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1 "C:\Users\asied\OneDrive\Documents\Coding Related Things\Garch Volatility  
Forecasting\venv\Scripts\python.exe" "C:/Users/asied/OneDrive/Documents/  
Coding Related Things/Garch Volatility Forecasting/BitcoinLSTM.py"  
2 Epoch 1/200  
3 43/43 [=====] - 0s 8ms/step - loss: 868005248.  
0000 - mean_absolute_error: 22801.0195 - val_loss: 373793120.0000 -  
val_mean_absolute_error: 19203.9785  
4 Epoch 2/200  
5 43/43 [=====] - 0s 2ms/step - loss: 743700352.  
0000 - mean_absolute_error: 19893.8965 - val_loss: 143741280.0000 -  
val_mean_absolute_error: 11780.8516  
6 Epoch 3/200  
7 43/43 [=====] - 0s 2ms/step - loss: 443910272.  
0000 - mean_absolute_error: 16408.9121 - val_loss: 8994142.0000 -  
val_mean_absolute_error: 2546.2498  
8 Epoch 4/200  
9 43/43 [=====] - 0s 2ms/step - loss: 332246400.  
0000 - mean_absolute_error: 14223.9629 - val_loss: 61793812.0000 -  
val_mean_absolute_error: 7528.7354  
10 Epoch 5/200  
11 43/43 [=====] - 0s 2ms/step - loss: 104548072.  
0000 - mean_absolute_error: 6561.9189 - val_loss: 226696176.0000 -  
val_mean_absolute_error: 14069.1504
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12 Epoch 6/200
13 43/43 [=====] - 0s 2ms/step - loss: 69587776.
0000 - mean_absolute_error: 5269.8550 - val_loss: 267355840.0000 -
val_mean_absolute_error: 14849.2578
14 Epoch 7/200
15 43/43 [=====] - 0s 2ms/step - loss: 78625296.
0000 - mean_absolute_error: 5595.8389 - val_loss: 221099328.0000 -
val_mean_absolute_error: 13220.7764
16 Epoch 8/200
17 43/43 [=====] - 0s 2ms/step - loss: 66119968.
0000 - mean_absolute_error: 5284.2705 - val_loss: 291019680.0000 -
val_mean_absolute_error: 15032.1416
18 Epoch 9/200
19 43/43 [=====] - 0s 2ms/step - loss: 60557036.
0000 - mean_absolute_error: 5116.5396 - val_loss: 350377056.0000 -
val_mean_absolute_error: 16430.9160
20 Epoch 10/200
21 43/43 [=====] - 0s 2ms/step - loss: 59631440.
0000 - mean_absolute_error: 4890.7524 - val_loss: 266194656.0000 -
val_mean_absolute_error: 13769.8105
22 Epoch 11/200
23 43/43 [=====] - 0s 2ms/step - loss: 61909968.
0000 - mean_absolute_error: 4992.1836 - val_loss: 380777632.0000 -
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23 val_mean_absolute_error: 17207.5410
24 Epoch 12/200
25 43/43 [=====] - 0s 2ms/step - loss: 63131576.
0000 - mean_absolute_error: 5000.7959 - val_loss: 336943232.0000 -
val_mean_absolute_error: 15870.7676
26 Epoch 13/200
27 43/43 [=====] - 0s 2ms/step - loss: 56331132.
0000 - mean_absolute_error: 4794.1182 - val_loss: 332856864.0000 -
val_mean_absolute_error: 15860.5107
28 Epoch 14/200
29 43/43 [=====] - 0s 2ms/step - loss: 55578552.
0000 - mean_absolute_error: 4610.5942 - val_loss: 306463680.0000 -
val_mean_absolute_error: 14887.9268
30 Epoch 15/200
31 43/43 [=====] - 0s 2ms/step - loss: 46908472.
0000 - mean_absolute_error: 4362.3525 - val_loss: 317913152.0000 -
val_mean_absolute_error: 15259.8311
32 Epoch 16/200
33 43/43 [=====] - 0s 2ms/step - loss: 53558868.
0000 - mean_absolute_error: 4599.6626 - val_loss: 279201984.0000 -
val_mean_absolute_error: 14160.9268
34 Epoch 17/200
35 43/43 [=====] - 0s 2ms/step - loss: 58304748.
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35 0000 - mean_absolute_error: 4763.4219 - val_loss: 318054048.0000 -
    val_mean_absolute_error: 15100.1338
36 Epoch 18/200
37 43/43 [=====] - 0s 2ms/step - loss: 59284728.
0000 - mean_absolute_error: 4779.5845 - val_loss: 214892128.0000 -
    val_mean_absolute_error: 11984.5439
38 Epoch 19/200
39 43/43 [=====] - 0s 2ms/step - loss: 60163916.
0000 - mean_absolute_error: 4794.1260 - val_loss: 252886144.0000 -
    val_mean_absolute_error: 13498.6973
40 Epoch 20/200
41 43/43 [=====] - 0s 2ms/step - loss: 54646640.
0000 - mean_absolute_error: 4600.9399 - val_loss: 253738720.0000 -
    val_mean_absolute_error: 13480.7158
42 Epoch 21/200
43 43/43 [=====] - 0s 2ms/step - loss: 58639480.
0000 - mean_absolute_error: 4797.1929 - val_loss: 232557296.0000 -
    val_mean_absolute_error: 12822.7637
44 Epoch 22/200
45 43/43 [=====] - 0s 2ms/step - loss: 56832928.
0000 - mean_absolute_error: 4687.2378 - val_loss: 264038544.0000 -
    val_mean_absolute_error: 13590.9102
46 Epoch 23/200
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47 43/43 [=====] - 0s 2ms/step - loss: 59983864.  
0000 - mean_absolute_error: 4694.6055 - val_loss: 220536368.0000 -  
val_mean_absolute_error: 12478.0293  
48 Epoch 24/200  
49 43/43 [=====] - 0s 2ms/step - loss: 53677820.  
0000 - mean_absolute_error: 4525.8213 - val_loss: 343289472.0000 -  
val_mean_absolute_error: 15781.9102  
50 Epoch 25/200  
51 43/43 [=====] - 0s 2ms/step - loss: 58239332.  
0000 - mean_absolute_error: 4632.2271 - val_loss: 300704768.0000 -  
val_mean_absolute_error: 14710.2217  
52 Epoch 26/200  
53 43/43 [=====] - 0s 2ms/step - loss: 61356564.  
0000 - mean_absolute_error: 4767.6206 - val_loss: 355076160.0000 -  
val_mean_absolute_error: 15961.6416  
54 Epoch 27/200  
55 43/43 [=====] - 0s 2ms/step - loss: 56331980.  
0000 - mean_absolute_error: 4686.8833 - val_loss: 327755744.0000 -  
val_mean_absolute_error: 15496.0059  
56 Epoch 28/200  
57 43/43 [=====] - 0s 2ms/step - loss: 47686784.  
0000 - mean_absolute_error: 4261.0781 - val_loss: 272140928.0000 -  
val_mean_absolute_error: 14134.8984
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58 Epoch 29/200
59 43/43 [=====] - 0s 2ms/step - loss: 47997872.
  0000 - mean_absolute_error: 4276.8467 - val_loss: 380886208.0000 -
val_mean_absolute_error: 16608.9316

