
  val_mean_absolute_error: 619.1597
286 Epoch 143/598
287 30/30 [=====] - 0s 2ms/step - loss: 15291.0762
  - mean_absolute_error: 90.4146 - val_loss: 763411.6250 -
  val_mean_absolute_error: 723.7119
```

```
288 Epoch 144/598
289 30/30 [=====] - 0s 2ms/step - loss: 14757.7051
    - mean_absolute_error: 90.00079 - val_loss: 758951.5625 -
    val_mean_absolute_error: 706.9085
290 Epoch 145/598
291 30/30 [=====] - 0s 2ms/step - loss: 15116.3613
    - mean_absolute_error: 89.5226 - val_loss: 619856.0625 -
    val_mean_absolute_error: 613.7805
292 Epoch 146/598
293 30/30 [=====] - 0s 2ms/step - loss: 146665.0615
    - mean_absolute_error: 88.6819 - val_loss: 724682.6250 -
    val_mean_absolute_error: 683.6771
294 Epoch 147/598
295 30/30 [=====] - 0s 2ms/step - loss: 14012.5293
    - mean_absolute_error: 85.5235 - val_loss: 692297.5625 -
    val_mean_absolute_error: 669.3399
296 Epoch 148/598
297 30/30 [=====] - 0s 2ms/step - loss: 13052.9658
    - mean_absolute_error: 84.0696 - val_loss: 746653.0000 -
    val_mean_absolute_error: 710.0547
298 Epoch 149/598
299 30/30 [=====] - 0s 2ms/step - loss: 15040.3887
    - mean_absolute_error: 88.6011 - val_loss: 645960.2500 -
```

```
299 val_mean_absolute_error: 643.1882
300 Epoch 150/598
301 30/30 [=====] - 0s 2ms/step - Loss: 12798.3252
    - mean_absolute_error: 83.0904 - val_loss: 748831.8750 -
        val_mean_absolute_error: 696.6134
302 Epoch 151/598
303 30/30 [=====] - 0s 2ms/step - Loss: 14697.7285
    - mean_absolute_error: 85.7319 - val_loss: 725823.8750 -
        val_mean_absolute_error: 681.1370
304 Epoch 152/598
305 30/30 [=====] - 0s 2ms/step - Loss: 13939.1387
    - mean_absolute_error: 86.4181 - val_loss: 722153.0000 -
        val_mean_absolute_error: 673.8192
306 Epoch 153/598
307 30/30 [=====] - 0s 2ms/step - Loss: 14539.2314
    - mean_absolute_error: 88.2015 - val_loss: 689695.3125 -
        val_mean_absolute_error: 670.6913
308 Epoch 154/598
309 30/30 [=====] - 0s 2ms/step - Loss: 11940.2285
    - mean_absolute_error: 80.7061 - val_loss: 712596.3125 -
        val_mean_absolute_error: 698.7945
310 Epoch 155/598
311 30/30 [=====] - 0s 2ms/step - Loss: 13380.7480
```

```
311  - mean_absolute_error: 83.8963 - val_loss: 691122.1250 -
    val_mean_absolute_error: 698.0942
312 Epoch 156/598
313 30/30 [=====] - 0s 2ms/step - Loss: 15869.5518
    - mean_absolute_error: 93.6667 - val_loss: 697477.5625 -
    val_mean_absolute_error: 692.7368
314 Epoch 157/598
315 30/30 [=====] - 0s 2ms/step - Loss: 13804.9844
    - mean_absolute_error: 85.8766 - val_loss: 726454.4375 -
    val_mean_absolute_error: 700.7883
316 Epoch 158/598
317 30/30 [=====] - 0s 2ms/step - Loss: 14103.3936
    - mean_absolute_error: 84.9615 - val_loss: 737377.1250 -
    val_mean_absolute_error: 706.0170
318 Epoch 159/598
319 30/30 [=====] - 0s 2ms/step - Loss: 12287.3320
    - mean_absolute_error: 82.5267 - val_loss: 700226.9375 -
    val_mean_absolute_error: 680.3983
320 Epoch 160/598
321 30/30 [=====] - 0s 2ms/step - Loss: 14218.2100
    - mean_absolute_error: 85.6777 - val_loss: 661622.5000 -
    val_mean_absolute_error: 674.2100
322 Epoch 161/598
```

```
323 30/30 [=====] - 0s 2ms/step - loss: 13620.5957
  - mean_absolute_error: 86.5872 - val_loss: 765206.6875 -
    val_mean_absolute_error: 696.2690

324 Epoch 162/598
325 30/30 [=====] - 0s 2ms/step - loss: 13772.7998
  - mean_absolute_error: 86.3863 - val_loss: 708637.1875 -
    val_mean_absolute_error: 656.3450

326 Epoch 163/598
327 30/30 [=====] - 0s 2ms/step - loss: 13561.2549
  - mean_absolute_error: 84.4895 - val_loss: 785999.9375 -
    val_mean_absolute_error: 725.9554

328 Epoch 164/598
329 30/30 [=====] - 0s 2ms/step - loss: 13518.4336
  - mean_absolute_error: 83.8000 - val_loss: 729472.7500 -
    val_mean_absolute_error: 682.5956

330 Epoch 165/598
331 30/30 [=====] - 0s 2ms/step - loss: 12434.7363
  - mean_absolute_error: 81.6194 - val_loss: 817656.2500 -
    val_mean_absolute_error: 722.2058

332 Epoch 166/598
333 30/30 [=====] - 0s 2ms/step - loss: 13203.6426
  - mean_absolute_error: 81.8898 - val_loss: 766856.8125 -
    val_mean_absolute_error: 705.2136
```

```
334 Epoch 167/598
335 30/30 [=====] - 0s 2ms/step - loss: 13899.3252
      - mean_absolute_error: 85.1707 - val_loss: 804539.4375 -
      val_mean_absolute_error: 715.0443

336 Epoch 168/598
337 30/30 [=====] - 0s 2ms/step - loss: 16046.3682
      - mean_absolute_error: 90.2485 - val_loss: 694314.4375 -
      val_mean_absolute_error: 678.6616

338 Epoch 169/598
339 30/30 [=====] - 0s 2ms/step - loss: 14858.1025
      - mean_absolute_error: 90.4323 - val_loss: 817662.6250 -
      val_mean_absolute_error: 734.7460

340 Epoch 170/598
341 30/30 [=====] - 0s 2ms/step - loss: 14589.4717
      - mean_absolute_error: 87.8421 - val_loss: 619057.7500 -
      val_mean_absolute_error: 635.0742

342 Epoch 171/598
343 30/30 [=====] - 0s 2ms/step - loss: 13914.4727
      - mean_absolute_error: 85.4542 - val_loss: 816942.6875 -
      val_mean_absolute_error: 733.0577

344 Epoch 172/598
345 30/30 [=====] - 0s 2ms/step - loss: 13492.7041
      - mean_absolute_error: 85.1097 - val_loss: 683746.7500 -
```

```
345 val_mean_absolute_error: 672.8303
346 Epoch 173/598
347 30/30 [=====] - 0s 2ms/step - Loss: 13459.0645
    - mean_absolute_error: 85.3366 - val_loss: 745753.0000 -
        val_mean_absolute_error: 692.5707
348 Epoch 174/598
349 30/30 [=====] - 0s 2ms/step - Loss: 15145.1719
    - mean_absolute_error: 88.9169 - val_loss: 749814.6250 -
        val_mean_absolute_error: 673.7292
350 Epoch 175/598
351 30/30 [=====] - 0s 2ms/step - Loss: 14471.9453
    - mean_absolute_error: 87.8685 - val_loss: 670337.3750 -
        val_mean_absolute_error: 660.4785
352 Epoch 176/598
353 30/30 [=====] - 0s 2ms/step - Loss: 13220.4707
    - mean_absolute_error: 83.0732 - val_loss: 739474.9375 -
        val_mean_absolute_error: 698.5922
354 Epoch 177/598
355 30/30 [=====] - 0s 2ms/step - Loss: 12799.3262
    - mean_absolute_error: 82.3700 - val_loss: 680382.4375 -
        val_mean_absolute_error: 654.1493
356 Epoch 178/598
357 30/30 [=====] - 0s 2ms/step - Loss: 12641.5859
```

```
357 - mean_absolute_error: 83.7576 - val_loss: 718885.1250 -
    val_mean_absolute_error: 674.3759
358 Epoch 179/598
359 30/30 [=====] - 0s 2ms/step - Loss: 13910.1748
    - mean_absolute_error: 85.5545 - val_loss: 709236.0625 -
    val_mean_absolute_error: 683.0012
360 Epoch 180/598
361 30/30 [=====] - 0s 2ms/step - Loss: 14464.3125
    - mean_absolute_error: 88.4069 - val_loss: 805914.6250 -
    val_mean_absolute_error: 713.4483
362 Epoch 181/598
363 30/30 [=====] - 0s 2ms/step - Loss: 11673.3428
    - mean_absolute_error: 78.1791 - val_loss: 697865.2500 -
    val_mean_absolute_error: 688.9699
364 Epoch 182/598
365 30/30 [=====] - 0s 2ms/step - Loss: 12936.4873
    - mean_absolute_error: 84.2672 - val_loss: 729595.3750 -
    val_mean_absolute_error: 683.5786
366 Epoch 183/598
367 30/30 [=====] - 0s 2ms/step - Loss: 13051.5410
    - mean_absolute_error: 85.6210 - val_loss: 747752.3125 -
    val_mean_absolute_error: 695.9148
368 Epoch 184/598
```

```
369 30/30 [=====] - 0s 2ms/step - loss: 12702.7031
  - mean_absolute_error: 79.7396 - val_loss: 697594.1250 -
  val_mean_absolute_error: 686.8506

370 Epoch 185/598
371 30/30 [=====] - 0s 2ms/step - loss: 12067.7021
  - mean_absolute_error: 80.8363 - val_loss: 745753.0000 -
  val_mean_absolute_error: 699.6614

372 Epoch 186/598
373 30/30 [=====] - 0s 2ms/step - loss: 12825.4248
  - mean_absolute_error: 83.3407 - val_loss: 794913.3750 -
  val_mean_absolute_error: 718.4953

374 Epoch 187/598
375 30/30 [=====] - 0s 2ms/step - loss: 12584.9443
  - mean_absolute_error: 83.7409 - val_loss: 714067.0625 -
  val_mean_absolute_error: 664.7341

376 Epoch 188/598
377 30/30 [=====] - 0s 2ms/step - loss: 13583.3721
  - mean_absolute_error: 84.8795 - val_loss: 628980.2500 -
  val_mean_absolute_error: 629.1314

378 Epoch 189/598
379 30/30 [=====] - 0s 2ms/step - loss: 13466.6055
  - mean_absolute_error: 87.8193 - val_loss: 694901.2500 -
  val_mean_absolute_error: 667.7110
```

```
380 Epoch 190/598
381 30/30 [=====] - 0s 2ms/step - loss: 12232.9863
      - mean_absolute_error: 79.1390 - val_loss: 859270.7500 -
      val_mean_absolute_error: 755.4617
382 Epoch 191/598
383 30/30 [=====] - 0s 2ms/step - loss: 13591.9922
      - mean_absolute_error: 84.2031 - val_loss: 681329.7500 -
      val_mean_absolute_error: 641.5172
384 Epoch 192/598
385 30/30 [=====] - 0s 2ms/step - loss: 12999.8252
      - mean_absolute_error: 80.9323 - val_loss: 753105.6250 -
      val_mean_absolute_error: 703.6433
386 Epoch 193/598
387 30/30 [=====] - 0s 2ms/step - loss: 13879.7197
      - mean_absolute_error: 84.3246 - val_loss: 708626.4375 -
      val_mean_absolute_error: 673.6285
388 Epoch 194/598
389 30/30 [=====] - 0s 2ms/step - loss: 12691.1562
      - mean_absolute_error: 81.5765 - val_loss: 775536.1875 -
      val_mean_absolute_error: 695.0066
390 Epoch 195/598
391 30/30 [=====] - 0s 2ms/step - loss: 12413.1748
      - mean_absolute_error: 80.2920 - val_loss: 731926.1250 -
```

```
391 val_mean_absolute_error: 670.3726
392 Epoch 196/598
393 30/30 [=====] - 0s 2ms/step - loss: 12716.8398
- mean_absolute_error: 81.9154 - val_loss: 762006.1250 -
val_mean_absolute_error: 689.8063
394 Epoch 197/598
395 30/30 [=====] - 0s 2ms/step - loss: 13769.5449
- mean_absolute_error: 83.9484 - val_loss: 792909.7500 -
val_mean_absolute_error: 724.3496
396 Epoch 198/598
397 30/30 [=====] - 0s 2ms/step - loss: 11237.1074
- mean_absolute_error: 79.8526 - val_loss: 760172.3125 -
val_mean_absolute_error: 698.9698
398 Epoch 199/598
399 30/30 [=====] - 0s 2ms/step - loss: 11426.1934
- mean_absolute_error: 78.1787 - val_loss: 769911.5000 -
val_mean_absolute_error: 711.9376
400 Epoch 200/598
401 30/30 [=====] - 0s 2ms/step - loss: 12418.3125
- mean_absolute_error: 81.3002 - val_loss: 702592.8750 -
val_mean_absolute_error: 665.6765
402 Epoch 201/598
403 30/30 [=====] - 0s 2ms/step - loss: 11843.6318
```

