

Machine Learning Project

Areas of Use of Machine Learning

As we know, Machine Learning is an area of Artificial Intelligence, and has the focus in making predictions through the resolution of problems applying multiple algorithms with the machine will learn to solve.

Facial Recognition - It is possible to make facial recognition with techniques of deep learning, with is a ramification of deep learning where it is used a CNN (Convolutional Neural Network), that it is used to make image classification -> <https://www.pxl-vision.com/en/blog/machine-learning-and-how-it-applies-to-facial-recognition-technology>

Voice Recognition - In the voice recognition it is also used the CNN (Convolutional Neural Network) joined with the RNN algorithm -> <https://medium.com/@ageitgey/machine-learning-is-fun-part-6-how-to-do-speech-recognition-with-deep-learning-28293c162f7a>

Wheather Predition - The wheather predictions are quite complex since they need aplication of termodinamics equations of fluids. But the artificial intelegence it is possible to predict models with more precision and usign less computation power, in the specific study were used radar precision images-> <https://plus.maths.org/content/can-artificial-intelligence-help-predict-weather>

Decease Recognition - The decease recognition has been on of the focus of the artificial intelegence, since the frees up time from the doctores, having only they to make the final evaluation. Artificial Intelegence can be used agregated with Particle Swarm Optimization (PSO) to predict 5 cronic deceases, for example: breast cancer, diabetes, heart attack, kidney faillure -> <https://www.frontiersin.org/articles/10.3389/fpubh.2022.860396/full>

Mathematical Calculations - The artificial intelegence has been a great help to make advanced mathematical calculations that would take too long to get to the result inducing in error. Since that in the computer in it's base works with sums and subtractions that become multiplications and divisions, it was thinked to use that in our advantage to make advanced mathematical calculations and save time -> <https://ai.facebook.com/blog/using-neural-networks-to-solve-advanced-mathematics-equations/>

Product Recomendation - The product recomendation is very used in today's day as is the buissness model of many companies like Google, Facebook, Youtube to name a few. If the content that we are using is free that means that the product is us. To make those types of personalized as it is used artificial intelegence that gets our data through the permissions that we gave to the apps to be able to use them. In this cases are used algorithms like CBF (Content Base Filtering) and CF (Complementary Filtering) -> <https://www.netguru.com/blog/product-recommendation-machine-learning>

Choose of the Specific Aplication

For this work my choice is in predict the CO2 emissions of vehicles. This is a thematic that I always have been interested on since I like cars and since all of we want to to achive carbon neutrality so we can diminute the global warming effect that in these days are very noticing. The advantages of the using of artificial intelegence are to be able to predict if a car is more poluent or not, using their caracteristics to know if the car can circulate in the Lisbon city center between other cities that have anti-polutions norm imposed

In my case this is a regression problem since we are trying to predict the CO2 values given some features, and it is going to be use an artificial neural network with a Sequential model with 3 layers of neurons, the first one being the input, the last one the output and in the middle a deep layer. As well as a Linear Regression model and compare the results of the predictions.

Gets the data from the file in the local machine

In [1178]:

```
import numpy as np # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
import matplotlib.pyplot as plt
import os
for dirname, _, filenames in os.walk('/kaggle/input'):
    for filename in filenames:
        print(os.path.join(dirname, filename))
```

File with the Data /kaggle/input/co2-emission-by-vehicles/CO2 Emissions_Canada.csv

In [1179]:

```
df = pd.read_csv("CO2 Emissions_Canada.csv")
```

Shows the first 5 registers of the File

In [1180]:

```
df.head()
```

Out[1180]:

	Make	Model	Vehicle Class	Engine Size(L)	Cylinders	Transmission	Fuel Type	Fuel Consumption City (L/100 km)	Fuel Consumption Hwy (L/100 km)	Fuel Consumption Comb (L/100 km)	Fuel Consumption Comb (m
0	ACURA	ILX	COMPACT	2.0	4	AS5	Z	9.9	6.7	8.5	
1	ACURA	ILX	COMPACT	2.4	4	M6	Z	11.2	7.7	9.6	
2	ACURA	ILX HYBRID	COMPACT	1.5	4	AV7	Z	6.0	5.8	5.9	
3	ACURA	MDX 4WD	SUV - SMALL	3.5	6	AS6	Z	12.7	9.1	11.1	
4	ACURA	RDX AWD	SUV - SMALL	3.5	6	AS6	Z	12.1	8.7	10.6	