60 Epoch 30/200
61 43/43 [=====] - 0s 2ms/step - loss: 48074576.
  0000 - mean_absolute_error: 4313.5767 - val_loss: 325263360.0000 -
val_mean_absolute_error: 15144.9941

62 Epoch 31/200
63 43/43 [=====] - 0s 2ms/step - loss: 49095648.
  0000 - mean_absolute_error: 4262.8892 - val_loss: 269308192.0000 -
val_mean_absolute_error: 13720.8408

64 Epoch 32/200
65 43/43 [=====] - 0s 2ms/step - loss: 49141772.
  0000 - mean_absolute_error: 4277.9888 - val_loss: 304246624.0000 -
val_mean_absolute_error: 14941.1709

66 Epoch 33/200
67 43/43 [=====] - 0s 2ms/step - loss: 46656616.
  0000 - mean_absolute_error: 4258.9199 - val_loss: 252063120.0000 -
val_mean_absolute_error: 13117.7607

68 Epoch 34/200
69 43/43 [=====] - 0s 2ms/step - loss: 51859136.
  0000 - mean_absolute_error: 4402.5513 - val_loss: 292478944.0000 -
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69 val_mean_absolute_error: 14679.3643
70 Epoch 35/200
71 43/43 [=====] - 0s 2ms/step - loss: 49110596.
0000 - mean_absolute_error: 4419.3696 - val_loss: 252239200.0000 -
val_mean_absolute_error: 13400.2266
72 Epoch 36/200
73 43/43 [=====] - 0s 2ms/step - loss: 50653812.
0000 - mean_absolute_error: 4418.0962 - val_loss: 269839392.0000 -
val_mean_absolute_error: 13599.8428
74 Epoch 37/200
75 43/43 [=====] - 0s 2ms/step - loss: 52971428.
0000 - mean_absolute_error: 4391.2188 - val_loss: 234756272.0000 -
val_mean_absolute_error: 12817.2266
76 Epoch 38/200
77 43/43 [=====] - 0s 2ms/step - loss: 51040616.
0000 - mean_absolute_error: 4383.5757 - val_loss: 224888560.0000 -
val_mean_absolute_error: 12691.2422
78 Epoch 39/200
79 43/43 [=====] - 0s 2ms/step - loss: 57342444.
0000 - mean_absolute_error: 4530.8281 - val_loss: 280059072.0000 -
val_mean_absolute_error: 14318.0059
80 Epoch 40/200
81 43/43 [=====] - 0s 2ms/step - loss: 431500052.
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81 0000 - mean_absolute_error: 4063.4944 - val_loss: 296843712.0000 -
val_mean_absolute_error: 14529.7930
82 Epoch 41/200
83 43/43 [=====] - 0s 2ms/step - Loss: 41639408.
0000 - mean_absolute_error: 4055.1497 - val_loss: 283118592.0000 -
val_mean_absolute_error: 14251.0840
84 Epoch 42/200
85 43/43 [=====] - 0s 2ms/step - Loss: 52949264.
0000 - mean_absolute_error: 4475.3286 - val_loss: 331610176.0000 -
val_mean_absolute_error: 15531.4248
86 Epoch 43/200
87 43/43 [=====] - 0s 2ms/step - Loss: 45868644.
0000 - mean_absolute_error: 4186.6138 - val_loss: 226469968.0000 -
val_mean_absolute_error: 12523.3027
88 Epoch 44/200
89 43/43 [=====] - 0s 2ms/step - Loss: 45779500.
0000 - mean_absolute_error: 4238.4097 - val_loss: 282848288.0000 -
val_mean_absolute_error: 14069.2793
90 Epoch 45/200
91 43/43 [=====] - 0s 2ms/step - Loss: 47734656.
0000 - mean_absolute_error: 4280.2090 - val_loss: 304521504.0000 -
val_mean_absolute_error: 14681.5205
92 Epoch 46/200
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93 43/43 [=====] - 0s 2ms/step - loss: 47205108.  
0000 - mean_absolute_error: 4250.5903 - val_loss: 280644416.0000 -  
val_mean_absolute_error: 14002.9062  
94 Epoch 47/200  
95 43/43 [=====] - 0s 2ms/step - loss: 43880836.  
0000 - mean_absolute_error: 4147.3984 - val_loss: 257081312.0000 -  
val_mean_absolute_error: 13520.1533  
96 Epoch 48/200  
97 43/43 [=====] - 0s 2ms/step - loss: 43305052.  
0000 - mean_absolute_error: 4133.8257 - val_loss: 276467968.0000 -  
val_mean_absolute_error: 14166.7988  
98 Epoch 49/200  
99 43/43 [=====] - 0s 2ms/step - loss: 40805952.  
0000 - mean_absolute_error: 3983.4067 - val_loss: 289266560.0000 -  
val_mean_absolute_error: 14459.6943  
100 Epoch 50/200  
101 43/43 [=====] - 0s 2ms/step - loss: 47570416.  
0000 - mean_absolute_error: 4279.0112 - val_loss: 277691488.0000 -  
val_mean_absolute_error: 14073.2783  
102 Epoch 51/200  
103 43/43 [=====] - 0s 2ms/step - loss: 46354920.  
0000 - mean_absolute_error: 4162.3716 - val_loss: 247503024.0000 -  
val_mean_absolute_error: 13363.3047
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104 Epoch 52/200
105 43/43 [=====] - 0s 2ms/step - loss: 47913360.
0000 - mean_absolute_error: 4139.7642 - val_loss: 285047744.0000 -
val_mean_absolute_error: 14530.3164