```
403 - mean_absolute_error: 78.0062 - val_loss: 738405.6875 -
    val_mean_absolute_error: 676.9451
404 Epoch 202/598
405 30/30 [=====] - 0s 2ms/step - Loss: 109999.7197
    - mean_absolute_error: 74.5626 - val_loss: 684295.8750 -
    val_mean_absolute_error: 659.5858
406 Epoch 203/598
407 30/30 [=====] - 0s 2ms/step - Loss: 13814.9434
    - mean_absolute_error: 85.8792 - val_loss: 729304.8125 -
    val_mean_absolute_error: 705.9064
408 Epoch 204/598
409 30/30 [=====] - 0s 2ms/step - Loss: 13219.4678
    - mean_absolute_error: 83.2384 - val_loss: 825459.0625 -
    val_mean_absolute_error: 719.0359
410 Epoch 205/598
411 30/30 [=====] - 0s 2ms/step - Loss: 13310.9814
    - mean_absolute_error: 83.2189 - val_loss: 718616.0000 -
    val_mean_absolute_error: 677.1154
412 Epoch 206/598
413 30/30 [=====] - 0s 2ms/step - Loss: 12317.9287
    - mean_absolute_error: 79.1252 - val_loss: 825290.6875 -
    val_mean_absolute_error: 737.5449
414 Epoch 207/598
```

```
415 30/30 [=====] - 0s 2ms/step - loss: 11905.3613
  - mean_absolute_error: 79.1648 - val_loss: 689123.5000 -
    val_mean_absolute_error: 666.9647
416 Epoch 208/598
417 30/30 [=====] - 0s 2ms/step - loss: 112229.5078
  - mean_absolute_error: 78.0717 - val_loss: 720155.3125 -
    val_mean_absolute_error: 696.0061
418 Epoch 209/598
419 30/30 [=====] - 0s 2ms/step - loss: 12756.3477
  - mean_absolute_error: 85.6950 - val_loss: 776463.3750 -
    val_mean_absolute_error: 714.3029
420 Epoch 210/598
421 30/30 [=====] - 0s 2ms/step - loss: 13766.2539
  - mean_absolute_error: 86.4211 - val_loss: 836730.0625 -
    val_mean_absolute_error: 733.5568
422 Epoch 211/598
423 30/30 [=====] - 0s 2ms/step - loss: 12825.3486
  - mean_absolute_error: 80.7649 - val_loss: 720550.5000 -
    val_mean_absolute_error: 681.6844
424 Epoch 212/598
425 30/30 [=====] - 0s 2ms/step - loss: 11970.4150
  - mean_absolute_error: 81.2104 - val_loss: 662355.1875 -
    val_mean_absolute_error: 643.6160
```

```
426 Epoch 213/598
427 30/30 [=====] - 0s 2ms/step - loss: 11610.2080
    - mean_absolute_error: 77.5659 - val_loss: 637581.6250 -
    val_mean_absolute_error: 643.8708
428 Epoch 214/598
429 30/30 [=====] - 0s 2ms/step - loss: 14487.2598
    - mean_absolute_error: 85.9077 - val_loss: 818029.6250 -
    val_mean_absolute_error: 728.0478
430 Epoch 215/598
431 30/30 [=====] - 0s 2ms/step - loss: 14412.8047
    - mean_absolute_error: 90.0989 - val_loss: 647338.6875 -
    val_mean_absolute_error: 650.5363
432 Epoch 216/598
433 30/30 [=====] - 0s 2ms/step - loss: 11584.1934
    - mean_absolute_error: 77.9871 - val_loss: 778294.7500 -
    val_mean_absolute_error: 714.5883
434 Epoch 217/598
435 30/30 [=====] - 0s 2ms/step - loss: 12015.9414
    - mean_absolute_error: 81.3318 - val_loss: 666209.2500 -
    val_mean_absolute_error: 654.6852
436 Epoch 218/598
437 30/30 [=====] - 0s 2ms/step - loss: 12198.7793
    - mean_absolute_error: 80.8298 - val_loss: 719738.6250 -
```

```
437 val_mean_absolute_error: 661.3930
438 Epoch 219/598
439 30/30 [=====] - 0s 2ms/step - Loss: 12569.1221
    - mean_absolute_error: 84.6305 - val_loss: 656042.1250 -
        val_mean_absolute_error: 653.7925
440 Epoch 220/598
441 30/30 [=====] - 0s 2ms/step - Loss: 11439.5771
    - mean_absolute_error: 78.5438 - val_loss: 708116.1250 -
        val_mean_absolute_error: 683.6127
442 Epoch 221/598
443 30/30 [=====] - 0s 2ms/step - Loss: 12037.9629
    - mean_absolute_error: 79.5691 - val_loss: 729599.9375 -
        val_mean_absolute_error: 688.4161
444 Epoch 222/598
445 30/30 [=====] - 0s 2ms/step - Loss: 10781.2607
    - mean_absolute_error: 74.1270 - val_loss: 769659.8750 -
        val_mean_absolute_error: 701.6243
446 Epoch 223/598
447 30/30 [=====] - 0s 2ms/step - Loss: 11427.6123
    - mean_absolute_error: 78.4745 - val_loss: 745490.5000 -
        val_mean_absolute_error: 691.3608
448 Epoch 224/598
449 30/30 [=====] - 0s 2ms/step - Loss: 12493.8398
```

```
449 - mean_absolute_error: 80.9643 - val_loss: 703433.4375 -
    val_mean_absolute_error: 661.1418
450 Epoch 225/598
451 30/30 [=====] - 0s 2ms/step - Loss: 14072.4268
    - mean_absolute_error: 89.5758 - val_loss: 780230.2500 -
    val_mean_absolute_error: 739.6428
452 Epoch 226/598
453 30/30 [=====] - 0s 2ms/step - Loss: 11722.9131
    - mean_absolute_error: 80.5295 - val_loss: 730056.6875 -
    val_mean_absolute_error: 679.5681
454 Epoch 227/598
455 30/30 [=====] - 0s 2ms/step - Loss: 11918.0498
    - mean_absolute_error: 79.0245 - val_loss: 797903.1875 -
    val_mean_absolute_error: 726.9194
456 Epoch 228/598
457 30/30 [=====] - 0s 2ms/step - Loss: 12858.9756
    - mean_absolute_error: 84.2910 - val_loss: 646825.9375 -
    val_mean_absolute_error: 642.7413
458 Epoch 229/598
459 30/30 [=====] - 0s 2ms/step - Loss: 12837.5322
    - mean_absolute_error: 84.7482 - val_loss: 814109.7500 -
    val_mean_absolute_error: 727.7341
460 Epoch 230/598
```

```
461 30/30 [=====] - 0s 2ms/step - loss: 12649.5186
      - mean_absolute_error: 80.3757 - val_loss: 703257.1875 -
      val_mean_absolute_error: 673.1302
462 Epoch 231/598
463 30/30 [=====] - 0s 2ms/step - loss: 15734.6357
      - mean_absolute_error: 91.8559 - val_loss: 612201.8750 -
      val_mean_absolute_error: 626.9178
464 Epoch 232/598
465 30/30 [=====] - 0s 2ms/step - loss: 14184.0166
      - mean_absolute_error: 88.1932 - val_loss: 677202.3750 -
      val_mean_absolute_error: 656.5154
466 Epoch 233/598
467 30/30 [=====] - 0s 2ms/step - loss: 12563.5068
      - mean_absolute_error: 82.6763 - val_loss: 712284.3750 -
      val_mean_absolute_error: 674.4742
468 Epoch 234/598
469 30/30 [=====] - 0s 2ms/step - loss: 10498.5713
      - mean_absolute_error: 75.3104 - val_loss: 792514.1250 -
      val_mean_absolute_error: 715.9052
470 Epoch 235/598
471 30/30 [=====] - 0s 2ms/step - loss: 14439.1582
      - mean_absolute_error: 90.6874 - val_loss: 772521.6250 -
      val_mean_absolute_error: 716.4047
```

```
472 Epoch 236/598
473 30/30 [=====] - 0s 2ms/step - loss: 11124.2627
    - mean_absolute_error: 75.9166 - val_loss: 733930.0625 -
    val_mean_absolute_error: 710.8693

474 Epoch 237/598
475 30/30 [=====] - 0s 2ms/step - loss: 13049.8506
    - mean_absolute_error: 84.2493 - val_loss: 778907.3125 -
    val_mean_absolute_error: 726.3142

476 Epoch 238/598
477 30/30 [=====] - 0s 2ms/step - loss: 12685.5635
    - mean_absolute_error: 81.2479 - val_loss: 758309.1875 -
    val_mean_absolute_error: 689.2644

478 Epoch 239/598
479 30/30 [=====] - 0s 2ms/step - loss: 10181.3555
    - mean_absolute_error: 74.6348 - val_loss: 742467.3125 -
    val_mean_absolute_error: 683.2253

480 Epoch 240/598
481 30/30 [=====] - 0s 2ms/step - loss: 12568.9229
    - mean_absolute_error: 79.4353 - val_loss: 719702.6250 -
    val_mean_absolute_error: 674.6465

482 Epoch 241/598
483 30/30 [=====] - 0s 2ms/step - loss: 12834.4697
    - mean_absolute_error: 83.9544 - val_loss: 697962.0625 -
```

```
483 val_mean_absolute_error: 661.6950
484 Epoch 242/598
485 30/30 [=====] - 0s 2ms/step - Loss: 11216.7236
    - mean_absolute_error: 75.7107 - val_loss: 656347.3750 -
    val_mean_absolute_error: 655.6155
486 Epoch 243/598
487 30/30 [=====] - 0s 2ms/step - Loss: 10854.3418
    - mean_absolute_error: 75.4398 - val_loss: 694457.7500 -
    val_mean_absolute_error: 671.7407
488 Epoch 244/598
489 30/30 [=====] - 0s 2ms/step - Loss: 10872.3037
    - mean_absolute_error: 77.2915 - val_loss: 729873.1250 -
    val_mean_absolute_error: 683.5104
490 Epoch 245/598
491 30/30 [=====] - 0s 2ms/step - Loss: 11192.2490
    - mean_absolute_error: 75.6885 - val_loss: 887818.7500 -
    val_mean_absolute_error: 761.0422
492 Epoch 246/598
493 30/30 [=====] - 0s 2ms/step - Loss: 12471.5996
    - mean_absolute_error: 81.4878 - val_loss: 687438.3750 -
    val_mean_absolute_error: 666.2299
494 Epoch 247/598
495 30/30 [=====] - 0s 2ms/step - Loss: 12009.0029
```

```
495  - mean_absolute_error: 79.8064 - val_loss: 738993.3750 -
    val_mean_absolute_error: 678.4348
496 Epoch 248/598
497 30/30 [=====] - 0s 2ms/step - Loss: 11932.6582
    - mean_absolute_error: 80.6576 - val_loss: 671217.5625 -
    val_mean_absolute_error: 657.5815
498 Epoch 249/598
499 30/30 [=====] - 0s 2ms/step - Loss: 12488.9043
    - mean_absolute_error: 79.5852 - val_loss: 702044.6875 -
    val_mean_absolute_error: 659.4798
500 Epoch 250/598
501 30/30 [=====] - 0s 2ms/step - Loss: 11967.4922
    - mean_absolute_error: 78.5533 - val_loss: 631974.2500 -
    val_mean_absolute_error: 630.0247
502 Epoch 251/598
503 30/30 [=====] - 0s 2ms/step - Loss: 12072.5508
    - mean_absolute_error: 80.9768 - val_loss: 701484.3750 -
    val_mean_absolute_error: 693.9553
504 Epoch 252/598
505 30/30 [=====] - 0s 2ms/step - Loss: 14510.7236
    - mean_absolute_error: 90.3456 - val_loss: 665827.8750 -
    val_mean_absolute_error: 648.8124
506 Epoch 253/598
```

```
507 30/30 [=====] - 0s 2ms/step - loss: 11408.3467
  - mean_absolute_error: 77.8149 - val_loss: 716624.5000 -
    val_mean_absolute_error: 671.8131
508 Epoch 254/598
509 30/30 [=====] - 0s 2ms/step - loss: 9960.5527
  - mean_absolute_error: 74.7701 - val_loss: 735168.1875 -
    val_mean_absolute_error: 702.3578
510 Epoch 255/598
511 30/30 [=====] - 0s 2ms/step - loss: 12337.1543
  - mean_absolute_error: 79.9415 - val_loss: 781632.6250 -
    val_mean_absolute_error: 714.4112
512 Epoch 256/598
513 30/30 [=====] - 0s 2ms/step - loss: 11656.4414
  - mean_absolute_error: 78.6678 - val_loss: 737311.8750 -
    val_mean_absolute_error: 686.0345
514 Epoch 257/598
515 30/30 [=====] - 0s 2ms/step - loss: 11786.2158
  - mean_absolute_error: 78.9859 - val_loss: 642475.6250 -
    val_mean_absolute_error: 634.8978
516 Epoch 258/598
517 30/30 [=====] - 0s 2ms/step - loss: 11609.8027
  - mean_absolute_error: 79.1316 - val_loss: 614713.9375 -
    val_mean_absolute_error: 616.5860
```

```
518 Epoch 259/598
519 30/30 [=====] - 0s 2ms/step - loss: 11792.8408
    - mean_absolute_error: 79.8762 - val_loss: 709654.0000 -
        val_mean_absolute_error: 676.7422
520 Epoch 260/598
521 30/30 [=====] - 0s 2ms/step - loss: 11677.9502
    - mean_absolute_error: 78.0040 - val_loss: 644291.4375 -
        val_mean_absolute_error: 629.5189
522 Epoch 261/598
523 30/30 [=====] - 0s 2ms/step - loss: 13089.8193
    - mean_absolute_error: 85.7407 - val_loss: 669027.5625 -
        val_mean_absolute_error: 662.9702
524 Epoch 262/598
525 30/30 [=====] - 0s 2ms/step - loss: 12384.0537
    - mean_absolute_error: 81.1961 - val_loss: 697109.1250 -
        val_mean_absolute_error: 660.4919
526 Epoch 263/598
527 30/30 [=====] - 0s 2ms/step - loss: 12368.2969
    - mean_absolute_error: 81.0308 - val_loss: 744761.5625 -
        val_mean_absolute_error: 676.3375
528 Epoch 264/598
529 30/30 [=====] - 0s 2ms/step - loss: 11254.7256
    - mean_absolute_error: 77.6395 - val_loss: 762032.6875 -
```

```
529 val_mean_absolute_error: 721.9065
530 Epoch 265/598
531 30/30 [=====] - 0s 2ms/step - Loss: 12856.3770
- mean_absolute_error: 84.0396 - val_loss: 659321.3125 -
val_mean_absolute_error: 632.3688
532 Epoch 266/598
533 30/30 [=====] - 0s 2ms/step - Loss: 10962.5928
- mean_absolute_error: 76.9387 - val_loss: 681723.9375 -
val_mean_absolute_error: 670.7426
534 Epoch 267/598
535 30/30 [=====] - 0s 2ms/step - Loss: 10584.8711
- mean_absolute_error: 75.9396 - val_loss: 787470.3125 -
val_mean_absolute_error: 704.7157
536 Epoch 268/598
537 30/30 [=====] - 0s 2ms/step - Loss: 11996.7363
- mean_absolute_error: 79.5286 - val_loss: 764968.6875 -
val_mean_absolute_error: 690.8142
538 Epoch 269/598
539 30/30 [=====] - 0s 2ms/step - Loss: 11197.7979
- mean_absolute_error: 77.3338 - val_loss: 696946.1875 -
val_mean_absolute_error: 654.4555
540 Epoch 270/598
541 30/30 [=====] - 0s 2ms/step - Loss: 10657.8174
```

```
541 - mean_absolute_error: 74.8229 - val_loss: 712381.7500 -
      val_mean_absolute_error: 679.0134
542 Epoch 271/598
543 30/30 [=====] - 0s 2ms/step - Loss: 11246.6230
      - mean_absolute_error: 76.5418 - val_loss: 693043.0625 -
      val_mean_absolute_error: 653.2954
544 Epoch 272/598
545 30/30 [=====] - 0s 2ms/step - Loss: 11997.5430
      - mean_absolute_error: 76.2809 - val_loss: 655464.0000 -
      val_mean_absolute_error: 648.7947
546 Epoch 273/598
547 30/30 [=====] - 0s 2ms/step - Loss: 10479.6758
      - mean_absolute_error: 73.6435 - val_loss: 804421.7500 -
      val_mean_absolute_error: 704.7556
548 Epoch 274/598
549 30/30 [=====] - 0s 2ms/step - Loss: 11543.4268
      - mean_absolute_error: 79.0721 - val_loss: 679881.6875 -
      val_mean_absolute_error: 646.0737
550 Epoch 275/598
551 30/30 [=====] - 0s 2ms/step - Loss: 12164.4297
      - mean_absolute_error: 79.3953 - val_loss: 767079.1875 -
      val_mean_absolute_error: 694.8365
552 Epoch 276/598
```

```
553 30/30 [=====] - 0s 2ms/step - loss: 11413.0625
  - mean_absolute_error: 77.0255 - val_loss: 762672.4375 -
  val_mean_absolute_error: 696.2005
554 Epoch 277/598
555 30/30 [=====] - 0s 2ms/step - loss: 11987.9580
  - mean_absolute_error: 80.4957 - val_loss: 777713.6250 -
  val_mean_absolute_error: 692.0772
556 Epoch 278/598
557 30/30 [=====] - 0s 2ms/step - loss: 12638.5967
  - mean_absolute_error: 81.6157 - val_loss: 826556.2500 -
  val_mean_absolute_error: 751.0282
558 Epoch 279/598
559 30/30 [=====] - 0s 2ms/step - loss: 12446.9590
  - mean_absolute_error: 83.3089 - val_loss: 700856.6250 -
  val_mean_absolute_error: 661.4998
560 Epoch 280/598
561 30/30 [=====] - 0s 2ms/step - loss: 13092.9043
  - mean_absolute_error: 80.2053 - val_loss: 749478.8125 -
  val_mean_absolute_error: 708.4486
562 Epoch 281/598
563 30/30 [=====] - 0s 2ms/step - loss: 12219.4062
  - mean_absolute_error: 82.3545 - val_loss: 655951.3125 -
  val_mean_absolute_error: 645.8420
```

```
564 Epoch 282/598
565 30/30 [=====] - 0s 2ms/step - loss: 11849.6504
      - mean_absolute_error: 79.0608 - val_loss: 728205.8750 -
      val_mean_absolute_error: 674.4601

566 Epoch 283/598
567 30/30 [=====] - 0s 2ms/step - loss: 10213.7090
      - mean_absolute_error: 73.9374 - val_loss: 710479.3750 -
      val_mean_absolute_error: 669.2301

568 Epoch 284/598
569 30/30 [=====] - 0s 2ms/step - loss: 11158.5273
      - mean_absolute_error: 77.4854 - val_loss: 770016.4375 -
      val_mean_absolute_error: 706.1581

570 Epoch 285/598
571 30/30 [=====] - 0s 2ms/step - loss: 10832.4531
      - mean_absolute_error: 75.9197 - val_loss: 665353.2500 -
      val_mean_absolute_error: 649.2719

572 Epoch 286/598
573 30/30 [=====] - 0s 2ms/step - loss: 11755.4531
      - mean_absolute_error: 80.1939 - val_loss: 778763.7500 -
      val_mean_absolute_error: 707.3760

574 Epoch 287/598
575 30/30 [=====] - 0s 2ms/step - loss: 13497.6992
      - mean_absolute_error: 81.2241 - val_loss: 608354.4375 -
```

```
575 val_mean_absolute_error: 632.3553
576 Epoch 288/598
577 30/30 [=====] - 0s 2ms/step - Loss: 12656.1396
      - mean_absolute_error: 81.7462 - val_loss: 762610.5000 -
      val_mean_absolute_error: 699.0251
578 Epoch 289/598
579 30/30 [=====] - 0s 2ms/step - Loss: 12161.8916
      - mean_absolute_error: 80.8075 - val_loss: 711921.1250 -
      val_mean_absolute_error: 668.8326
580 Epoch 290/598
581 30/30 [=====] - 0s 2ms/step - Loss: 10034.6904
      - mean_absolute_error: 72.3986 - val_loss: 744740.1250 -
      val_mean_absolute_error: 698.6032
582 Epoch 291/598
583 30/30 [=====] - 0s 2ms/step - Loss: 11421.4834
      - mean_absolute_error: 77.4742 - val_loss: 755078.5000 -
      val_mean_absolute_error: 699.4005
584 Epoch 292/598
585 30/30 [=====] - 0s 2ms/step - Loss: 11166.8096
      - mean_absolute_error: 77.4331 - val_loss: 635826.5000 -
      val_mean_absolute_error: 629.4278
586 Epoch 293/598
587 30/30 [=====] - 0s 2ms/step - Loss: 11525.8086
```

```
587  - mean_absolute_error: 79.5052 - val_loss: 752647.3125 -
      val_mean_absolute_error: 708.5682
588 Epoch 294/598
589 30/30 [=====] - 0s 2ms/step - Loss: 10871.5215
      - mean_absolute_error: 77.1893 - val_loss: 671195.0625 -
      val_mean_absolute_error: 648.0392
590 Epoch 295/598
591 30/30 [=====] - 0s 2ms/step - Loss: 10756.3486
      - mean_absolute_error: 76.7990 - val_loss: 709459.9375 -
      val_mean_absolute_error: 683.2294
592 Epoch 296/598
593 30/30 [=====] - 0s 2ms/step - Loss: 10178.0605
      - mean_absolute_error: 72.5871 - val_loss: 726950.0625 -
      val_mean_absolute_error: 688.0026
594 Epoch 297/598
595 30/30 [=====] - 0s 2ms/step - Loss: 10955.5488
      - mean_absolute_error: 74.2153 - val_loss: 776342.0625 -
      val_mean_absolute_error: 718.6862
596 Epoch 298/598
597 30/30 [=====] - 0s 2ms/step - Loss: 12169.3223
      - mean_absolute_error: 79.9749 - val_loss: 709579.9375 -
      val_mean_absolute_error: 664.5214
598 Epoch 299/598
```

```
599 30/30 [=====] - 0s 2ms/step - loss: 13479.9873
  - mean_absolute_error: 88.0777 - val_loss: 817258.0625 -
    val_mean_absolute_error: 728.3596
600 Epoch 300/598
601 30/30 [=====] - 0s 2ms/step - loss: 11532.3096
  - mean_absolute_error: 77.3770 - val_loss: 744992.5625 -
    val_mean_absolute_error: 699.1642
602 Epoch 301/598
603 30/30 [=====] - 0s 2ms/step - loss: 10521.2295
  - mean_absolute_error: 74.4308 - val_loss: 754560.9375 -
    val_mean_absolute_error: 679.5722
604 Epoch 302/598
605 30/30 [=====] - 0s 2ms/step - loss: 11624.7568
  - mean_absolute_error: 78.2304 - val_loss: 683287.5000 -
    val_mean_absolute_error: 677.8375
606 Epoch 303/598
607 30/30 [=====] - 0s 2ms/step - loss: 10027.0459
  - mean_absolute_error: 73.6724 - val_loss: 779814.6250 -
    val_mean_absolute_error: 693.6135
608 Epoch 304/598
609 30/30 [=====] - 0s 2ms/step - loss: 12349.9424
  - mean_absolute_error: 80.4068 - val_loss: 754649.6250 -
    val_mean_absolute_error: 700.1426
```

```
610 Epoch 305/598
611 30/30 [=====] - 0s 2ms/step - loss: 11239.7842
      - mean_absolute_error: 77.5099 - val_loss: 726173.1250 -
      val_mean_absolute_error: 681.2191
612 Epoch 306/598
613 30/30 [=====] - 0s 2ms/step - loss: 11109.3682
      - mean_absolute_error: 77.7050 - val_loss: 775131.0625 -
      val_mean_absolute_error: 727.0061
614 Epoch 307/598
615 30/30 [=====] - 0s 2ms/step - loss: 11351.0156
      - mean_absolute_error: 76.8884 - val_loss: 678234.3750 -
      val_mean_absolute_error: 661.8325
616 Epoch 308/598
617 30/30 [=====] - 0s 2ms/step - loss: 10950.1602
      - mean_absolute_error: 74.7969 - val_loss: 740650.0625 -
      val_mean_absolute_error: 720.0269
618 Epoch 309/598
619 30/30 [=====] - 0s 2ms/step - loss: 11994.7568
      - mean_absolute_error: 80.5899 - val_loss: 688327.0000 -
      val_mean_absolute_error: 649.3790
620 Epoch 310/598
621 30/30 [=====] - 0s 2ms/step - loss: 10331.7715
      - mean_absolute_error: 73.6961 - val_loss: 692012.6250 -
```

```
621 val_mean_absolute_error: 666.00532
622 Epoch 311/598
623 30/30 [=====] - 0s 2ms/step - Loss: 103337.3555
    - mean_absolute_error: 76.7832 - val_loss: 706760.9375 -
        val_mean_absolute_error: 656.0477
624 Epoch 312/598
625 30/30 [=====] - 0s 2ms/step - Loss: 11606.7930
    - mean_absolute_error: 81.3856 - val_loss: 785687.5625 -
        val_mean_absolute_error: 714.0782
626 Epoch 313/598
627 30/30 [=====] - 0s 2ms/step - Loss: 11391.1768
    - mean_absolute_error: 78.6009 - val_loss: 683534.3750 -
        val_mean_absolute_error: 662.0722
628 Epoch 314/598
629 30/30 [=====] - 0s 2ms/step - Loss: 10933.0068
    - mean_absolute_error: 77.2515 - val_loss: 658882.7500 -
        val_mean_absolute_error: 650.9882
630 Epoch 315/598
631 30/30 [=====] - 0s 2ms/step - Loss: 9934.9375
    - mean_absolute_error: 72.5246 - val_loss: 772889.3125 -
        val_mean_absolute_error: 704.8851
632 Epoch 316/598
633 30/30 [=====] - 0s 2ms/step - Loss: 10270.3174
```