106 Epoch 53/200
107 43/43 [=====] - 0s 2ms/step - loss: 42978780.
0000 - mean_absolute_error: 3992.8052 - val_loss: 291271136.0000 -
val_mean_absolute_error: 14640.4102

108 Epoch 54/200
109 43/43 [=====] - 0s 2ms/step - loss: 41914916.
0000 - mean_absolute_error: 4035.5830 - val_loss: 312496480.0000 -
val_mean_absolute_error: 15040.2725

110 Epoch 55/200
111 43/43 [=====] - 0s 2ms/step - loss: 41779604.
0000 - mean_absolute_error: 4008.9475 - val_loss: 329071072.0000 -
val_mean_absolute_error: 15374.4297

112 Epoch 56/200
113 43/43 [=====] - 0s 2ms/step - loss: 44715656.
0000 - mean_absolute_error: 4107.5796 - val_loss: 247067776.0000 -
val_mean_absolute_error: 13281.9854

114 Epoch 57/200
115 43/43 [=====] - 0s 2ms/step - loss: 39828952.
0000 - mean_absolute_error: 4038.3162 - val_loss: 270563456.0000 -
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115 val_mean_absolute_error: 14062.2041
116 Epoch 58/200
117 43/43 [=====] - 0s 2ms/step - loss: 45761220.
0000 - mean_absolute_error: 4139.0908 - val_loss: 253539216.0000 -
val_mean_absolute_error: 13467.9980
118 Epoch 59/200
119 43/43 [=====] - 0s 2ms/step - loss: 42287188.
0000 - mean_absolute_error: 4100.7188 - val_loss: 2500589712.0000 -
val_mean_absolute_error: 13076.7441
120 Epoch 60/200
121 43/43 [=====] - 0s 2ms/step - loss: 43711440.
0000 - mean_absolute_error: 4091.0247 - val_loss: 268288192.0000 -
val_mean_absolute_error: 13854.3975
122 Epoch 61/200
123 43/43 [=====] - 0s 2ms/step - loss: 42723936.
0000 - mean_absolute_error: 4021.6338 - val_loss: 274499872.0000 -
val_mean_absolute_error: 13866.8340
124 Epoch 62/200
125 43/43 [=====] - 0s 2ms/step - loss: 42996856.
0000 - mean_absolute_error: 4005.3940 - val_loss: 269504672.0000 -
val_mean_absolute_error: 13758.8584
126 Epoch 63/200
127 43/43 [=====] - 0s 2ms/step - loss: 43847252.
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127 0000 - mean_absolute_error: 4165.8389 - val_loss: 295051008.0000 -
    val_mean_absolute_error: 14509.3750
128 Epoch 64/200
129 43/43 [=====] - 0s 2ms/step - Loss: 41941876.
0000 - mean_absolute_error: 4000.5437 - val_loss: 228337088.0000 -
    val_mean_absolute_error: 12478.8086
130 Epoch 65/200
131 43/43 [=====] - 0s 2ms/step - Loss: 37215244.
0000 - mean_absolute_error: 3777.7878 - val_loss: 259804608.0000 -
    val_mean_absolute_error: 13601.9395
132 Epoch 66/200
133 43/43 [=====] - 0s 2ms/step - Loss: 36105196.
0000 - mean_absolute_error: 3780.9534 - val_loss: 281819200.0000 -
    val_mean_absolute_error: 14290.7363
134 Epoch 67/200
135 43/43 [=====] - 0s 2ms/step - Loss: 40175208.
0000 - mean_absolute_error: 3992.1895 - val_loss: 286376288.0000 -
    val_mean_absolute_error: 14509.1768
136 Epoch 68/200
137 43/43 [=====] - 0s 2ms/step - Loss: 38769588.
0000 - mean_absolute_error: 3881.2791 - val_loss: 253460016.0000 -
    val_mean_absolute_error: 13483.6826
138 Epoch 69/200
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139 43/43 [=====] - 0s 2ms/step - loss: 38473656.  
0000 - mean_absolute_error: 3884.0894 - val_loss: 201610944.0000 -  
val_mean_absolute_error: 11888.6162  
140 Epoch 70/200  
141 43/43 [=====] - 0s 2ms/step - loss: 36142668.  
0000 - mean_absolute_error: 3825.7136 - val_loss: 223285424.0000 -  
val_mean_absolute_error: 12507.9014  
142 Epoch 71/200  
143 43/43 [=====] - 0s 2ms/step - loss: 33503064.  
0000 - mean_absolute_error: 3668.2092 - val_loss: 287147296.0000 -  
val_mean_absolute_error: 14240.5898  
144 Epoch 72/200  
145 43/43 [=====] - 0s 2ms/step - loss: 41557228.  
0000 - mean_absolute_error: 3965.3472 - val_loss: 231256688.0000 -  
val_mean_absolute_error: 12637.1201  
146 Epoch 73/200  
147 43/43 [=====] - 0s 2ms/step - loss: 39490616.  
0000 - mean_absolute_error: 3946.0137 - val_loss: 246104352.0000 -  
val_mean_absolute_error: 13201.4541  
148 Epoch 74/200  
149 43/43 [=====] - 0s 2ms/step - loss: 38682392.  
0000 - mean_absolute_error: 3830.7761 - val_loss: 229115568.0000 -  
val_mean_absolute_error: 12667.2812
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150 Epoch 75/200
151 43/43 [=====] - 0s 2ms/step - loss: 36935240.
0000 - mean_absolute_error: 3818.7444 - val_loss: 228215984.0000 -
val_mean_absolute_error: 12894.7002