```
633  - mean_absolute_error: 73.6862 - val_loss: 697324.5625 -
    val_mean_absolute_error: 667.5042
634 Epoch 317/598
635 30/30 [=====] - 0s 2ms/step - Loss: 11044.3193
    - mean_absolute_error: 76.3614 - val_loss: 639327.3125 -
    val_mean_absolute_error: 614.1208
636 Epoch 318/598
637 30/30 [=====] - 0s 2ms/step - Loss: 11240.8320
    - mean_absolute_error: 78.6997 - val_loss: 854908.3750 -
    val_mean_absolute_error: 741.8009
638 Epoch 319/598
639 30/30 [=====] - 0s 2ms/step - Loss: 10920.3516
    - mean_absolute_error: 76.4098 - val_loss: 6222229.0625 -
    val_mean_absolute_error: 628.1321
640 Epoch 320/598
641 30/30 [=====] - 0s 2ms/step - Loss: 11378.9541
    - mean_absolute_error: 75.9629 - val_loss: 772641.5000 -
    val_mean_absolute_error: 721.9055
642 Epoch 321/598
643 30/30 [=====] - 0s 2ms/step - Loss: 10872.4570
    - mean_absolute_error: 77.9913 - val_loss: 687298.1875 -
    val_mean_absolute_error: 660.4409
644 Epoch 322/598
```

```
645 30/30 [=====] - 0s 2ms/step - loss: 11060.8262
  - mean_absolute_error: 76.1859 - val_loss: 729008.2500 -
  val_mean_absolute_error: 688.8144
646 Epoch 323/598
647 30/30 [=====] - 0s 2ms/step - loss: 10145.4912
  - mean_absolute_error: 74.1167 - val_loss: 786415.0625 -
  val_mean_absolute_error: 706.2914
648 Epoch 324/598
649 30/30 [=====] - 0s 2ms/step - loss: 11169.3652
  - mean_absolute_error: 78.0644 - val_loss: 719905.9375 -
  val_mean_absolute_error: 670.4363
650 Epoch 325/598
651 30/30 [=====] - 0s 2ms/step - loss: 10799.0137
  - mean_absolute_error: 75.9600 - val_loss: 703688.5625 -
  val_mean_absolute_error: 666.7961
652 Epoch 326/598
653 30/30 [=====] - 0s 2ms/step - loss: 11316.3809
  - mean_absolute_error: 75.1980 - val_loss: 744420.0625 -
  val_mean_absolute_error: 676.9304
654 Epoch 327/598
655 30/30 [=====] - 0s 2ms/step - loss: 11119.9580
  - mean_absolute_error: 77.4192 - val_loss: 621746.3125 -
  val_mean_absolute_error: 618.4072
```

```
656 Epoch 328/598
657 30/30 [=====] - 0s 2ms/step - loss: 12450.8916
      - mean_absolute_error: 83.7117 - val_loss: 737399.3750 -
      val_mean_absolute_error: 701.3878
658 Epoch 329/598
659 30/30 [=====] - 0s 2ms/step - loss: 11115.9463
      - mean_absolute_error: 78.8766 - val_loss: 622028.6875 -
      val_mean_absolute_error: 622.7391
660 Epoch 330/598
661 30/30 [=====] - 0s 2ms/step - loss: 11115.9463
      - mean_absolute_error: 78.5728 - val_loss: 788955.1250 -
      val_mean_absolute_error: 637.8254
662 Epoch 331/598
663 30/30 [=====] - 0s 2ms/step - loss: 11977.7275
      - mean_absolute_error: 75.4907 - val_loss: 793595.3750 -
      val_mean_absolute_error: 658543.6875 -
664 Epoch 332/598
665 30/30 [=====] - 0s 2ms/step - loss: 11251.5186
      - mean_absolute_error: 637.8254
      val_mean_absolute_error: 714.8893
666 Epoch 333/598
667 30/30 [=====] - 0s 2ms/step - loss: 10544.8301
      - mean_absolute_error: 72.8733 - val_loss: 710596.8125 -
      val_mean_absolute_error: 72.8733 - val_loss: 100005.9355
```

```
667 val_mean_absolute_error: 672.0454
668 Epoch 334/598
669 30/30 [=====] - 0s 2ms/step - Loss: 11284.7314
    - mean_absolute_error: 76.6258 - val_loss: 699155.6250 -
    val_mean_absolute_error: 655.7933
670 Epoch 335/598
671 30/30 [=====] - 0s 2ms/step - Loss: 11004.1064
    - mean_absolute_error: 76.3141 - val_loss: 752330.0625 -
    val_mean_absolute_error: 693.8547
672 Epoch 336/598
673 30/30 [=====] - 0s 2ms/step - Loss: 11049.5684
    - mean_absolute_error: 75.8762 - val_loss: 602917.2500 -
    val_mean_absolute_error: 622.7477
674 Epoch 337/598
675 30/30 [=====] - 0s 2ms/step - Loss: 10644.3555
    - mean_absolute_error: 76.0295 - val_loss: 725567.8750 -
    val_mean_absolute_error: 669.8196
676 Epoch 338/598
677 30/30 [=====] - 0s 2ms/step - Loss: 10113.3799
    - mean_absolute_error: 71.5680 - val_loss: 704333.0625 -
    val_mean_absolute_error: 666.4973
678 Epoch 339/598
679 30/30 [=====] - 0s 2ms/step - Loss: 10645.3398
```

```
679 - mean_absolute_error: 76.5014 - val_loss: 593823.2500 -
val_mean_absolute_error: 603.0132
680 Epoch 340/598
681 30/30 [=====] - 0s 2ms/step - Loss: 14889.6758
- mean_absolute_error: 91.3761 - val_loss: 733934.0625 -
val_mean_absolute_error: 719.5995
682 Epoch 341/598
683 30/30 [=====] - 0s 2ms/step - Loss: 11089.2158
- mean_absolute_error: 76.4193 - val_loss: 713538.3125 -
val_mean_absolute_error: 680.4544
684 Epoch 342/598
685 30/30 [=====] - 0s 3ms/step - Loss: 10068.8525
- mean_absolute_error: 72.6558 - val_loss: 755952.9375 -
val_mean_absolute_error: 694.7204
686 Epoch 343/598
687 30/30 [=====] - 0s 2ms/step - Loss: 11576.3408
- mean_absolute_error: 79.5064 - val_loss: 695584.8750 -
val_mean_absolute_error: 654.5507
688 Epoch 344/598
689 30/30 [=====] - 0s 2ms/step - Loss: 9487.0693
- mean_absolute_error: 70.8211 - val_loss: 730700.1875 -
val_mean_absolute_error: 697.1526
690 Epoch 345/598
```

```
691 30/30 [=====] - 0s 2ms/step - loss: 113330.1787
  - mean_absolute_error: 77.4769 - val_loss: 771801.5625 -
    val_mean_absolute_error: 688.5806
692 Epoch 346/598
693 30/30 [=====] - 0s 2ms/step - loss: 114444.4229
  - mean_absolute_error: 76.9234 - val_loss: 703677.0000 -
    val_mean_absolute_error: 677.6164
694 Epoch 347/598
695 30/30 [=====] - 0s 2ms/step - loss: 9588.4980
  - mean_absolute_error: 72.1131 - val_loss: 834289.1875 -
    val_mean_absolute_error: 735.8505
696 Epoch 348/598
697 30/30 [=====] - 0s 2ms/step - loss: 120094.7441
  - mean_absolute_error: 82.3692 - val_loss: 701253.7500 -
    val_mean_absolute_error: 658.6157
698 Epoch 349/598
699 30/30 [=====] - 0s 2ms/step - loss: 14739.8662
  - mean_absolute_error: 91.7440 - val_loss: 764139.5000 -
    val_mean_absolute_error: 710.3552
700 Epoch 350/598
701 30/30 [=====] - 0s 2ms/step - loss: 11094.5078
  - mean_absolute_error: 77.2968 - val_loss: 649593.6875 -
    val_mean_absolute_error: 653.1002
```

```
702 Epoch 351/598
703 30/30 [=====] - 0s 2ms/step - loss: 11145.0430
    - mean_absolute_error: 77.4721 - val_loss: 753312.4375 -
    val_mean_absolute_error: 682.5096
704 Epoch 352/598
705 30/30 [=====] - 0s 2ms/step - loss: 11502.8545
    - mean_absolute_error: 76.8914 - val_loss: 772335.7500 -
    val_mean_absolute_error: 700.1348
706 Epoch 353/598
707 30/30 [=====] - 0s 2ms/step - loss: 9389.5762
    - mean_absolute_error: 71.0905 - val_loss: 779329.6250 -
    val_mean_absolute_error: 704.1083
708 Epoch 354/598
709 30/30 [=====] - 0s 2ms/step - loss: 10207.8008
    - mean_absolute_error: 75.6951 - val_loss: 827491.6875 -
    val_mean_absolute_error: 741.4966
710 Epoch 355/598
711 30/30 [=====] - 0s 3ms/step - loss: 12381.7285
    - mean_absolute_error: 82.1471 - val_loss: 690983.7500 -
    val_mean_absolute_error: 664.5723
712 Epoch 356/598
713 30/30 [=====] - 0s 3ms/step - loss: 9569.6514
    - mean_absolute_error: 70.9786 - val_loss: 724418.7500 -
```

```
713 val_mean_absolute_error: 685.0930
714 Epoch 357/598
715 30/30 [=====] - 0s 3ms/step - Loss: 10543.7256
    - mean_absolute_error: 75.3210 - val_loss: 690376.9375 -
    val_mean_absolute_error: 659.3806
716 Epoch 358/598
717 30/30 [=====] - 0s 2ms/step - Loss: 10456.2861
    - mean_absolute_error: 73.7642 - val_loss: 717349.8125 -
    val_mean_absolute_error: 667.9055
718 Epoch 359/598
719 30/30 [=====] - 0s 3ms/step - Loss: 10148.3145
    - mean_absolute_error: 72.0321 - val_loss: 715055.7500 -
    val_mean_absolute_error: 677.0543
720 Epoch 360/598
721 30/30 [=====] - 0s 2ms/step - Loss: 10995.3447
    - mean_absolute_error: 77.0497 - val_loss: 785724.4375 -
    val_mean_absolute_error: 709.7563
722 Epoch 361/598
723 30/30 [=====] - 0s 2ms/step - Loss: 10909.6885
    - mean_absolute_error: 77.4554 - val_loss: 710005.6875 -
    val_mean_absolute_error: 686.0478
724 Epoch 362/598
725 30/30 [=====] - 0s 2ms/step - Loss: 10713.8086
```

```
725  - mean_absolute_error: 75.6639 - val_loss: 731803.1250 -
    val_mean_absolute_error: 685.5924
726 Epoch 363/598
727 30/30 [=====] - 0s 2ms/step - loss: 11987.1738
    - mean_absolute_error: 78.9531 - val_loss: 766326.6250 -
    val_mean_absolute_error: 710.9228
728 Epoch 364/598
729 30/30 [=====] - 0s 2ms/step - loss: 11417.8818
    - mean_absolute_error: 81.4489 - val_loss: 635876.1250 -
    val_mean_absolute_error: 646.2455
730 Epoch 365/598
731 30/30 [=====] - 0s 2ms/step - loss: 10429.5430
    - mean_absolute_error: 74.1567 - val_loss: 739919.5625 -
    val_mean_absolute_error: 685.9838
732 Epoch 366/598
733 30/30 [=====] - 0s 2ms/step - loss: 10092.3154
    - mean_absolute_error: 72.8520 - val_loss: 771389.0625 -
    val_mean_absolute_error: 696.2850
734 Epoch 367/598
735 30/30 [=====] - 0s 2ms/step - loss: 9570.2188
    - mean_absolute_error: 70.9762 - val_loss: 783319.5000 -
    val_mean_absolute_error: 697.2846
736 Epoch 368/598
```

```
737 30/30 [=====] - 0s 2ms/step - loss: 10712.6396
  - mean_absolute_error: 77.8090 - val_loss: 806947.1250 -
  val_mean_absolute_error: 734.3646
738 Epoch 369/598
739 30/30 [=====] - 0s 3ms/step - loss: 11115.8252
  - mean_absolute_error: 80.6614 - val_loss: 682084.5625 -
  val_mean_absolute_error: 649.0084
740 Epoch 370/598
741 30/30 [=====] - 0s 2ms/step - loss: 10958.4004
  - mean_absolute_error: 78.9204 - val_loss: 696396.6250 -
  val_mean_absolute_error: 668.6229
742 Epoch 371/598
743 30/30 [=====] - 0s 2ms/step - loss: 9973.4863
  - mean_absolute_error: 73.3562 - val_loss: 790433.3125 -
  val_mean_absolute_error: 709.4512
744 Epoch 372/598
745 30/30 [=====] - 0s 2ms/step - loss: 775654.8750 -
  - mean_absolute_error: 73.6052 - val_loss: 775654.8750 -
  val_mean_absolute_error: 705.9962
746 Epoch 373/598
747 30/30 [=====] - 0s 2ms/step - loss: 10067.8701
  - mean_absolute_error: 75.3568 - val_loss: 662561.8750 -
  val_mean_absolute_error: 645.7289
```

```
748 Epoch 374/598
749 30/30 [=====] - 0s 2ms/step - loss: 10206.0029
    - mean_absolute_error: 72.4548 - val_loss: 774899.4375 -
    val_mean_absolute_error: 701.3397
750 Epoch 375/598
751 30/30 [=====] - 0s 2ms/step - loss: 10891.2764
    - mean_absolute_error: 76.1891 - val_loss: 753111.2500 -
    val_mean_absolute_error: 680.3480
752 Epoch 376/598
753 30/30 [=====] - 0s 2ms/step - loss: 11538.5605
    - mean_absolute_error: 80.3897 - val_loss: 738381.5000 -
    val_mean_absolute_error: 681.3832
754 Epoch 377/598
755 30/30 [=====] - 0s 2ms/step - loss: 10531.2451
    - mean_absolute_error: 74.8871 - val_loss: 638115.3125 -
    val_mean_absolute_error: 634.6295
756 Epoch 378/598
757 30/30 [=====] - 0s 2ms/step - loss: 9662.7822
    - mean_absolute_error: 73.0398 - val_loss: 806648.0625 -
    val_mean_absolute_error: 723.5703
758 Epoch 379/598
759 30/30 [=====] - 0s 2ms/step - loss: 9894.5176
    - mean_absolute_error: 71.1572 - val_loss: 679725.5625 -
```

```
759 val_mean_absolute_error: 659.2798
760 Epoch 380/598
761 30/30 [=====] - 0s 2ms/step - Loss: 12470.5303
- mean_absolute_error: 82.6354 - val_loss: 717385.5000 -
val_mean_absolute_error: 674.6354
762 Epoch 381/598
763 30/30 [=====] - 0s 2ms/step - Loss: 10773.2793
- mean_absolute_error: 76.9306 - val_loss: 662162.1875 -
val_mean_absolute_error: 648.1607
764 Epoch 382/598
765 30/30 [=====] - 0s 2ms/step - Loss: 100050.4666
- mean_absolute_error: 73.6952 - val_loss: 771376.5000 -
val_mean_absolute_error: 721.7869
766 Epoch 383/598
767 30/30 [=====] - 0s 2ms/step - Loss: 14523.9893
- mean_absolute_error: 90.7162 - val_loss: 702867.0000 -
val_mean_absolute_error: 650.1560
768 Epoch 384/598
769 30/30 [=====] - 0s 2ms/step - Loss: 11082.2461
- mean_absolute_error: 76.5966 - val_loss: 779320.6875 -
val_mean_absolute_error: 712.9775
770 Epoch 385/598
771 30/30 [=====] - 0s 2ms/step - Loss: 11387.4375
```

```
771 - mean_absolute_error: 78.7916 - val_loss: 627201.6875 -
    val_mean_absolute_error: 613.5588
772 Epoch 386/598
773 30/30 [=====] - 0s 2ms/step - Loss: 12184.8457
    - mean_absolute_error: 83.6338 - val_loss: 686621.0000 -
    val_mean_absolute_error: 656.6736
774 Epoch 387/598
775 30/30 [=====] - 0s 2ms/step - Loss: 10072.5195
    - mean_absolute_error: 72.4565 - val_loss: 678097.8750 -
    val_mean_absolute_error: 657.3140
776 Epoch 388/598
777 30/30 [=====] - 0s 2ms/step - Loss: 9875.4531
    - mean_absolute_error: 72.6061 - val_loss: 731195.0000 -
    val_mean_absolute_error: 684.4276
778 Epoch 389/598
779 30/30 [=====] - 0s 2ms/step - Loss: 11365.1348
    - mean_absolute_error: 81.3987 - val_loss: 725307.4375 -
    val_mean_absolute_error: 691.8453
780 Epoch 390/598
781 30/30 [=====] - 0s 2ms/step - Loss: 11594.2598
    - mean_absolute_error: 80.7950 - val_loss: 714546.0000 -
    val_mean_absolute_error: 669.0104
782 Epoch 391/598
```

```
783 30/30 [=====] - 0s 2ms/step - loss: 10779.1562
  - mean_absolute_error: 75.4549 - val_loss: 720072.7500 -
    val_mean_absolute_error: 687.7606

784 Epoch 392/598
785 30/30 [=====] - 0s 2ms/step - loss: 9578.6807
  - mean_absolute_error: 70.7733 - val_loss: 738235.1875 -
    val_mean_absolute_error: 707.7605

786 Epoch 393/598
787 30/30 [=====] - 0s 2ms/step - loss: 10541.6123
  - mean_absolute_error: 75.8678 - val_loss: 653961.3125 -
    val_mean_absolute_error: 629.3141

788 Epoch 394/598
789 30/30 [=====] - 0s 2ms/step - loss: 11488.0137
  - mean_absolute_error: 79.1210 - val_loss: 760760.3125 -
    val_mean_absolute_error: 704.3587

790 Epoch 395/598
791 30/30 [=====] - 0s 2ms/step - loss: 9673.7227
  - mean_absolute_error: 71.3257 - val_loss: 733213.9375 -
    val_mean_absolute_error: 693.9433

792 Epoch 396/598
793 30/30 [=====] - 0s 2ms/step - loss: 10413.3799
  - mean_absolute_error: 75.6541 - val_loss: 728582.6250 -
    val_mean_absolute_error: 703.6926
```

```
794 Epoch 397/598
795 30/30 [=====] - 0s 2ms/step - loss: 10211.7939
    - mean_absolute_error: 74.9971 - val_loss: 749682.8750 -
    val_mean_absolute_error: 688.6208
796 Epoch 398/598
797 30/30 [=====] - 0s 2ms/step - loss: 10764.1729
    - mean_absolute_error: 76.0510 - val_loss: 718471.3750 -
    val_mean_absolute_error: 651.8827
798 Epoch 399/598
799 30/30 [=====] - 0s 2ms/step - loss: 11150.4385
    - mean_absolute_error: 80.0615 - val_loss: 715020.9375 -
    val_mean_absolute_error: 680.9991
800 Epoch 400/598
801 30/30 [=====] - 0s 3ms/step - loss: 10237.7510
    - mean_absolute_error: 71.3987 - val_loss: 694199.5000 -
    val_mean_absolute_error: 663.4459
802 Epoch 401/598
803 30/30 [=====] - 0s 2ms/step - loss: 10659.8857
    - mean_absolute_error: 75.4349 - val_loss: 668840.3125 -
    val_mean_absolute_error: 637.9670
804 Epoch 402/598
805 30/30 [=====] - 0s 2ms/step - loss: 10776.6094
    - mean_absolute_error: 77.7983 - val_loss: 757762.3750 -
```

805	val_mean_absolute_error:	682.9415
806	Epoch 403/598	
807	30/30	[=====] - 0s 2ms/step - Loss: 10547.0566 - mean_absolute_error: 75.2366 - val_loss: 727468.6250 - val_mean_absolute_error: 656.7719
808	Epoch 404/598	
809	30/30	[=====] - 0s 2ms/step - Loss: 12564.5322 - mean_absolute_error: 81.7348 - val_loss: 685525.5625 - val_mean_absolute_error: 676.4118
810	Epoch 405/598	
811	30/30	[=====] - 0s 2ms/step - Loss: 9355.7607 - mean_absolute_error: 70.3157 - val_loss: 709043.7500 - val_mean_absolute_error: 665.9022
812	Epoch 406/598	
813	30/30	[=====] - 0s 2ms/step - Loss: 10253.2178 - mean_absolute_error: 73.7178 - val_loss: 729409.0000 - val_mean_absolute_error: 682.8031
814	Epoch 407/598	
815	30/30	[=====] - 0s 2ms/step - Loss: 10138.4385 - mean_absolute_error: 73.2010 - val_loss: 678490.3750 - val_mean_absolute_error: 645.9770
816	Epoch 408/598	
817	30/30	[=====] - 0s 2ms/step - Loss: 11607.6582

```
817  - mean_absolute_error: 78.1897 - val_loss: 742895.3125 -
    val_mean_absolute_error: 694.3033
818 Epoch 409/598
819 30/30 [=====] - 0s 2ms/step - Loss: 10210.6514
    - mean_absolute_error: 73.6035 - val_loss: 693323.5625 -
    val_mean_absolute_error: 679.6904
820 Epoch 410/598
821 30/30 [=====] - 0s 2ms/step - Loss: 10059.5625
    - mean_absolute_error: 72.9313 - val_loss: 694261.6250 -
    val_mean_absolute_error: 675.1320
822 Epoch 411/598
823 30/30 [=====] - 0s 2ms/step - Loss: 9341.9551
    - mean_absolute_error: 70.9105 - val_loss: 720164.6875 -
    val_mean_absolute_error: 690.8232
824 Epoch 412/598
825 30/30 [=====] - 0s 2ms/step - Loss: 11186.3916
    - mean_absolute_error: 78.2092 - val_loss: 613808.8125 -
    val_mean_absolute_error: 609.9092
826 Epoch 413/598
827 30/30 [=====] - 0s 2ms/step - Loss: 11133.5088
    - mean_absolute_error: 78.4282 - val_loss: 750866.8125 -
    val_mean_absolute_error: 695.8801
828 Epoch 414/598
```

```
829 30/30 [=====] - 0s 2ms/step - loss: 10419.4033
  - mean_absolute_error: 74.5741 - val_loss: 666776.1250 -
  val_mean_absolute_error: 642.4076

830 Epoch 415/598
831 30/30 [=====] - 0s 2ms/step - loss: 10187.2061
  - mean_absolute_error: 74.8203 - val_loss: 749254.8125 -
  val_mean_absolute_error: 683.3134

832 Epoch 416/598
833 30/30 [=====] - 0s 2ms/step - loss: 10130.2383
  - mean_absolute_error: 72.4819 - val_loss: 675410.9375 -
  val_mean_absolute_error: 661.2071

834 Epoch 417/598
835 30/30 [=====] - 0s 2ms/step - loss: 9959.8477
  - mean_absolute_error: 73.7366 - val_loss: 717028.1875 -
  val_mean_absolute_error: 682.4034

836 Epoch 418/598
837 30/30 [=====] - 0s 2ms/step - loss: 9873.8018
  - mean_absolute_error: 72.9137 - val_loss: 648920.3125 -
  val_mean_absolute_error: 636.8986

838 Epoch 419/598
839 30/30 [=====] - 0s 2ms/step - loss: 10684.5400
  - mean_absolute_error: 74.7117 - val_loss: 763201.7500 -
  val_mean_absolute_error: 696.5630
```

840	Epoch 420/598	
841	30/30	[=====] - 0s 2ms/step - loss: 10182.5127 - mean_absolute_error: 74.3244 - val_loss: 726198.1250 - val_mean_absolute_error: 670.6572
842	Epoch 421/598	
843	30/30	[=====] - 0s 2ms/step - loss: 12112.6973 - mean_absolute_error: 79.7766 - val_loss: 678977.5000 - val_mean_absolute_error: 672.8343
844	Epoch 422/598	
845	30/30	[=====] - 0s 2ms/step - loss: 10525.0869 - mean_absolute_error: 75.4252 - val_loss: 750007.9375 - val_mean_absolute_error: 705.2073
846	Epoch 423/598	
847	30/30	[=====] - 0s 2ms/step - loss: 9756.9062 - mean_absolute_error: 73.5090 - val_loss: 674345.3125 - val_mean_absolute_error: 662.2764
848	Epoch 424/598	
849	30/30	[=====] - 0s 2ms/step - loss: 11874.3818 - mean_absolute_error: 80.0441 - val_loss: 781681.1250 - val_mean_absolute_error: 704.3535
850	Epoch 425/598	
851	30/30	[=====] - 0s 2ms/step - loss: 10461.8877 - mean_absolute_error: 71.9687 - val_loss: 832462.6250 -

```
851 val_mean_absolute_error: 736.0667
852 Epoch 426/598
853 30/30 [=====] - 0s 2ms/step - Loss: 10779.8896
- mean_absolute_error: 78.6695 - val_loss: 730647.4375 -
val_mean_absolute_error: 673.4977
854 Epoch 427/598
855 30/30 [=====] - 0s 2ms/step - Loss: 10042.9902
- mean_absolute_error: 74.6207 - val_loss: 740768.0000 -
val_mean_absolute_error: 675.7993
856 Epoch 428/598
857 30/30 [=====] - 0s 2ms/step - Loss: 10486.2754
- mean_absolute_error: 74.2485 - val_loss: 683424.3125 -
val_mean_absolute_error: 660.0955
858 Epoch 429/598
859 30/30 [=====] - 0s 2ms/step - Loss: 10979.0166
- mean_absolute_error: 75.1064 - val_loss: 633496.8750 -
val_mean_absolute_error: 629.5261
860 Epoch 430/598
861 30/30 [=====] - 0s 2ms/step - Loss: 10394.5088
- mean_absolute_error: 75.3168 - val_loss: 793439.1250 -
val_mean_absolute_error: 708.2956
862 Epoch 431/598
863 30/30 [=====] - 0s 2ms/step - Loss: 9594.0322
```

```
863 - mean_absolute_error: 70.5101 - val_loss: 743387.5625 -
val_mean_absolute_error: 678.2874
864 Epoch 432/598
865 30/30 [=====] - 0s 2ms/step - Loss: 10831.8584
- mean_absolute_error: 76.9738 - val_loss: 764308.8750 -
val_mean_absolute_error: 709.0604
866 Epoch 433/598
867 30/30 [=====] - 0s 2ms/step - Loss: 10597.1484
- mean_absolute_error: 75.4646 - val_loss: 727785.5625 -
val_mean_absolute_error: 659.9436
868 Epoch 434/598
869 30/30 [=====] - 0s 2ms/step - Loss: 12458.5391
- mean_absolute_error: 83.4160 - val_loss: 811902.8750 -
val_mean_absolute_error: 692.6655
870 Epoch 435/598
871 30/30 [=====] - 0s 2ms/step - Loss: 9689.5684
- mean_absolute_error: 71.9943 - val_loss: 674965.3750 -
val_mean_absolute_error: 661.2949
872 Epoch 436/598
873 30/30 [=====] - 0s 2ms/step - Loss: 10855.4131
- mean_absolute_error: 75.1336 - val_loss: 626653.9375 -
val_mean_absolute_error: 636.9924
874 Epoch 437/598
```