152 Epoch 76/200
153 43/43 [=====] - 0s 2ms/step - loss: 37861748.
0000 - mean_absolute_error: 3797.8813 - val_loss: 193461488.0000 -
val_mean_absolute_error: 11695.2842
154 Epoch 77/200
155 43/43 [=====] - 0s 2ms/step - loss: 32655110.
0000 - mean_absolute_error: 3610.4985 - val_loss: 229959264.0000 -
val_mean_absolute_error: 12962.2246
156 Epoch 78/200
157 43/43 [=====] - 0s 2ms/step - loss: 36269224.
0000 - mean_absolute_error: 3846.9192 - val_loss: 251823136.0000 -
val_mean_absolute_error: 13421.4043
158 Epoch 79/200
159 43/43 [=====] - 0s 2ms/step - loss: 37509032.
0000 - mean_absolute_error: 3767.7332 - val_loss: 226817520.0000 -
val_mean_absolute_error: 12704.9062
160 Epoch 80/200
161 43/43 [=====] - 0s 2ms/step - loss: 34137132.
0000 - mean_absolute_error: 3738.9434 - val_loss: 179994464.0000 -
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161 val_mean_absolute_error: 11360.0459
162 Epoch 81/200
163 43/43 [=====] - 0s 2ms/step - loss: 328888098.
0000 - mean_absolute_error: 3599.1655 - val_loss: 237946256.0000 -
val_mean_absolute_error: 13068.0820
164 Epoch 82/200
165 43/43 [=====] - 0s 2ms/step - loss: 32203728.
0000 - mean_absolute_error: 3537.0371 - val_loss: 178935584.0000 -
val_mean_absolute_error: 11265.4072
166 Epoch 83/200
167 43/43 [=====] - 0s 2ms/step - loss: 32308010.
0000 - mean_absolute_error: 3569.6990 - val_loss: 195843088.0000 -
val_mean_absolute_error: 11687.6621
168 Epoch 84/200
169 43/43 [=====] - 0s 2ms/step - loss: 33618156.
0000 - mean_absolute_error: 3570.5596 - val_loss: 191451968.0000 -
val_mean_absolute_error: 11732.7148
170 Epoch 85/200
171 43/43 [=====] - 0s 2ms/step - loss: 27881722.
0000 - mean_absolute_error: 3320.2959 - val_loss: 166240240.0000 -
val_mean_absolute_error: 11026.9512
172 Epoch 86/200
173 43/43 [=====] - 0s 2ms/step - loss: 29883658.
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173 0000 - mean_absolute_error: 3433.0562 - val_loss: 163025792.0000 -
    val_mean_absolute_error: 10980.5459
174 Epoch 87/200
175 43/43 [=====] - 0s 2ms/step - Loss: 33452516.
0000 - mean_absolute_error: 3511.5049 - val_loss: 196228704.0000 -
    val_mean_absolute_error: 11838.4014
176 Epoch 88/200
177 43/43 [=====] - 0s 2ms/step - Loss: 29838204.
0000 - mean_absolute_error: 3409.4121 - val_loss: 215832544.0000 -
    val_mean_absolute_error: 12110.7305
178 Epoch 89/200
179 43/43 [=====] - 0s 2ms/step - Loss: 31033444.
0000 - mean_absolute_error: 3424.1611 - val_loss: 231242784.0000 -
    val_mean_absolute_error: 12870.7520
180 Epoch 90/200
181 43/43 [=====] - 0s 2ms/step - Loss: 33698604.
0000 - mean_absolute_error: 3608.2981 - val_loss: 208331216.0000 -
    val_mean_absolute_error: 12168.3223
182 Epoch 91/200
183 43/43 [=====] - 0s 2ms/step - Loss: 28448940.
0000 - mean_absolute_error: 3323.9067 - val_loss: 174262144.0000 -
    val_mean_absolute_error: 10966.6123
184 Epoch 92/200
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185 43/43 [=====] - 0s 2ms/step - loss: 29901272.  
0000 - mean_absolute_error: 3447.2078 - val_loss: 192686944.0000 -  
val_mean_absolute_error: 11635.0107  
186 Epoch 93/200  
187 43/43 [=====] - 0s 2ms/step - loss: 28729548.  
0000 - mean_absolute_error: 3321.5647 - val_loss: 173159200.0000 -  
val_mean_absolute_error: 11105.2637  
188 Epoch 94/200  
189 43/43 [=====] - 0s 2ms/step - loss: 33612296.  
0000 - mean_absolute_error: 3519.3298 - val_loss: 169963456.0000 -  
val_mean_absolute_error: 11018.0078  
190 Epoch 95/200  
191 43/43 [=====] - 0s 2ms/step - loss: 31000470.  
0000 - mean_absolute_error: 3340.7646 - val_loss: 185392800.0000 -  
val_mean_absolute_error: 11600.6113  
192 Epoch 96/200  
193 43/43 [=====] - 0s 2ms/step - loss: 28278158.  
0000 - mean_absolute_error: 3302.5662 - val_loss: 179113920.0000 -  
val_mean_absolute_error: 11221.8145  
194 Epoch 97/200  
195 43/43 [=====] - 0s 2ms/step - loss: 29296076.  
0000 - mean_absolute_error: 3332.8176 - val_loss: 158338112.0000 -  
val_mean_absolute_error: 10680.8975
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196 Epoch 98/200
197 43/43 [=====] - 0s 2ms/step - loss: 28571176.
0000 - mean_absolute_error: 3269.0466 - val_loss: 162875424.0000 -
val_mean_absolute_error: 10696.2695