```
875 30/30 [=====] - 0s 2ms/step - loss: 10642.5293
  - mean_absolute_error: 75.8515 - val_loss: 753925.0000 -
    val_mean_absolute_error: 706.0939
876 Epoch 438/598
877 30/30 [=====] - 0s 2ms/step - loss: 10633.4756
  - mean_absolute_error: 73.9992 - val_loss: 781148.2500 -
    val_mean_absolute_error: 698.4339
878 Epoch 439/598
879 30/30 [=====] - 0s 2ms/step - loss: 10079.8750
  - mean_absolute_error: 72.4934 - val_loss: 786852.3750 -
    val_mean_absolute_error: 717.9724
880 Epoch 440/598
881 30/30 [=====] - 0s 2ms/step - loss: 9403.7480
  - mean_absolute_error: 71.2392 - val_loss: 734925.5000 -
    val_mean_absolute_error: 678.7587
882 Epoch 441/598
883 30/30 [=====] - 0s 2ms/step - loss: 9471.5664
  - mean_absolute_error: 69.0335 - val_loss: 691457.3750 -
    val_mean_absolute_error: 660.1215
884 Epoch 442/598
885 30/30 [=====] - 0s 2ms/step - loss: 9899.0078
  - mean_absolute_error: 72.4793 - val_loss: 764907.4375 -
    val_mean_absolute_error: 690.7311
```

886	Epoch 443/598	
887	30/30	[=====] - 0s 2ms/step - loss: 10503.8887 - mean_absolute_error: 70.9389 - val_loss: 717219.5625 - val_mean_absolute_error: 679.5350
888	Epoch 444/598	
889	30/30	[=====] - 0s 2ms/step - loss: 10175.7725 - mean_absolute_error: 71.2190 - val_loss: 811047.7500 - val_mean_absolute_error: 723.6549
890	Epoch 445/598	
891	30/30	[=====] - 0s 2ms/step - loss: 10644.8252 - mean_absolute_error: 75.5730 - val_loss: 728400.5000 - val_mean_absolute_error: 679.3430
892	Epoch 446/598	
893	30/30	[=====] - 0s 2ms/step - loss: 10457.7891 - mean_absolute_error: 72.9924 - val_loss: 789568.0000 - val_mean_absolute_error: 713.1091
894	Epoch 447/598	
895	30/30	[=====] - 0s 2ms/step - loss: 9477.7666 - mean_absolute_error: 72.3947 - val_loss: 629785.3125 - val_mean_absolute_error: 627.1380
896	Epoch 448/598	
897	30/30	[=====] - 0s 2ms/step - loss: 11354.6709 - mean_absolute_error: 77.9292 - val_loss: 795441.1875 -

```
897 val_mean_absolute_error: 709.3139
898 Epoch 449/598
899 30/30 [=====] - 0s 2ms/step - Loss: 9711.9805
- mean_absolute_error: 70.7306 - val_loss: 731400.2500 -
val_mean_absolute_error: 668.3607
900 Epoch 450/598
901 30/30 [=====] - 0s 2ms/step - Loss: 11692.0596
- mean_absolute_error: 82.0508 - val_loss: 801410.8125 -
val_mean_absolute_error: 728.8483
902 Epoch 451/598
903 30/30 [=====] - 0s 2ms/step - Loss: 10114.8428
- mean_absolute_error: 75.1394 - val_loss: 720362.5000 -
val_mean_absolute_error: 684.6122
904 Epoch 452/598
905 30/30 [=====] - 0s 2ms/step - Loss: 10133.5049
- mean_absolute_error: 75.0146 - val_loss: 747693.0000 -
val_mean_absolute_error: 688.9876
906 Epoch 453/598
907 30/30 [=====] - 0s 2ms/step - Loss: 10093.0195
- mean_absolute_error: 69.3797 - val_loss: 772806.0000 -
val_mean_absolute_error: 697.7980
908 Epoch 454/598
909 30/30 [=====] - 0s 2ms/step - Loss: 9984.7383
```

```
909 - mean_absolute_error: 73.6667 - val_loss: 674803.8750 -
val_mean_absolute_error: 662.6937
910 Epoch 455/598
911 30/30 [=====] - 0s 2ms/step - Loss: 10095.3115
- mean_absolute_error: 74.1667 - val_loss: 764343.1875 -
val_mean_absolute_error: 691.3656
912 Epoch 456/598
913 30/30 [=====] - 0s 2ms/step - Loss: 9312.0000
- mean_absolute_error: 70.7874 - val_loss: 694798.6875 -
val_mean_absolute_error: 669.8926
914 Epoch 457/598
915 30/30 [=====] - 0s 2ms/step - Loss: 9876.4463
- mean_absolute_error: 72.4930 - val_loss: 737036.4375 -
val_mean_absolute_error: 692.4581
916 Epoch 458/598
917 30/30 [=====] - 0s 2ms/step - Loss: 10105.3877
- mean_absolute_error: 72.8149 - val_loss: 740510.5625 -
val_mean_absolute_error: 675.2079
918 Epoch 459/598
919 30/30 [=====] - 0s 2ms/step - Loss: 9670.3828
- mean_absolute_error: 71.3067 - val_loss: 716976.4375 -
val_mean_absolute_error: 685.6585
920 Epoch 460/598
```

```
921 30/30 [=====] - 0s 2ms/step - loss: 9023.9766
  - mean_absolute_error: 70.2565 - val_loss: 675003.4375 -
  val_mean_absolute_error: 632.4536
922 Epoch 461/598
923 30/30 [=====] - 0s 2ms/step - loss: 10314.8975
  - mean_absolute_error: 75.4028 - val_loss: 821495.4375 -
  val_mean_absolute_error: 721.1238
924 Epoch 462/598
925 30/30 [=====] - 0s 2ms/step - loss: 10800.2285
  - mean_absolute_error: 75.9149 - val_loss: 821626.2500 -
  val_mean_absolute_error: 740.3862
926 Epoch 463/598
927 30/30 [=====] - 0s 2ms/step - loss: 12376.2910
  - mean_absolute_error: 82.9171 - val_loss: 872771.8125 -
  val_mean_absolute_error: 747.6847
928 Epoch 464/598
929 30/30 [=====] - 0s 2ms/step - loss: 11217.2412
  - mean_absolute_error: 75.6845 - val_loss: 715777.0000 -
  val_mean_absolute_error: 673.5621
930 Epoch 465/598
931 30/30 [=====] - 0s 2ms/step - loss: 9948.0449
  - mean_absolute_error: 72.7088 - val_loss: 712165.7500 -
  val_mean_absolute_error: 665.5496
```

```
932 Epoch 466/598
933 30/30 [=====] - 0s 2ms/step - loss: 9992.3330
    - mean_absolute_error: 72.7906 - val_loss: 660752.1250 -
        val_mean_absolute_error: 648.9810
934 Epoch 467/598
935 30/30 [=====] - 0s 2ms/step - loss: 9274.0693
    - mean_absolute_error: 70.8427 - val_loss: 686708.6875 -
        val_mean_absolute_error: 649.4380
936 Epoch 468/598
937 30/30 [=====] - 0s 2ms/step - loss: 9147.5762
    - mean_absolute_error: 68.9562 - val_loss: 691817.4375 -
        val_mean_absolute_error: 659.2452
938 Epoch 469/598
939 30/30 [=====] - 0s 2ms/step - loss: 9776.1006
    - mean_absolute_error: 71.3324 - val_loss: 695687.1250 -
        val_mean_absolute_error: 673.5447
940 Epoch 470/598
941 30/30 [=====] - 0s 2ms/step - loss: 10273.7930
    - mean_absolute_error: 73.5419 - val_loss: 627634.8750 -
        val_mean_absolute_error: 611.1718
942 Epoch 471/598
943 30/30 [=====] - 0s 2ms/step - loss: 10275.9062
    - mean_absolute_error: 74.1399 - val_loss: 747452.8125 -
```

```
943 val_mean_absolute_error: 693.8506
944 Epoch 472/598
945 30/30 [=====] - 0s 2ms/step - Loss: 10208.5771
- mean_absolute_error: 74.1533 - val_loss: 647979.8125 -
val_mean_absolute_error: 636.2264
946 Epoch 473/598
947 30/30 [=====] - 0s 2ms/step - Loss: 10331.7100
- mean_absolute_error: 75.9945 - val_loss: 763155.5000 -
val_mean_absolute_error: 696.9189
948 Epoch 474/598
949 30/30 [=====] - 0s 2ms/step - Loss: 9716.3643
- mean_absolute_error: 69.8321 - val_loss: 753348.6250 -
val_mean_absolute_error: 699.9311
950 Epoch 475/598
951 30/30 [=====] - 0s 2ms/step - Loss: 10061.5449
- mean_absolute_error: 74.7339 - val_loss: 728627.6875 -
val_mean_absolute_error: 686.6688
952 Epoch 476/598
953 30/30 [=====] - 0s 2ms/step - Loss: 11033.5176
- mean_absolute_error: 79.3721 - val_loss: 691764.9375 -
val_mean_absolute_error: 662.0378
954 Epoch 477/598
955 30/30 [=====] - 0s 2ms/step - Loss: 8990.1904
```

```
955 - mean_absolute_error: 70.0597 - val_loss: 693495.0625 -
    val_mean_absolute_error: 660.9848
956 Epoch 478/598
957 30/30 [=====] - 0s 2ms/step - Loss: 9652.5869
    - mean_absolute_error: 71.2539 - val_loss: 694231.4375 -
    val_mean_absolute_error: 649.4822
958 Epoch 479/598
959 30/30 [=====] - 0s 2ms/step - Loss: 10012.5947
    - mean_absolute_error: 73.8371 - val_loss: 784553.5000 -
    val_mean_absolute_error: 717.1848
960 Epoch 480/598
961 30/30 [=====] - 0s 2ms/step - Loss: 10200.7090
    - mean_absolute_error: 75.7010 - val_loss: 684744.6875 -
    val_mean_absolute_error: 660.7803
962 Epoch 481/598
963 30/30 [=====] - 0s 3ms/step - Loss: 10778.0850
    - mean_absolute_error: 75.7832 - val_loss: 714918.7500 -
    val_mean_absolute_error: 669.7723
964 Epoch 482/598
965 30/30 [=====] - 0s 2ms/step - Loss: 11349.6113
    - mean_absolute_error: 78.8946 - val_loss: 771412.8750 -
    val_mean_absolute_error: 708.8143
966 Epoch 483/598
```

```
967 30/30 [=====] - 0s 2ms/step - loss: 9412.8867
  - mean_absolute_error: 68.9043 - val_loss: 752679.8750 -
  val_mean_absolute_error: 693.6688
968 Epoch 484/598
969 30/30 [=====] - 0s 2ms/step - loss: 9429.6299
  - mean_absolute_error: 72.9449 - val_loss: 750040.5625 -
  val_mean_absolute_error: 696.6656
970 Epoch 485/598
971 30/30 [=====] - 0s 2ms/step - loss: 9832.9238
  - mean_absolute_error: 72.0210 - val_loss: 806786.1250 -
  val_mean_absolute_error: 715.5421
972 Epoch 486/598
973 30/30 [=====] - 0s 2ms/step - loss: 9363.7480
  - mean_absolute_error: 71.2491 - val_loss: 764919.3750 -
  val_mean_absolute_error: 711.4791
974 Epoch 487/598
975 30/30 [=====] - 0s 2ms/step - loss: 9389.4756
  - mean_absolute_error: 70.9398 - val_loss: 721220.3750 -
  val_mean_absolute_error: 689.4090
976 Epoch 488/598
977 30/30 [=====] - 0s 2ms/step - loss: 8499.9980
  - mean_absolute_error: 67.1127 - val_loss: 664777.1875 -
  val_mean_absolute_error: 638.0013
```

```
978 Epoch 489/598
979 30/30 [=====] - 0s 2ms/step - loss: 9709.3916
    - mean_absolute_error: 71.3561 - val_loss: 735669.5000 -
    val_mean_absolute_error: 699.7942
980 Epoch 490/598
981 30/30 [=====] - 0s 2ms/step - loss: 10343.8193
    - mean_absolute_error: 74.0861 - val_loss: 766003.7500 -
    val_mean_absolute_error: 695.3638
982 Epoch 491/598
983 30/30 [=====] - 0s 2ms/step - loss: 10347.5879
    - mean_absolute_error: 73.8627 - val_loss: 686324.6875 -
    val_mean_absolute_error: 655.1950
984 Epoch 492/598
985 30/30 [=====] - 0s 2ms/step - loss: 10164.1172
    - mean_absolute_error: 73.2285 - val_loss: 773900.5625 -
    val_mean_absolute_error: 702.7217
986 Epoch 493/598
987 30/30 [=====] - 0s 2ms/step - loss: 9766.1338
    - mean_absolute_error: 71.6406 - val_loss: 743588.3750 -
    val_mean_absolute_error: 687.9147
988 Epoch 494/598
989 30/30 [=====] - 0s 2ms/step - loss: 9728.4971
    - mean_absolute_error: 71.6020 - val_loss: 747062.6250 -
```