198 Epoch 99/200
199 43/43 [=====] - 0s 2ms/step - loss: 34104116.
0000 - mean_absolute_error: 3516.4282 - val_loss: 135378720.0000 -
val_mean_absolute_error: 9437.1738

200 Epoch 100/200
201 43/43 [=====] - 0s 2ms/step - loss: 31247652.
0000 - mean_absolute_error: 3489.5938 - val_loss: 172915984.0000 -
val_mean_absolute_error: 11199.8320

202 Epoch 101/200
203 43/43 [=====] - 0s 2ms/step - loss: 29257870.
0000 - mean_absolute_error: 3335.1606 - val_loss: 161269200.0000 -
val_mean_absolute_error: 10721.0430

204 Epoch 102/200
205 43/43 [=====] - 0s 2ms/step - loss: 27518094.
0000 - mean_absolute_error: 3299.5779 - val_loss: 157724064.0000 -
val_mean_absolute_error: 10579.7607

206 Epoch 103/200
207 43/43 [=====] - 0s 2ms/step - loss: 25796066.
0000 - mean_absolute_error: 3200.0232 - val_loss: 146448976.0000 -
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207 val_mean_absolute_error: 10268.0830
208 Epoch 104/200
209 43/43 [=====] - 0s 2ms/step - loss: 26385908.
0000 - mean_absolute_error: 3201.4014 - val_loss: 129334408.0000 -
val_mean_absolute_error: 9593.5605
210 Epoch 105/200
211 43/43 [=====] - 0s 2ms/step - loss: 24695980.
0000 - mean_absolute_error: 3151.0139 - val_loss: 139467536.0000 -
val_mean_absolute_error: 9900.5820
212 Epoch 106/200
213 43/43 [=====] - 0s 2ms/step - loss: 30071350.
0000 - mean_absolute_error: 3339.0544 - val_loss: 157931696.0000 -
val_mean_absolute_error: 10614.1758
214 Epoch 107/200
215 43/43 [=====] - 0s 2ms/step - loss: 29596040.
0000 - mean_absolute_error: 3302.2900 - val_loss: 156568864.0000 -
val_mean_absolute_error: 10590.4639
216 Epoch 108/200
217 43/43 [=====] - 0s 2ms/step - loss: 26125752.
0000 - mean_absolute_error: 3225.1030 - val_loss: 132760128.0000 -
val_mean_absolute_error: 9668.1416
218 Epoch 109/200
219 43/43 [=====] - 0s 2ms/step - loss: 25522576.
```

```
219 0000 - mean_absolute_error: 3118.0247 - val_loss: 111596632.0000 -
    val_mean_absolute_error: 8628.2471
220 Epoch 110/200
221 43/43 [=====] - 0s 2ms/step - Loss: 28046086.
0000 - mean_absolute_error: 3285.1650 - val_loss: 178770784.0000 -
    val_mean_absolute_error: 11242.5107
222 Epoch 111/200
223 43/43 [=====] - 0s 2ms/step - Loss: 32140560.
0000 - mean_absolute_error: 3370.3530 - val_loss: 157958080.0000 -
    val_mean_absolute_error: 10658.8086
224 Epoch 112/200
225 43/43 [=====] - 0s 2ms/step - Loss: 240000572.
0000 - mean_absolute_error: 3079.9353 - val_loss: 113336384.0000 -
    val_mean_absolute_error: 8742.4619
226 Epoch 113/200
227 43/43 [=====] - 0s 2ms/step - Loss: 33330842.
0000 - mean_absolute_error: 3389.0945 - val_loss: 162683200.0000 -
    val_mean_absolute_error: 10734.0420
228 Epoch 114/200
229 43/43 [=====] - 0s 2ms/step - Loss: 26237194.
0000 - mean_absolute_error: 3120.8083 - val_loss: 156838240.0000 -
    val_mean_absolute_error: 10558.3574
230 Epoch 115/200
```

```
231 43/43 [=====] - 0s 2ms/step - loss: 30091620.  
0000 - mean_absolute_error: 3312.6721 - val_loss: 123938560.0000 -  
val_mean_absolute_error: 9351.8584  
232 Epoch 116/200  
233 43/43 [=====] - 0s 2ms/step - loss: 25588034.  
0000 - mean_absolute_error: 3072.7173 - val_loss: 134787824.0000 -  
val_mean_absolute_error: 9869.4307  
234 Epoch 117/200  
235 43/43 [=====] - 0s 2ms/step - loss: 28986838.  
0000 - mean_absolute_error: 3120.3501 - val_loss: 120176232.0000 -  
val_mean_absolute_error: 9211.0176  
236 Epoch 118/200  
237 43/43 [=====] - 0s 2ms/step - loss: 27945348.  
0000 - mean_absolute_error: 3209.1692 - val_loss: 110598008.0000 -  
val_mean_absolute_error: 8506.6143  
238 Epoch 119/200  
239 43/43 [=====] - 0s 2ms/step - loss: 27148914.  
0000 - mean_absolute_error: 3110.4426 - val_loss: 110606528.0000 -  
val_mean_absolute_error: 8654.9346  
240 Epoch 120/200  
241 43/43 [=====] - 0s 2ms/step - loss: 26241234.  
0000 - mean_absolute_error: 3119.3418 - val_loss: 129628296.0000 -  
val_mean_absolute_error: 9281.3584
```

```
242 Epoch 121/200
243 43/43 [=====] - 0s 2ms/step - loss: 20508992.
0000 - mean_absolute_error: 2854.9417 - val_loss: 107246640.0000 -
val_mean_absolute_error: 8388.7393

244 Epoch 122/200
245 43/43 [=====] - 0s 2ms/step - loss: 25766378.
0000 - mean_absolute_error: 3109.5808 - val_loss: 103266112.0000 -
val_mean_absolute_error: 8391.6328

246 Epoch 123/200
247 43/43 [=====] - 0s 2ms/step - loss: 25260822.
0000 - mean_absolute_error: 3104.9666 - val_loss: 127759096.0000 -
val_mean_absolute_error: 9375.3115

248 Epoch 124/200
249 43/43 [=====] - 0s 2ms/step - loss: 24579452.
0000 - mean_absolute_error: 2994.7346 - val_loss: 115056504.0000 -
val_mean_absolute_error: 8923.0625

250 Epoch 125/200
251 43/43 [=====] - 0s 2ms/step - loss: 250059060.
0000 - mean_absolute_error: 3019.0088 - val_loss: 104650488.0000 -
val_mean_absolute_error: 8450.0273

252 Epoch 126/200
253 43/43 [=====] - 0s 2ms/step - loss: 225535330.
0000 - mean_absolute_error: 2982.6462 - val_loss: 131524416.0000 -
```

```
253 val_mean_absolute_error: 9530.8867
254 Epoch 127/200
255 43/43 [=====] - 0s 2ms/step - loss: 24455836.
0000 - mean_absolute_error: 3036.0205 - val_loss: 154170896.0000 -
val_mean_absolute_error: 10018.6055
256 Epoch 128/200
257 43/43 [=====] - 0s 2ms/step - loss: 24059462.
0000 - mean_absolute_error: 3021.0522 - val_loss: 140213904.0000 -
val_mean_absolute_error: 9618.0674
258 Epoch 129/200
259 43/43 [=====] - 0s 2ms/step - loss: 25173000.
0000 - mean_absolute_error: 3095.7900 - val_loss: 125228696.0000 -
val_mean_absolute_error: 9234.4746
260 Epoch 130/200
261 43/43 [=====] - 0s 2ms/step - loss: 28227282.
0000 - mean_absolute_error: 3271.9346 - val_loss: 130400712.0000 -
val_mean_absolute_error: 9232.1875
262 Epoch 131/200
263 43/43 [=====] - 0s 2ms/step - loss: 26052514.
0000 - mean_absolute_error: 3109.4036 - val_loss: 127770120.0000 -
val_mean_absolute_error: 9419.0352
264 Epoch 132/200
265 43/43 [=====] - 0s 2ms/step - loss: 21373570.
```