```
989 val_mean_absolute_error: 688.6652
990 Epoch 495/598
991 30/30 [=====] - 0s 2ms/step - loss: 9867.2197
- mean_absolute_error: 72.5305 - val_loss: 687978.0000 -
val_mean_absolute_error: 651.9156
992 Epoch 496/598
993 30/30 [=====] - 0s 2ms/step - loss: 10108.2686
- mean_absolute_error: 72.4325 - val_loss: 737131.1250 -
val_mean_absolute_error: 691.8976
994 Epoch 497/598
995 30/30 [=====] - 0s 2ms/step - loss: 9503.3154
- mean_absolute_error: 70.0380 - val_loss: 735492.3750 -
val_mean_absolute_error: 690.0699
996 Epoch 498/598
997 30/30 [=====] - 0s 2ms/step - loss: 8605.3135
- mean_absolute_error: 67.0119 - val_loss: 784212.1875 -
val_mean_absolute_error: 700.4446
998 Epoch 499/598
999 30/30 [=====] - 0s 2ms/step - loss: 9954.1846
- mean_absolute_error: 71.5141 - val_loss: 752136.0000 -
val_mean_absolute_error: 680.2119
1000 Epoch 500/598
1001 30/30 [=====] - 0s 2ms/step - loss: 9883.3018
```

1001	-	mean_absolute_error:	71.9686	-	val_loss:	744885.9375	-
1002	Epoch	501/598					
1003	30/30	[=====]	-	0s	2ms/step -	loss:	9840.6465
	-	mean_absolute_error:	73.7949	-	val_loss:	718203.9375	-
1004	Epoch	502/598					
1005	30/30	[=====]	-	0s	2ms/step -	loss:	8798.8652
	-	mean_absolute_error:	69.4931	-	val_loss:	721443.3750	-
1006	Epoch	503/598					
1007	30/30	[=====]	-	0s	2ms/step -	loss:	10216.7148
	-	mean_absolute_error:	73.3002	-	val_loss:	679717.1250	-
1008	Epoch	504/598					
1009	30/30	[=====]	-	0s	2ms/step -	loss:	10755.0879
	-	mean_absolute_error:	75.4147	-	val_loss:	788776.8750	-
1010	Epoch	505/598					
1011	30/30	[=====]	-	0s	2ms/step -	loss:	9090.9102
	-	mean_absolute_error:	69.6456	-	val_loss:	720356.1875	-
1012	Epoch	506/598					

1013	30/30	[=====]	- 0s 2ms/step - loss: 9426.0098
		- mean_absolute_error: 71.8312 - val_loss: 704007.2500 -	val_mean_absolute_error: 678.2129
1014	Epoch 507/598	[=====]	- 0s 2ms/step - loss: 9380.8379
1015	30/30	[=====]	- 0s 2ms/step - loss: 9380.8379
		- mean_absolute_error: 70.7710 - val_loss: 772596.8125 -	val_mean_absolute_error: 705.5126
1016	Epoch 508/598	[=====]	- 0s 2ms/step - loss: 9282.2090
1017	30/30	[=====]	- 0s 2ms/step - loss: 9282.2090
		- mean_absolute_error: 69.4331 - val_loss: 736257.7500 -	val_mean_absolute_error: 680.8082
1018	Epoch 509/598	[=====]	- 0s 2ms/step - loss: 10472.8857
1019	30/30	[=====]	- 0s 2ms/step - loss: 10472.8857
		- mean_absolute_error: 72.6976 - val_loss: 789352.4375 -	val_mean_absolute_error: 710.8129
1020	Epoch 510/598	[=====]	- 0s 2ms/step - loss: 120093.0840
1021	30/30	[=====]	- 0s 2ms/step - loss: 120093.0840
		- mean_absolute_error: 82.1630 - val_loss: 788740.8750 -	val_mean_absolute_error: 717.9779
1022	Epoch 511/598	[=====]	- 0s 2ms/step - loss: 9858.7783
1023	30/30	[=====]	- 0s 2ms/step - loss: 9858.7783
		- mean_absolute_error: 74.0587 - val_loss: 787159.0625 -	val_mean_absolute_error: 702.3400

```
1024 Epoch 512/598
1025 30/30 [=====] - 0s 2ms/step - loss: 9293.2412
    - mean_absolute_error: 70.3451 - val_loss: 709495.1250 -
    val_mean_absolute_error: 677.2895
1026 Epoch 513/598
1027 30/30 [=====] - 0s 2ms/step - loss: 9776.6436
    - mean_absolute_error: 72.4762 - val_loss: 775247.8750 -
    val_mean_absolute_error: 707.9032
1028 Epoch 514/598
1029 30/30 [=====] - 0s 2ms/step - loss: 10078.5771
    - mean_absolute_error: 74.2237 - val_loss: 657877.5000 -
    val_mean_absolute_error: 644.2635
1030 Epoch 515/598
1031 30/30 [=====] - 0s 2ms/step - loss: 11611.2607
    - mean_absolute_error: 79.3262 - val_loss: 720188.8750 -
    val_mean_absolute_error: 694.3317
1032 Epoch 516/598
1033 30/30 [=====] - 0s 2ms/step - loss: 9278.6572
    - mean_absolute_error: 71.1218 - val_loss: 723348.5625 -
    val_mean_absolute_error: 665.3277
1034 Epoch 517/598
1035 30/30 [=====] - 0s 2ms/step - loss: 9362.3408
    - mean_absolute_error: 69.5359 - val_loss: 809929.1875 -
```

```
1035 val_mean_absolute_error: 722.3202
1036 Epoch 518/598
1037 30/30 [=====] - 0s 2ms/step - loss: 10290.4824
    - mean_absolute_error: 74.7089 - val_loss: 786128.6250 -
        val_mean_absolute_error: 703.4589
1038 Epoch 519/598
1039 30/30 [=====] - 0s 2ms/step - loss: 10030.3369
    - mean_absolute_error: 70.8685 - val_loss: 784129.5000 -
        val_mean_absolute_error: 709.8278
1040 Epoch 520/598
1041 30/30 [=====] - 0s 2ms/step - loss: 9800.7363
    - mean_absolute_error: 73.8702 - val_loss: 726710.8125 -
        val_mean_absolute_error: 669.5637
1042 Epoch 521/598
1043 30/30 [=====] - 0s 2ms/step - loss: 9693.2256
    - mean_absolute_error: 73.7653 - val_loss: 761337.2500 -
        val_mean_absolute_error: 686.3918
1044 Epoch 522/598
1045 30/30 [=====] - 0s 2ms/step - loss: 10428.9150
    - mean_absolute_error: 74.5677 - val_loss: 730379.8750 -
        val_mean_absolute_error: 672.2623
1046 Epoch 523/598
1047 30/30 [=====] - 0s 2ms/step - loss: 10382.4756
```

```
1047 - mean_absolute_error: 76.7346 - val_loss: 715881.9375 -
    val_mean_absolute_error: 668.1975
1048 Epoch 524/598
1049 30/30 [=====] - 0s 2ms/step - loss: 9826.0488
    - mean_absolute_error: 73.1436 - val_loss: 795906.0625 -
    val_mean_absolute_error: 721.6074
1050 Epoch 525/598
1051 30/30 [=====] - 0s 2ms/step - loss: 10600.4600
    - mean_absolute_error: 76.5671 - val_loss: 657484.3125 -
    val_mean_absolute_error: 638.2881
1052 Epoch 526/598
1053 30/30 [=====] - 0s 2ms/step - loss: 11084.6006
    - mean_absolute_error: 78.6751 - val_loss: 692600.1875 -
    val_mean_absolute_error: 652.7673
1054 Epoch 527/598
1055 30/30 [=====] - 0s 2ms/step - loss: 9456.5869
    - mean_absolute_error: 70.4230 - val_loss: 749337.6875 -
    val_mean_absolute_error: 710.8613
1056 Epoch 528/598
1057 30/30 [=====] - 0s 2ms/step - loss: 10045.3086
    - mean_absolute_error: 73.2351 - val_loss: 777363.8125 -
    val_mean_absolute_error: 694.4771
1058 Epoch 529/598
```

1059	30/30	[=====] - 0s 2ms/step - loss: 9361.2451
	- mean_absolute_error: 70.4420 - val_loss: 723331.0625 -	val_mean_absolute_error: 679.0987
1060	Epoch 530/598	
1061	30/30	[=====] - 0s 2ms/step - loss: 10862.7598
	- mean_absolute_error: 76.2021 - val_loss: 709752.0000 -	val_mean_absolute_error: 681.4198
1062	Epoch 531/598	
1063	30/30	[=====] - 0s 2ms/step - loss: 9908.6621
	- mean_absolute_error: 74.4556 - val_loss: 696074.1875 -	val_mean_absolute_error: 668.2264
1064	Epoch 532/598	
1065	30/30	[=====] - 0s 2ms/step - loss: 9651.2666
	- mean_absolute_error: 70.7142 - val_loss: 652545.5625 -	val_mean_absolute_error: 639.9263
1066	Epoch 533/598	
1067	30/30	[=====] - 0s 2ms/step - loss: 9326.6768
	- mean_absolute_error: 68.2691 - val_loss: 728603.8125 -	val_mean_absolute_error: 681.1667
1068	Epoch 534/598	
1069	30/30	[=====] - 0s 2ms/step - loss: 10228.9492
	- mean_absolute_error: 72.0777 - val_loss: 727774.2500 -	val_mean_absolute_error: 684.2930

1070	Epoch	535/598
1071	30/30	[=====] - 0s 2ms/step - loss: 100080.0146
	- mean_absolute_error:	73.5933 - val_loss: 700986.1875 -
	val_mean_absolute_error:	654.6926
1072	Epoch	536/598
1073	30/30	[=====] - 0s 2ms/step - loss: 9382.7129
	- mean_absolute_error:	69.8186 - val_loss: 688717.9375 -
	val_mean_absolute_error:	673.6379
1074	Epoch	537/598
1075	30/30	[=====] - 0s 2ms/step - loss: 8788.4580
	- mean_absolute_error:	68.2811 - val_loss: 686970.3125 -
	val_mean_absolute_error:	658.1478
1076	Epoch	538/598
1077	30/30	[=====] - 0s 2ms/step - loss: 9700.2803
	- mean_absolute_error:	70.3999 - val_loss: 769382.5625 -
	val_mean_absolute_error:	693.6284
1078	Epoch	539/598
1079	30/30	[=====] - 0s 2ms/step - loss: 9874.4043
	- mean_absolute_error:	72.5617 - val_loss: 778221.9375 -
	val_mean_absolute_error:	698.9024
1080	Epoch	540/598
1081	30/30	[=====] - 0s 2ms/step - loss: 9040.5908
	- mean_absolute_error:	70.4625 - val_loss: 770581.6250 -

1081	val_mean_absolute_error:	700.9112
1082	Epoch	541/598
1083	30/30	[=====] - 0s 2ms/step - loss: 9677.7197 - mean_absolute_error: 71.6379 - val_loss: 769895.8125 - val_mean_absolute_error: 709.0458
1084	Epoch	542/598
1085	30/30	[=====] - 0s 2ms/step - loss: 10962.5029 - mean_absolute_error: 78.8521 - val_loss: 708701.1875 - val_mean_absolute_error: 670.3806
1086	Epoch	543/598
1087	30/30	[=====] - 0s 2ms/step - loss: 9384.2666 - mean_absolute_error: 70.3658 - val_loss: 787989.2500 - val_mean_absolute_error: 710.5106
1088	Epoch	544/598
1089	30/30	[=====] - 0s 2ms/step - loss: 9365.3633 - mean_absolute_error: 69.5790 - val_loss: 721551.5625 - val_mean_absolute_error: 683.1617
1090	Epoch	545/598
1091	30/30	[=====] - 0s 2ms/step - loss: 9156.5488 - mean_absolute_error: 68.9727 - val_loss: 671771.1875 - val_mean_absolute_error: 669.5204
1092	Epoch	546/598
1093	30/30	[=====] - 0s 2ms/step - loss: 9951.3203

```
1093 - mean_absolute_error: 73.5805 - val_loss: 738258.8750 -
    val_mean_absolute_error: 680.6657
1094 Epoch 547/598
1095 30/30 [=====] - 0s 2ms/step - loss: 10676.0439
    - mean_absolute_error: 77.6808 - val_loss: 724509.3125 -
    val_mean_absolute_error: 666.9192
1096 Epoch 548/598
1097 30/30 [=====] - 0s 2ms/step - loss: 9659.3115
    - mean_absolute_error: 72.2638 - val_loss: 740333.8750 -
    val_mean_absolute_error: 689.3350
1098 Epoch 549/598
1099 30/30 [=====] - 0s 2ms/step - loss: 8854.2715
    - mean_absolute_error: 67.4404 - val_loss: 744710.1250 -
    val_mean_absolute_error: 687.6909
1100 Epoch 550/598
1101 30/30 [=====] - 0s 2ms/step - loss: 9433.3672
    - mean_absolute_error: 71.1167 - val_loss: 617496.3125 -
    val_mean_absolute_error: 619.8675
1102 Epoch 551/598
1103 30/30 [=====] - 0s 2ms/step - loss: 9732.9521
    - mean_absolute_error: 72.1290 - val_loss: 714164.9375 -
    val_mean_absolute_error: 677.0289
1104 Epoch 552/598
```