```
265 0000 - mean_absolute_error: 2875.4319 - val_loss: 123714040.0000 -
    val_mean_absolute_error: 9117.3789
266 Epoch 133/200
267 43/43 [=====] - 0s 2ms/step - Loss: 24461706.
0000 - mean_absolute_error: 3035.8010 - val_loss: 106730680.0000 -
    val_mean_absolute_error: 8380.2871
268 Epoch 134/200
269 43/43 [=====] - 0s 2ms/step - Loss: 24700556.
0000 - mean_absolute_error: 3053.7258 - val_loss: 106661072.0000 -
    val_mean_absolute_error: 8137.1851
270 Epoch 135/200
271 43/43 [=====] - 0s 2ms/step - Loss: 24965410.
0000 - mean_absolute_error: 3064.3120 - val_loss: 85346152.0000 -
    val_mean_absolute_error: 7538.2700
272 Epoch 136/200
273 43/43 [=====] - 0s 2ms/step - Loss: 24174730.
0000 - mean_absolute_error: 3022.9363 - val_loss: 138641488.0000 -
    val_mean_absolute_error: 9755.6045
274 Epoch 137/200
275 43/43 [=====] - 0s 2ms/step - Loss: 26617718.
0000 - mean_absolute_error: 3127.1731 - val_loss: 101450416.0000 -
    val_mean_absolute_error: 8373.9600
276 Epoch 138/200
```

```
277 43/43 [=====] - 0s 2ms/step - loss: 23943810.  
0000 - mean_absolute_error: 3047.8501 - val_loss: 115350808.0000 -  
val_mean_absolute_error: 8870.2471  
278 Epoch 139/200  
279 43/43 [=====] - 0s 2ms/step - loss: 25697340.  
0000 - mean_absolute_error: 3084.6033 - val_loss: 131629656.0000 -  
val_mean_absolute_error: 9279.0244  
280 Epoch 140/200  
281 43/43 [=====] - 0s 2ms/step - loss: 25388900.  
0000 - mean_absolute_error: 3082.5781 - val_loss: 95222752.0000 -  
val_mean_absolute_error: 7926.5635  
282 Epoch 141/200  
283 43/43 [=====] - 0s 2ms/step - loss: 26421522.  
0000 - mean_absolute_error: 3157.3494 - val_loss: 117169360.0000 -  
val_mean_absolute_error: 8795.5518  
284 Epoch 142/200  
285 43/43 [=====] - 0s 2ms/step - loss: 22963332.  
0000 - mean_absolute_error: 2928.0681 - val_loss: 113656256.0000 -  
val_mean_absolute_error: 8870.9482  
286 Epoch 143/200  
287 43/43 [=====] - 0s 2ms/step - loss: 20173274.  
0000 - mean_absolute_error: 2904.5188 - val_loss: 117016928.0000 -  
val_mean_absolute_error: 8935.9395
```

```
288 Epoch 144/200
289 43/43 [=====] - 0s 2ms/step - loss: 22800740.
0000 - mean_absolute_error: 2956.3467 - val_loss: 148795936.0000 -
val_mean_absolute_error: 10128.7920
290 Epoch 145/200
291 43/43 [=====] - 0s 2ms/step - loss: 21931540.
0000 - mean_absolute_error: 2971.9329 - val_loss: 126628648.0000 -
val_mean_absolute_error: 9396.2471
292 Epoch 146/200
293 43/43 [=====] - 0s 2ms/step - loss: 21872370.
0000 - mean_absolute_error: 2892.3823 - val_loss: 98398240.0000 -
val_mean_absolute_error: 8159.9712
294 Epoch 147/200
295 43/43 [=====] - 0s 2ms/step - loss: 25141702.
0000 - mean_absolute_error: 3108.4221 - val_loss: 110373984.0000 -
val_mean_absolute_error: 8691.8760
296 Epoch 148/200
297 43/43 [=====] - 0s 2ms/step - loss: 21369630.
0000 - mean_absolute_error: 2961.2349 - val_loss: 91934152.0000 -
val_mean_absolute_error: 7788.1353
298 Epoch 149/200
299 43/43 [=====] - 0s 2ms/step - loss: 24245818.
0000 - mean_absolute_error: 2957.8701 - val_loss: 97708280.0000 -
```

```
299 val_mean_absolute_error: 7952.4727
300 Epoch 150/200
301 43/43 [=====] - 0s 2ms/step - loss: 22327384.
0000 - mean_absolute_error: 2954.0752 - val_loss: 125889440.0000 -
val_mean_absolute_error: 9237.0176
302 Epoch 151/200
303 43/43 [=====] - 0s 2ms/step - loss: 23222540.
0000 - mean_absolute_error: 2933.3916 - val_loss: 97180248.0000 -
val_mean_absolute_error: 8212.0371
304 Epoch 152/200
305 43/43 [=====] - 0s 2ms/step - loss: 20206288.
0000 - mean_absolute_error: 2894.3528 - val_loss: 98384368.0000 -
val_mean_absolute_error: 7952.3950
306 Epoch 153/200
307 43/43 [=====] - 0s 2ms/step - loss: 26157454.
0000 - mean_absolute_error: 3050.0439 - val_loss: 113706624.0000 -
val_mean_absolute_error: 8792.9580
308 Epoch 154/200
309 43/43 [=====] - 0s 2ms/step - loss: 20658782.
0000 - mean_absolute_error: 2922.7153 - val_loss: 114873136.0000 -
val_mean_absolute_error: 8688.7207
310 Epoch 155/200
311 43/43 [=====] - 0s 2ms/step - loss: 25382226.
```

```
311 0000 - mean_absolute_error: 3006.0996 - val_loss: 102595344.0000 -
    val_mean_absolute_error: 8099.2197
312 Epoch 156/200
313 43/43 [=====] - 0s 2ms/step - loss: 19930780.
0000 - mean_absolute_error: 2806.4587 - val_loss: 123282568.0000 -
    val_mean_absolute_error: 9259.2529
314 Epoch 157/200
315 43/43 [=====] - 0s 2ms/step - loss: 19611676.
0000 - mean_absolute_error: 2771.9656 - val_loss: 106239480.0000 -
    val_mean_absolute_error: 8504.2969
316 Epoch 158/200
317 43/43 [=====] - 0s 2ms/step - loss: 218886052.
0000 - mean_absolute_error: 2893.6372 - val_loss: 101820376.0000 -
    val_mean_absolute_error: 8389.5957
318 Epoch 159/200
319 43/43 [=====] - 0s 2ms/step - loss: 23014244.
0000 - mean_absolute_error: 2989.7207 - val_loss: 114089680.0000 -
    val_mean_absolute_error: 8646.8682
320 Epoch 160/200
321 43/43 [=====] - 0s 2ms/step - loss: 20797954.
0000 - mean_absolute_error: 2881.4834 - val_loss: 110303472.0000 -
    val_mean_absolute_error: 8398.3613
322 Epoch 161/200
```

```
323 43/43 [=====] - 0s 2ms/step - loss: 20166544.  
0000 - mean_absolute_error: 2834.3799 - val_loss: 97418024.0000 -  
val_mean_absolute_error: 8230.3193  
324 Epoch 162/200  
325 43/43 [=====] - 0s 2ms/step - loss: 20321252.  
0000 - mean_absolute_error: 2832.1775 - val_loss: 110941616.0000 -  
val_mean_absolute_error: 8490.1992  
326 Epoch 163/200  
327 43/43 [=====] - 0s 2ms/step - loss: 20989422.  
0000 - mean_absolute_error: 2856.2373 - val_loss: 121645360.0000 -  
val_mean_absolute_error: 8974.8975  
328 Epoch 164/200  
329 43/43 [=====] - 0s 2ms/step - loss: 23232662.  
0000 - mean_absolute_error: 3032.1694 - val_loss: 106293632.0000 -  
val_mean_absolute_error: 8624.8340  
330 Epoch 165/200  
331 43/43 [=====] - 0s 2ms/step - loss: 21675954.  
0000 - mean_absolute_error: 2931.7588 - val_loss: 126086528.0000 -  
val_mean_absolute_error: 9373.6387  
332 Epoch 166/200  
333 43/43 [=====] - 0s 2ms/step - loss: 20493418.  
0000 - mean_absolute_error: 2858.8574 - val_loss: 128152560.0000 -  
val_mean_absolute_error: 9443.3076
```

```
334 Epoch 167/200
335 43/43 [=====] - 0s 2ms/step - loss: 22100740.
0000 - mean_absolute_error: 2919.1145 - val_loss: 141478448.0000 -
val_mean_absolute_error: 9834.1523

336 Epoch 168/200
337 43/43 [=====] - 0s 2ms/step - loss: 21263556.
0000 - mean_absolute_error: 2961.0515 - val_loss: 107133568.0000 -
val_mean_absolute_error: 8703.8867

338 Epoch 169/200
339 43/43 [=====] - 0s 2ms/step - loss: 20234686.
0000 - mean_absolute_error: 2795.0740 - val_loss: 121914504.0000 -
val_mean_absolute_error: 9177.7607

340 Epoch 170/200
341 43/43 [=====] - 0s 2ms/step - loss: 21639006.
0000 - mean_absolute_error: 2922.0957 - val_loss: 116934016.0000 -
val_mean_absolute_error: 9075.1436

342 Epoch 171/200
343 43/43 [=====] - 0s 2ms/step - loss: 20501166.
0000 - mean_absolute_error: 2811.6372 - val_loss: 101797744.0000 -
val_mean_absolute_error: 8371.6533

344 Epoch 172/200
345 43/43 [=====] - 0s 2ms/step - loss: 19883858.
0000 - mean_absolute_error: 2724.9766 - val_loss: 123667128.0000 -
```

```
345 val_mean_absolute_error: 9153.8242
346 Epoch 173/200
347 43/43 [=====] - 0s 2ms/step - loss: 20665494.
0000 - mean_absolute_error: 2803.2920 - val_loss: 121519648.0000 -
val_mean_absolute_error: 8873.2529
348 Epoch 174/200
349 43/43 [=====] - 0s 2ms/step - loss: 16795794.
0000 - mean_absolute_error: 2635.0190 - val_loss: 129049032.0000 -
val_mean_absolute_error: 9324.8779
350 Epoch 175/200
351 43/43 [=====] - 0s 2ms/step - loss: 17810266.
0000 - mean_absolute_error: 2689.0115 - val_loss: 121263032.0000 -
val_mean_absolute_error: 8915.6338
352 Epoch 176/200
353 43/43 [=====] - 0s 2ms/step - loss: 17439810.
0000 - mean_absolute_error: 2645.2358 - val_loss: 128537368.0000 -
val_mean_absolute_error: 9276.6484
354 Epoch 177/200
355 43/43 [=====] - 0s 2ms/step - loss: 18982148.
0000 - mean_absolute_error: 2682.5405 - val_loss: 102643304.0000 -
val_mean_absolute_error: 8568.8047
356 Epoch 178/200
357 43/43 [=====] - 0s 2ms/step - loss: 18194112.
```

```
357 0000 - mean_absolute_error: 2697.9053 - val_loss: 99230392.0000 -
    val_mean_absolute_error: 8186.6089
358 Epoch 179/200
359 43/43 [=====] - 0s 2ms/step - Loss: 20230128.
0000 - mean_absolute_error: 2785.5398 - val_loss: 130779976.0000 -
    val_mean_absolute_error: 9393.5762
360 Epoch 180/200
361 43/43 [=====] - 0s 2ms/step - Loss: 20536330.
0000 - mean_absolute_error: 2757.5496 - val_loss: 124641776.0000 -
    val_mean_absolute_error: 9341.4561
362 Epoch 181/200
363 43/43 [=====] - 0s 2ms/step - Loss: 21069674.
0000 - mean_absolute_error: 2840.2874 - val_loss: 94253168.0000 -
    val_mean_absolute_error: 7965.2373
364 Epoch 182/200
365 43/43 [=====] - 0s 2ms/step - Loss: 18501568.
0000 - mean_absolute_error: 2747.7158 - val_loss: 111799792.0000 -
    val_mean_absolute_error: 8752.6924
366 Epoch 183/200
367 43/43 [=====] - 0s 2ms/step - Loss: 19915102.
0000 - mean_absolute_error: 2777.9475 - val_loss: 105426800.0000 -
    val_mean_absolute_error: 8483.1641
368 Epoch 184/200
```