```
1105 30/30 [=====] - 0s 2ms/step - loss: 9030.5127
  - mean_absolute_error: 69.2977 - val_loss: 683718.8750 -
    val_mean_absolute_error: 661.2100

1106 Epoch 553/598
1107 30/30 [=====] - 0s 2ms/step - loss: 8639.7109
  - mean_absolute_error: 68.3937 - val_loss: 722782.3125 -
    val_mean_absolute_error: 674.5758

1108 Epoch 554/598
1109 30/30 [=====] - 0s 2ms/step - loss: 9668.4492
  - mean_absolute_error: 73.1873 - val_loss: 750088.6875 -
    val_mean_absolute_error: 691.6136

1110 Epoch 555/598
1111 30/30 [=====] - 0s 2ms/step - loss: 9461.5850
  - mean_absolute_error: 71.7680 - val_loss: 772682.0625 -
    val_mean_absolute_error: 701.0919

1112 Epoch 556/598
1113 30/30 [=====] - 0s 2ms/step - loss: 8781.6982
  - mean_absolute_error: 67.6327 - val_loss: 720623.8125 -
    val_mean_absolute_error: 668.6572

1114 Epoch 557/598
1115 30/30 [=====] - 0s 2ms/step - loss: 9091.1543
  - mean_absolute_error: 69.5013 - val_loss: 682730.0000 -
    val_mean_absolute_error: 664.0688
```

1116	Epoch	558/598
1117	30/30	[=====] - 0s 2ms/step - loss: 9633.3467
	- mean_absolute_error:	70.6200 - val_loss: 686941.1250 -
	val_mean_absolute_error:	666.5189
1118	Epoch	559/598
1119	30/30	[=====] - 0s 2ms/step - loss: 9454.5166
	- mean_absolute_error:	71.1843 - val_loss: 798959.5000 -
	val_mean_absolute_error:	722.9359
1120	Epoch	560/598
1121	30/30	[=====] - 0s 2ms/step - loss: 10680.7705
	- mean_absolute_error:	77.7866 - val_loss: 621942.4375 -
	val_mean_absolute_error:	619.8720
1122	Epoch	561/598
1123	30/30	[=====] - 0s 2ms/step - loss: 9751.2656
	- mean_absolute_error:	73.6923 - val_loss: 696779.0625 -
	val_mean_absolute_error:	663.9230
1124	Epoch	562/598
1125	30/30	[=====] - 0s 2ms/step - loss: 8680.8174
	- mean_absolute_error:	68.0883 - val_loss: 738885.9375 -
	val_mean_absolute_error:	673.5466
1126	Epoch	563/598
1127	30/30	[=====] - 0s 2ms/step - loss: 10291.4961
	- mean_absolute_error:	74.3523 - val_loss: 819722.4375 -

```
1127 val_mean_absolute_error: 738.0334
1128 Epoch 564/598
1129 30/30 [=====] - 0s 2ms/step - loss: 10271.6123
    - mean_absolute_error: 75.3652 - val_loss: 694302.3750 -
    val_mean_absolute_error: 673.2900
1130 Epoch 565/598
1131 30/30 [=====] - 0s 2ms/step - loss: 8868.0859
    - mean_absolute_error: 69.2401 - val_loss: 721060.6875 -
    val_mean_absolute_error: 675.0879
1132 Epoch 566/598
1133 30/30 [=====] - 0s 2ms/step - loss: 9373.3730
    - mean_absolute_error: 70.8610 - val_loss: 750288.7500 -
    val_mean_absolute_error: 687.6035
1134 Epoch 567/598
1135 30/30 [=====] - 0s 2ms/step - loss: 10175.3496
    - mean_absolute_error: 73.9702 - val_loss: 781499.4375 -
    val_mean_absolute_error: 717.6127
1136 Epoch 568/598
1137 30/30 [=====] - 0s 2ms/step - loss: 10001.7158
    - mean_absolute_error: 72.4573 - val_loss: 667270.0000 -
    val_mean_absolute_error: 652.3846
1138 Epoch 569/598
1139 30/30 [=====] - 0s 2ms/step - loss: 8383.7578
```

```
1139 - mean_absolute_error: 66.5015 - val_loss: 737843.50000 -
    val_mean_absolute_error: 688.4976
1140 Epoch 570/598
1141 30/30 [=====] - 0s 2ms/step - loss: 9229.5273
    - mean_absolute_error: 70.1607 - val_loss: 817214.3750 -
    val_mean_absolute_error: 716.8372
1142 Epoch 571/598
1143 30/30 [=====] - 0s 2ms/step - loss: 9139.0303
    - mean_absolute_error: 67.8598 - val_loss: 674107.1875 -
    val_mean_absolute_error: 656.1895
1144 Epoch 572/598
1145 30/30 [=====] - 0s 2ms/step - loss: 9321.0352
    - mean_absolute_error: 70.3769 - val_loss: 689231.3750 -
    val_mean_absolute_error: 654.1865
1146 Epoch 573/598
1147 30/30 [=====] - 0s 2ms/step - loss: 9920.7275
    - mean_absolute_error: 74.3758 - val_loss: 793730.6250 -
    val_mean_absolute_error: 725.2338
1148 Epoch 574/598
1149 30/30 [=====] - 0s 2ms/step - loss: 10652.2383
    - mean_absolute_error: 75.8793 - val_loss: 674202.1875 -
    val_mean_absolute_error: 659.1467
1150 Epoch 575/598
```

```
1151 30/30 [=====] - 0s 2ms/step - loss: 8878.4707
  - mean_absolute_error: 68.4270 - val_loss: 753309.6250 -
    val_mean_absolute_error: 705.9252
1152 Epoch 576/598
1153 30/30 [=====] - 0s 2ms/step - loss: 9537.8613
  - mean_absolute_error: 71.3052 - val_loss: 750980.8750 -
    val_mean_absolute_error: 680.8730
1154 Epoch 577/598
1155 30/30 [=====] - 0s 2ms/step - loss: 8969.9180
  - mean_absolute_error: 69.0141 - val_loss: 780334.6250 -
    val_mean_absolute_error: 702.0822
1156 Epoch 578/598
1157 30/30 [=====] - 0s 2ms/step - loss: 9651.8213
  - mean_absolute_error: 71.4050 - val_loss: 831336.6875 -
    val_mean_absolute_error: 732.4460
1158 Epoch 579/598
1159 30/30 [=====] - 0s 2ms/step - loss: 10252.0352
  - mean_absolute_error: 73.8006 - val_loss: 663756.2500 -
    val_mean_absolute_error: 650.8889
1160 Epoch 580/598
1161 30/30 [=====] - 0s 4ms/step - loss: 10441.4453
  - mean_absolute_error: 73.3995 - val_loss: 629590.3750 -
    val_mean_absolute_error: 630.1215
```

1162	Epoch	581/598
1163	30/30	[=====] - 0s 2ms/step - loss: 9968.2344 - mean_absolute_error: 74.9095 - val_loss: 707952.4375 - val_mean_absolute_error: 674.7030
1164	Epoch	582/598
1165	30/30	[=====] - 0s 2ms/step - loss: 8784.0029 - mean_absolute_error: 70.6877 - val_loss: 764620.8750 - val_mean_absolute_error: 691.6846
1166	Epoch	583/598
1167	30/30	[=====] - 0s 2ms/step - loss: 8416.2578 - mean_absolute_error: 67.1805 - val_loss: 719141.0000 - val_mean_absolute_error: 661.7760
1168	Epoch	584/598
1169	30/30	[=====] - 0s 2ms/step - loss: 9265.8594 - mean_absolute_error: 69.6828 - val_loss: 721833.4375 - val_mean_absolute_error: 689.4419
1170	Epoch	585/598
1171	30/30	[=====] - 0s 2ms/step - loss: 100086.1299 - mean_absolute_error: 75.7928 - val_loss: 727374.6250 - val_mean_absolute_error: 674.9183
1172	Epoch	586/598
1173	30/30	[=====] - 0s 2ms/step - loss: 9309.0615 - mean_absolute_error: 69.5920 - val_loss: 714807.5625 -

```
1173 val_mean_absolute_error: 674.9798
1174 Epoch 587/598
1175 30/30 [=====] - 0s 2ms/step - loss: 9364.5850
    - mean_absolute_error: 70.9260 - val_loss: 752095.8125 -
        val_mean_absolute_error: 696.5242
1176 Epoch 588/598
1177 30/30 [=====] - 0s 2ms/step - loss: 9555.1602
    - mean_absolute_error: 71.1528 - val_loss: 702569.6875 -
        val_mean_absolute_error: 696.5242
1178 Epoch 589/598
1179 30/30 [=====] - 0s 2ms/step - loss: 9387.4297
    - mean_absolute_error: 72.4857 - val_loss: 772043.5000 -
        val_mean_absolute_error: 659.1944
1180 Epoch 590/598
1181 30/30 [=====] - 0s 2ms/step - loss: 8755.7676
    - mean_absolute_error: 69.6324 - val_loss: 688367.5000 -
        val_mean_absolute_error: 672.4813
1182 Epoch 591/598
1183 30/30 [=====] - 0s 2ms/step - loss: 9059.5361
    - mean_absolute_error: 68.8769 - val_loss: 762768.2500 -
        val_mean_absolute_error: 689.1848
1184 Epoch 592/598
1185 30/30 [=====] - 0s 2ms/step - loss: 10214.8525
```

```
1185 - mean_absolute_error: 72.5626 - val_loss: 725354.2500 -
    val_mean_absolute_error: 684.3393
1186 Epoch 593/598
1187 30/30 [=====] - 0s 2ms/step - loss: 9604.6006
    - mean_absolute_error: 70.5210 - val_loss: 816218.7500 -
    val_mean_absolute_error: 717.8031
1188 Epoch 594/598
1189 30/30 [=====] - 0s 2ms/step - loss: 9171.5820
    - mean_absolute_error: 71.1033 - val_loss: 765038.7500 -
    val_mean_absolute_error: 698.8436
1190 Epoch 595/598
1191 30/30 [=====] - 0s 2ms/step - loss: 9032.3701
    - mean_absolute_error: 68.6092 - val_loss: 699572.2500 -
    val_mean_absolute_error: 672.0836
1192 Epoch 596/598
1193 30/30 [=====] - 0s 2ms/step - loss: 9311.8867
    - mean_absolute_error: 68.2805 - val_loss: 790149.6250 -
    val_mean_absolute_error: 718.8926
1194 Epoch 597/598
1195 30/30 [=====] - 0s 2ms/step - loss: 8853.8887
    - mean_absolute_error: 69.9036 - val_loss: 800176.2500 -
    val_mean_absolute_error: 716.7007
1196 Epoch 598/598
```

```
1197 30/30 [=====] - 0s 2ms/step - loss: 8721.9639
  - mean_absolute_error: 68.5377 - val_loss: 736896.0625 -
    val_mean_absolute_error: 693.8702
1198 30/30 [=====] - 0s 631us/step
1199 4/4 [=====] - 0s 780us/step
1200 4/4 [=====] - 0s 1ms/step
1201 Train Data Mean Absolute Error (MAE): 61.65299987792969
1202 Train Data Mean Absolute Percentage Error (MAPE): 0.008999999612569809
1203 Train Data Root Mean Squared Error (RMSE): 83.044
1204 Validation Data Mean Absolute Error (MAE): 693.8699951171875
1205 Validation Data Mean Absolute Percentage Error (MAPE): 0.
09700000286102295
1206 Validation Data Root Mean Squared Error (RMSE): 858.426
1207 Testing Data Mean Absolute Error (MAE): 1180.675048828125
1208 Testing Data Mean Absolute Percentage Error (MAPE): 0.15399999916553497
1209 Testing Data Root Mean Squared Error (RMSE): 1280.573
1210
1211
1212 Variable N Mean SD 95% Conf. Interval
1213 0 Close 936.0 6908.7342 535.9311 17.5175 6874.3561 6943.1123
1214 The Train Count is: 936
1215 The Train Max is: 7581.721
1216 The Train Min is: 5223.6284
```

```
1217 The Train Kurtosis is: 0.03146737874710359
1218 The Train Skew is: -1.0029782081212244
1219 -
-----
```

	Variable	N	Mean	SD	SE	95% Conf.	Interval
1220							
1221							
1222							
1223	0 Close	116.0	6580.1894	706.0691	65.5569	6450.3339	6710.045
1224	The Validation Count	is:	116				
1225	The Validation Max	is:	7574.8877				
1226	The Validation Min	is:	5207.187				
1227	The Validation Kurtosis	is:	-1.033479658834696				
1228	The Validation Skew	is:	-0.404253623561174				
1229							
-----							
1230							
1231							
1232							
1233	0 Close	117.0	6552.3183	658.1059	60.8419	6431.8132	6672.8234
1234	The Test Count	is:	117				
1235	The Test Max	is:	7590.9473				
1236	The Test Min	is:	5210.0615				
1237	The Test Kurtosis	is:	-0.9036590096379351				

```
1238 The Test Skew is: -0.4375724180981589
1239
1240 Process finished with exit code 0
1241
```