```
369 43/43 [=====] - 0s 2ms/step - loss: 19761094.  
0000 - mean_absolute_error: 2719.5598 - val_loss: 114645040.0000 -  
val_mean_absolute_error: 8944.0020  
370 Epoch 185/200  
371 43/43 [=====] - 0s 2ms/step - loss: 17313150.  
0000 - mean_absolute_error: 2597.4521 - val_loss: 112881000.0000 -  
val_mean_absolute_error: 8872.2266  
372 Epoch 186/200  
373 43/43 [=====] - 0s 2ms/step - loss: 19839040.  
0000 - mean_absolute_error: 2752.8147 - val_loss: 113697936.0000 -  
val_mean_absolute_error: 9121.4600  
374 Epoch 187/200  
375 43/43 [=====] - 0s 2ms/step - loss: 20408064.  
0000 - mean_absolute_error: 2816.9653 - val_loss: 118542080.0000 -  
val_mean_absolute_error: 9120.3086  
376 Epoch 188/200  
377 43/43 [=====] - 0s 2ms/step - loss: 17646238.  
0000 - mean_absolute_error: 2562.5710 - val_loss: 98674944.0000 -  
val_mean_absolute_error: 8228.9238  
378 Epoch 189/200  
379 43/43 [=====] - 0s 2ms/step - loss: 16930230.  
0000 - mean_absolute_error: 2593.2585 - val_loss: 105535368.0000 -  
val_mean_absolute_error: 8535.1895
```

```
380 Epoch 190/200
381 43/43 [=====] - 0s 2ms/step - loss: 17890316.
0000 - mean_absolute_error: 2618.0334 - val_loss: 107387856.0000 -
val_mean_absolute_error: 8575.6738
382 Epoch 191/200
383 43/43 [=====] - 0s 2ms/step - loss: 18989090.
0000 - mean_absolute_error: 2754.3147 - val_loss: 134317536.0000 -
val_mean_absolute_error: 9398.7197
384 Epoch 192/200
385 43/43 [=====] - 0s 2ms/step - loss: 17994736.
0000 - mean_absolute_error: 2699.7820 - val_loss: 118642920.0000 -
val_mean_absolute_error: 8812.6182
386 Epoch 193/200
387 43/43 [=====] - 0s 2ms/step - loss: 19897924.
0000 - mean_absolute_error: 2776.5300 - val_loss: 118489472.0000 -
val_mean_absolute_error: 9035.3926
388 Epoch 194/200
389 43/43 [=====] - 0s 2ms/step - loss: 19593676.
0000 - mean_absolute_error: 2728.3762 - val_loss: 116038064.0000 -
val_mean_absolute_error: 8914.2363
390 Epoch 195/200
391 43/43 [=====] - 0s 2ms/step - loss: 17771056.
0000 - mean_absolute_error: 2594.2866 - val_loss: 115992552.0000 -
```

```
391 val_mean_absolute_error: 8916.8887
392 Epoch 196/200
393 43/43 [=====] - 0s 2ms/step - Loss: 208880610.
0000 - mean_absolute_error: 2784.6626 - val_loss: 102104320.0000 -
val_mean_absolute_error: 8441.9678
394 Epoch 197/200
395 43/43 [=====] - 0s 2ms/step - Loss: 21926092.
0000 - mean_absolute_error: 2769.2576 - val_loss: 124059480.0000 -
val_mean_absolute_error: 9137.5596
396 Epoch 198/200
397 43/43 [=====] - 0s 2ms/step - Loss: 19775312.
0000 - mean_absolute_error: 2715.3110 - val_loss: 132234504.0000 -
val_mean_absolute_error: 9669.5371
398 Epoch 199/200
399 43/43 [=====] - 0s 2ms/step - Loss: 19644076.
0000 - mean_absolute_error: 2735.4504 - val_loss: 147900144.0000 -
val_mean_absolute_error: 9954.2383
400 Epoch 200/200
401 43/43 [=====] - 0s 2ms/step - Loss: 18990614.
0000 - mean_absolute_error: 2653.9609 - val_loss: 103251776.0000 -
val_mean_absolute_error: 8357.5117
402 43/43 [=====] - 0s 600us/step
403 6/6 [=====] - 0s 670us/step
```

```
404 6/6 [=====] - 0s 906us/step
405 Train Data Mean Absolute Error (MAE): 5836.89404296875
406 Train Data Mean Absolute Percentage Error (MAPE): 0.2129999952316284
407 Train Data Root Mean Squared Error (RMSE): 8300.213
408 Validation Data Mean Absolute Error (MAE): 8357.51171875
409 Validation Data Mean Absolute Percentage Error (MAPE): 0.
410 Validation Data Root Mean Squared Error (RMSE): 10161.288
411 Testing Data Mean Absolute Error (MAE): 8379.5009765625
412 Testing Data Mean Absolute Percentage Error (MAPE): 0.3459998593330383
413 Testing Data Root Mean Squared Error (RMSE): 9755.635
414
415
416 Variable N Mean SD SE 95% Conf.
  Interval
417 0 Close 1359.0 17324.1405 12671.6341 343.7343 16649.8326 17998.
4483
418 The Train Count is: 1359
419 The Train Max is: 47067.625
420 The Train Min is: 4858.5503
421 The Train Kurtosis is: -1.0467551145697402
422 The Train Skew is: 0.6706390635622537
423 --
```

		Variable	N	Mean	SD	SE	95% Conf.
		Interval					
423	--						
424							
425							
426							
427	0	Close	169.0	24839.5061	11030.9152	848.5319	23164.347
428		The Validation Count	is: 169				
429		The Validation Max	is: 47377.035				
430		The Validation Min	is: 4858.5503				
431		The Validation Kurtosis	is: -0.6817475027774389				
432		The Validation Skew	is: 0.10575559094863668				
433	--						
434							
435							
436							
437	0	Variable	N	Mean	SD	SE	95% Conf.
		Interval					
438		The Test Count	is: 170				
439		The Test Max	is: 47525.19				
440		The Test Min	is: 4858.5503				
	--						

```
441 The Test Kurtosis is: -0.6772153945507795
442 The Test Skew is: -0.6160572219874278
443
444 Process finished with exit code 0
445
```