Removing files like Fuel Consumption Cmb (mpg) because this is not America Removes Transmission Because there are a lot of types of transmissions when there is only supposed to be 2, Manual or Automatic Replacing Fuel Type Values From Z to Gasoline and D to Diesel

In [1181]:

```
# https://stackoverflow.com/questions/48899051/how-to-drop-a-specific-column-of-csv-file-while-reading-it-using-pandas
df = df.drop('Fuel Consumption Comb (mpg)', axis=1)
df = df.drop('Transmission', axis=1)
```

Gets the dimensions of the File

In [1182]:

```
df.shape
```

Out[1182]:

```
(7385, 10)
```

Shows the Information of the File

In [1183]:

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7385 entries, 0 to 7384
Data columns (total 10 columns):
 #   Column                                Non-Null Count  Dtype
---  -
 0   Make                                7385 non-null   object
 1   Model                              7385 non-null   object
 2   Vehicle Class                      7385 non-null   object
 3   Engine Size(L)                     7385 non-null   float64
 4   Cylinders                          7385 non-null   int64
 5   Fuel Type                          7385 non-null   object
 6   Fuel Consumption City (L/100 km)   7385 non-null   float64
 7   Fuel Consumption Hwy (L/100 km)    7385 non-null   float64
 8   Fuel Consumption Comb (L/100 km)   7385 non-null   float64
 9   CO2 Emissions(g/km)               7385 non-null   int64
dtypes: float64(4), int64(2), object(4)
memory usage: 577.1+ KB
```

Shows the description of all the lines in the file

In [1184]:

```
df.describe()
```

Out[1184]:

	Engine Size(L)	Cylinders	Fuel Consumption City (L/100 km)	Fuel Consumption Hwy (L/100 km)	Fuel Consumption Comb (L/100 km)	CO2 Emissions(g/km)
count	7385.000000	7385.000000	7385.000000	7385.000000	7385.000000	7385.000000
mean	3.160068	5.615030	12.556534	9.041706	10.975071	250.584699
std	1.354170	1.828307	3.500274	2.224456	2.892506	58.512679
min	0.900000	3.000000	4.200000	4.000000	4.100000	96.000000
25%	2.000000	4.000000	10.100000	7.500000	8.900000	208.000000
50%	3.000000	6.000000	12.100000	8.700000	10.600000	246.000000
75%	3.700000	6.000000	14.600000	10.200000	12.600000	288.000000
max	8.400000	16.000000	30.600000	20.600000	26.100000	522.000000

Shows all the columns in the file

In [1185]:

```
df.columns
```

Out[1185]:

```
Index(['Make', 'Model', 'Vehicle Class', 'Engine Size(L)', 'Cylinders',
      'Fuel Type', 'Fuel Consumption City (L/100 km)',
      'Fuel Consumption Hwy (L/100 km)', 'Fuel Consumption Comb (L/100 km)',
      'CO2 Emissions(g/km)'],
      dtype='object')
```

Renames all the columns to be easier to make operations with them

In [1186]:

```
renamed_col = {
    'Vehicle Class': 'vehicle_class',
    'Engine Size(L)': 'engine_size',
    'Fuel Consumption City (L/100 km)': 'fuel_cons_city',
```

```
'Fuel Consumption Hwy (L/100 km)': 'fuel_cons_hwy',
'Fuel Consumption Comb (L/100 km)': 'fuel_cons_comb',
'CO2 Emissions(g/km)': 'co2'
}
df.rename(renamed_col, axis='columns', inplace=True)
```

Shows all the data

In [1187]:

```
df
```

Out[1187]:

	Make	Model	vehicle_class	engine_size	Cylinders	Fuel Type	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	co2
0	ACURA	ILX	COMPACT	2.0	4	Z	9.9	6.7	8.5	196
1	ACURA	ILX	COMPACT	2.4	4	Z	11.2	7.7	9.6	221
2	ACURA	ILX HYBRID	COMPACT	1.5	4	Z	6.0	5.8	5.9	136
3	ACURA	MDX 4WD	SUV - SMALL	3.5	6	Z	12.7	9.1	11.1	255
4	ACURA	RDX AWD	SUV - SMALL	3.5	6	Z	12.1	8.7	10.6	244
...
7380	VOLVO	XC40 T5 AWD	SUV - SMALL	2.0	4	Z	10.7	7.7	9.4	219
7381	VOLVO	XC60 T5 AWD	SUV - SMALL	2.0	4	Z	11.2	8.3	9.9	232
7382	VOLVO	XC60 T6 AWD	SUV - SMALL	2.0	4	Z	11.7	8.6	10.3	240
7383	VOLVO	XC90 T5 AWD	SUV - STANDARD	2.0	4	Z	11.2	8.3	9.9	232
7384	VOLVO	XC90 T6 AWD	SUV - STANDARD	2.0	4	Z	12.2	8.7	10.7	248

7385 rows × 10 columns

Shows the descriptions of a table in a transpose table

In [1188]:

```
df.describe().transpose()
```

Out[1188]:

	count	mean	std	min	25%	50%	75%	max
engine_size	7385.0	3.160068	1.354170	0.9	2.0	3.0	3.7	8.4
Cylinders	7385.0	5.615030	1.828307	3.0	4.0	6.0	6.0	16.0
fuel_cons_city	7385.0	12.556534	3.500274	4.2	10.1	12.1	14.6	30.6
fuel_cons_hwy	7385.0	9.041706	2.224456	4.0	7.5	8.7	10.2	20.6
fuel_cons_comb	7385.0	10.975071	2.892506	4.1	8.9	10.6	12.6	26.1
co2	7385.0	250.584699	58.512679	96.0	208.0	246.0	288.0	522.0

Imports the packages to be able to draw graphics

In [1189]:

```
import seaborn as sns
```

```
import seaborn as sns
from plotly import express as px, graph_objects as go
from plotly.subplots import make_subplots
```

Sets the configuration for drawing the graphic, gets the brand values and sorts them

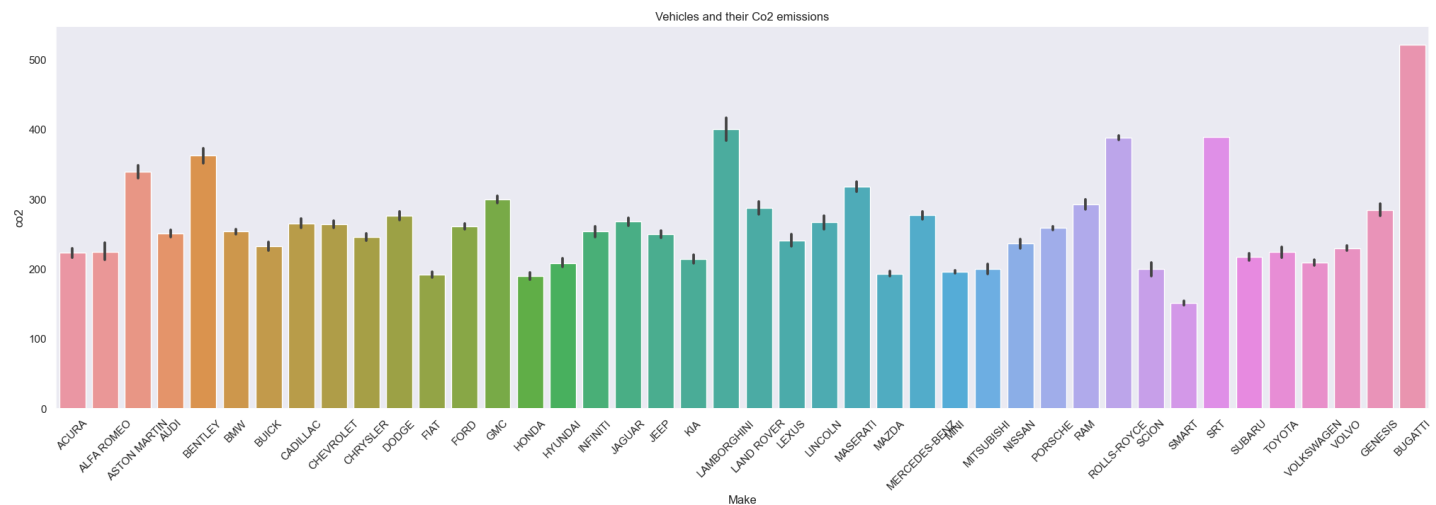
The graphic bellow shows CO2 emissions by brands

In [1190]:

```
f, ax = plt.subplots(figsize=(25,7))
sns.set_theme(style="darkgrid")

x = df.Make.value_counts().sort_values()

ax = sns.barplot(data=df, x='Make', y='co2')
plt.title('Vehicles and their Co2 emissions')
plt.xticks(rotation=45)
plt.show()
```



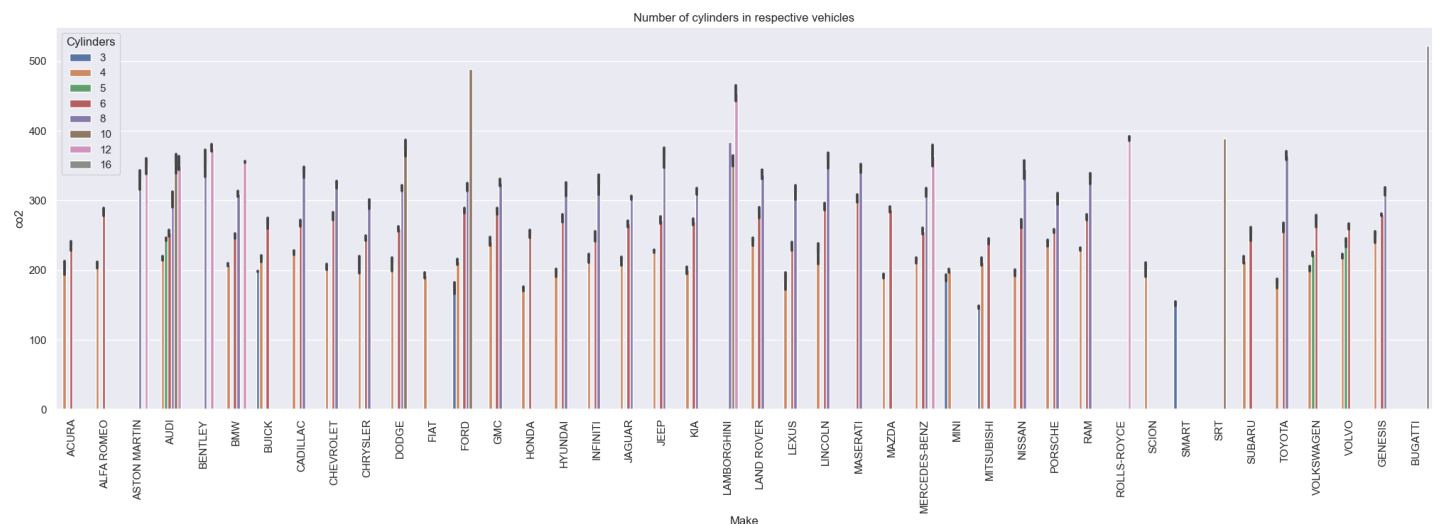
The graphic bellow shows the number of cylinders by car brand

In [1191]:

```
f, ax = plt.subplots(figsize=(25,7))
sns.set_theme(style="darkgrid")

x = df.Make.value_counts().sort_values()

ax = sns.barplot(data=df, x='Make', y='co2', hue='Cylinders')
plt.title('Number of cylinders in respective vehicles')
plt.xticks(rotation=90)
plt.show()
```



Changes Fuel Type from Z, X, N to Petrol and D to Diesel

In [1192]:

```
df["Fuel Type"] = df["Fuel Type"].replace('D', 'Diesel')
df["Fuel Type"] = df["Fuel Type"].replace('Z', 'Petrol')
df["Fuel Type"] = df["Fuel Type"].replace('X', 'Petrol')
df["Fuel Type"] = df["Fuel Type"].replace('N', 'Petrol')
df["Fuel Type"] = df["Fuel Type"].replace('E', 'Eletric')
```

Shows the cars that produce more CO2, with it is not suprisingly the fastest ones. Because in order to a car be fast it is not just about aerodynamics, or having a great engine, it is also about expeling exhaust fumes as quickly as possible to obtain maximum performance, therefore if we want to expell the fumes as fast as possible the cars must have almost a straith pipe and not caring about CO2 emissions,

In [1193]:

```
df[df.co2 == df.co2.max()]
```

Out[1193]:

	Make	Model	vehicle_class	engine_size	Cylinders	Fuel Type	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	co2
4509	BUGATTI	CHIRON	TWO-SEATER	8.0	16	Petrol	26.8	16.6	22.2	522
5575	BUGATTI	Chiron	TWO-SEATER	8.0	16	Petrol	26.8	16.6	22.2	522
6640	BUGATTI	Chiron	TWO-SEATER	8.0	16	Petrol	26.8	16.6	22.2	522

Shows only the Volkswagen brand cars As we can se by comparing with the Bugatti brand the fuel consumption to the BMW and Volkswagen products it is much lesser than the Bugatti's, they also have much less engine size and less than half of the cylinders. With that being said the CO2 emissions are less too

In [1194]:

```
df[df.Make == 'VOLKSWAGEN']
```

Out[1194]:

	Make	Model	vehicle_class	engine_size	Cylinders	Fuel Type	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
1019	VOLKSWAGEN	BEETLE	COMPACT	1.8	4	Petrol	9.5	7.2	8.5
1020	VOLKSWAGEN	BEETLE	COMPACT	1.8	4	Petrol	9.9	7.2	8.7
1021	VOLKSWAGEN	BEETLE	COMPACT	2.0	4	Petrol	10.3	7.7	9.1
1022	VOLKSWAGEN	BEETLE	COMPACT	2.0	4	Petrol	10.8	7.6	9.4
1023	VOLKSWAGEN	BEETLE	COMPACT	2.5	5	Petrol	10.9	8.4	9.8
...
7368	VOLKSWAGEN	Jetta GLI	COMPACT	2.0	4	Petrol	9.3	7.2	8.4
7369	VOLKSWAGEN	Jetta GLI	COMPACT	2.0	4	Petrol	9.6	7.1	8.5
7370	VOLKSWAGEN	Passat	MID-SIZE	2.0	4	Petrol	10.2	6.9	8.7
7371	VOLKSWAGEN	Tiguan	SUV - SMALL	2.0	4	Petrol	10.5	8.1	9.4
7372	VOLKSWAGEN	Tiguan 4MOTION	SUV - SMALL	2.0	4	Petrol	11.5	8.7	10.2

197 rows x 10 columns

Shows only the BMW brand cars by comparasing with the Volkswagen cars the BMW's are very close to one another even though they are RWD but the tables turn when we compare the VW cars that are mostly 4 cylinders engines with the straight 6 of the BMW, they do consume more fuel in city, highway and combined there for emitting more CO2.

In [1195]:

```
df[df.Make == 'BMW']
```

Out[1195]:

	Make	Model	vehicle_class	engine_size	Cylinders	Fuel Type	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	co2
76	BMW	320i	COMPACT	2.0	4	Petrol	10.0	6.5	8.4	193
77	BMW	320i	COMPACT	2.0	4	Petrol	10.4	6.7	8.7	200
78	BMW	320i xDRIVE	COMPACT	2.0	4	Petrol	10.2	7.0	8.8	202
79	BMW	328d xDRIVE	COMPACT	2.0	4	Diesel	7.6	5.5	6.7	181
80	BMW	328d xDRIVE TOURING	STATION WAGON - SMALL	2.0	4	Diesel	7.6	5.5	6.7	181
...
6635	BMW	X7 xDrive40i	SUV - STANDARD	3.0	6	Petrol	12.0	9.4	10.8	254
6636	BMW	X7 xDrive50i	SUV - STANDARD	4.4	8	Petrol	15.5	11.4	13.6	318
6637	BMW	X7 M50i	SUV - STANDARD	4.4	8	Petrol	15.5	11.4	13.6	318
6638	BMW	Z4 sDrive30i	TWO-SEATER	2.0	4	Petrol	9.5	7.4	8.5	200
6639	BMW	Z4 M40i	TWO-SEATER	3.0	6	Petrol	10.3	8.0	9.3	216

527 rows x 10 columns

Creates an histogram to be able to compare the number of cylinder in the various cars. As we can see for the histogram bellow it is well known that there are many cars with 4 cylinders with until few years back was the standard number of cylinders and with had more reliability.

Remember less moving parts more reliable it is.

The cars with more cylinders tend to use a lot of fuel because there are design for speed and therefore it is less likely to be used by normal people wanting to go from point A to point B reliably and comfortably.

In [1196]:

```
fig = px.histogram(df, x="Cylinders")
fig.update_layout(title_text='Cylinders in Vehicles', xaxis_title="Cylinders", yaxis_title="Number of vehicles ")
fig.show()
```

Shows more detailed information that the graphic, about the absolute values of number of cylinders

In [1197]:

```
df.Cylinders.value_counts()
```

Out[1197]:

```
4    3220
6    2446
```

```

8      2110
12      1402
12      151
3       95
10      42
5       26
16      3
Name: Cylinders, dtype: int64

```

Count how many cylinders there are from each type and makes a normal distribution

In [1198]:

```
df['Cylinders'].value_counts(normalize=True)
```

Out[1198]:

```

4      0.436019
6      0.331212
8      0.189844
12     0.020447
3      0.012864
10     0.005687
5      0.003521
16     0.000406
Name: Cylinders, dtype: float64

```

Shows the models of the Brand Lamborghini

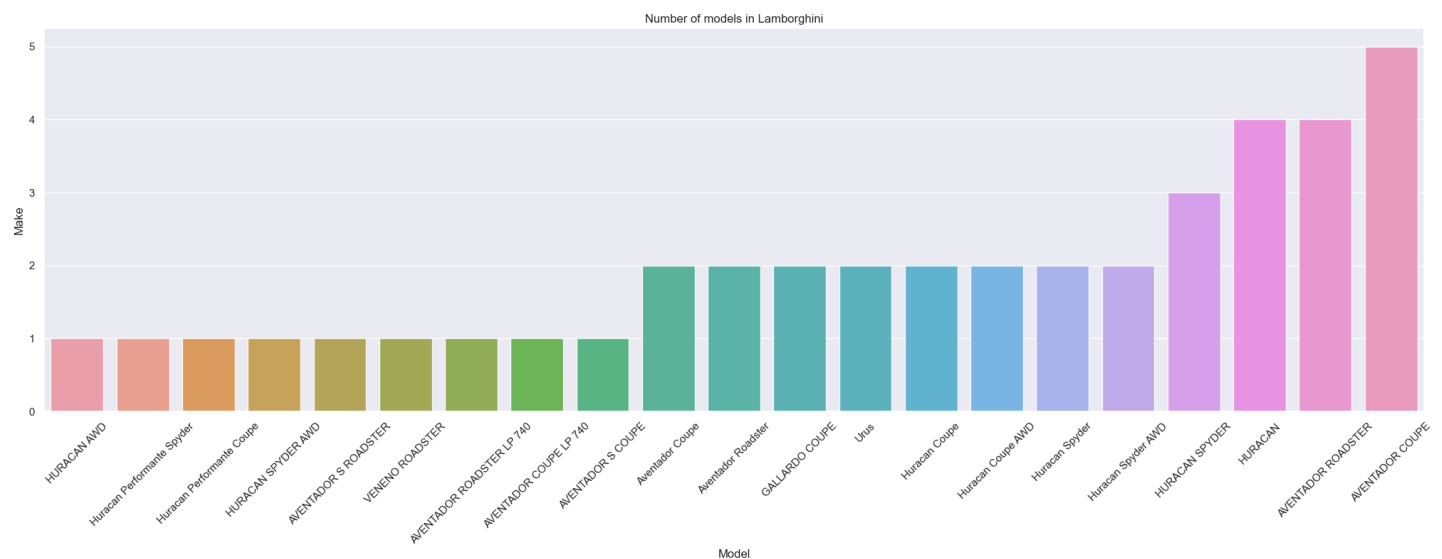
In [1199]:

```

lamborghini = df[df.Make == 'LAMBORGHINI']
lamborghini_models = lamborghini.groupby('Model').count().reset_index().sort_values('Make', ascending=True)

f, ax = plt.subplots(figsize=(25,7))
sns.set_theme(style="dark")
ax = sns.barplot(data=lamborghini_models, y='Make', x='Model', alpha=.9)
plt.title('Number of models in Lamborghini')
plt.xticks(rotation=45)
plt.show()

```



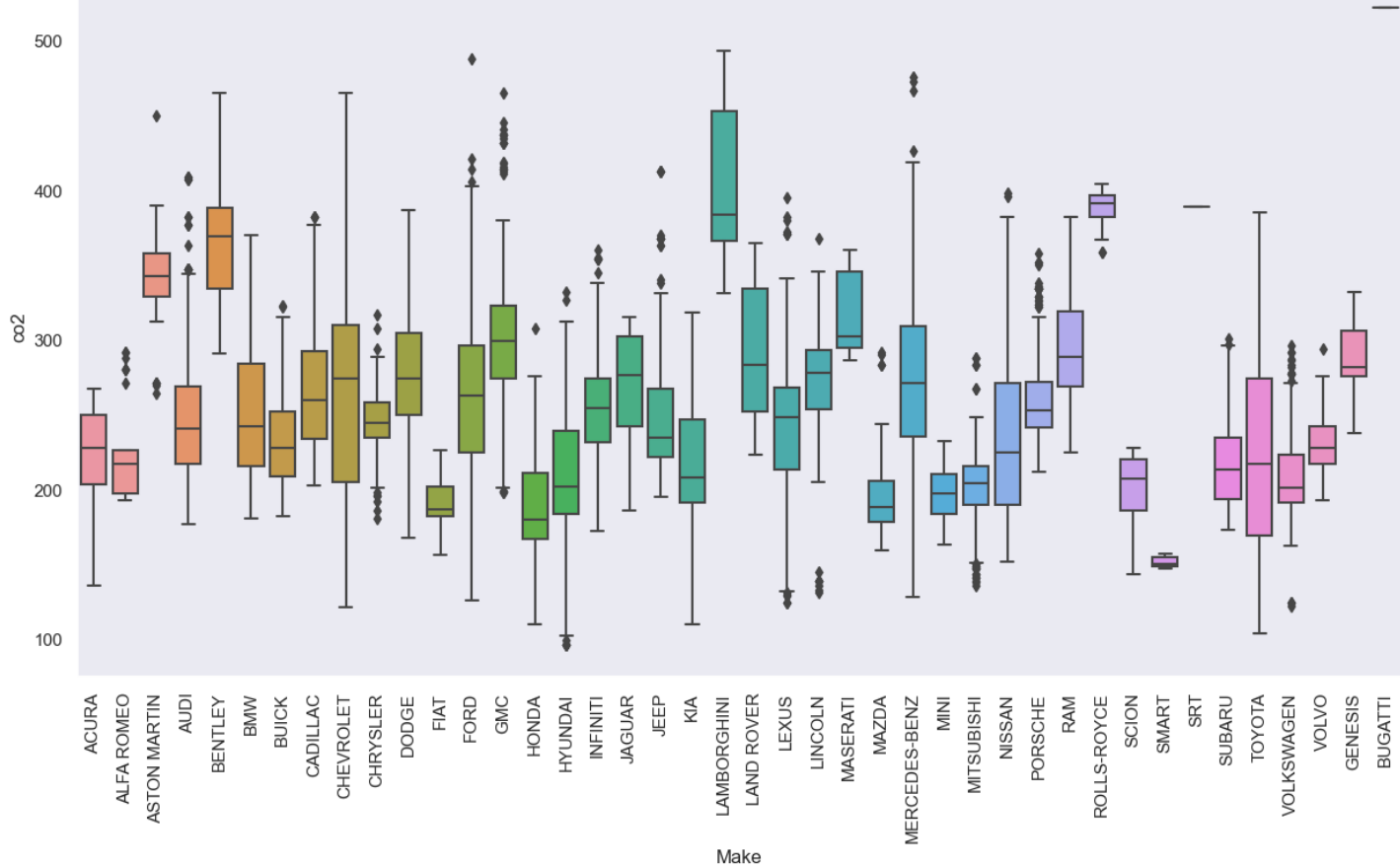
Uses a Box-Plot to identify the outliers

In [1200]:

```

plt.figure(figsize = (15,8))
sns.boxplot(x="Make", y="co2", data=df)
plt.xticks(rotation = 90)
plt.show()

```

`/opt/conda/lib/python3.7/site-packages/seaborn/distributions.py:316: UserWarning:`

Dataset has 0 variance; skipping density estimate. Pass `warn_singular=False` to disable this warning.

`/opt/conda/lib/python3.7/site-packages/seaborn/distributions.py:316: UserWarning:`

Dataset has 0 variance; skipping density estimate. Pass `warn_singular=False` to disable this warning.

Shows the proportion of the number of cylinders in cars

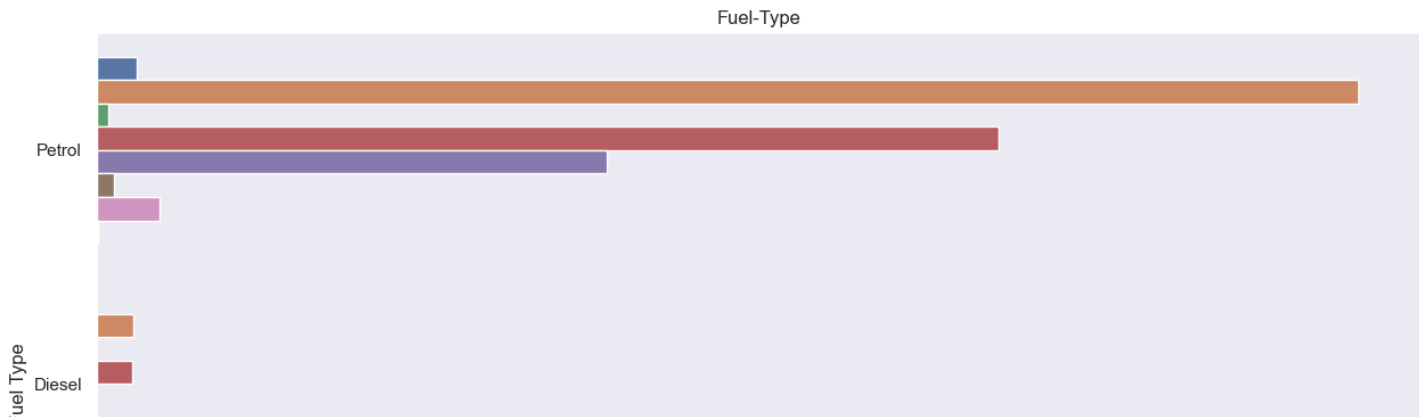
`In [1201]:`

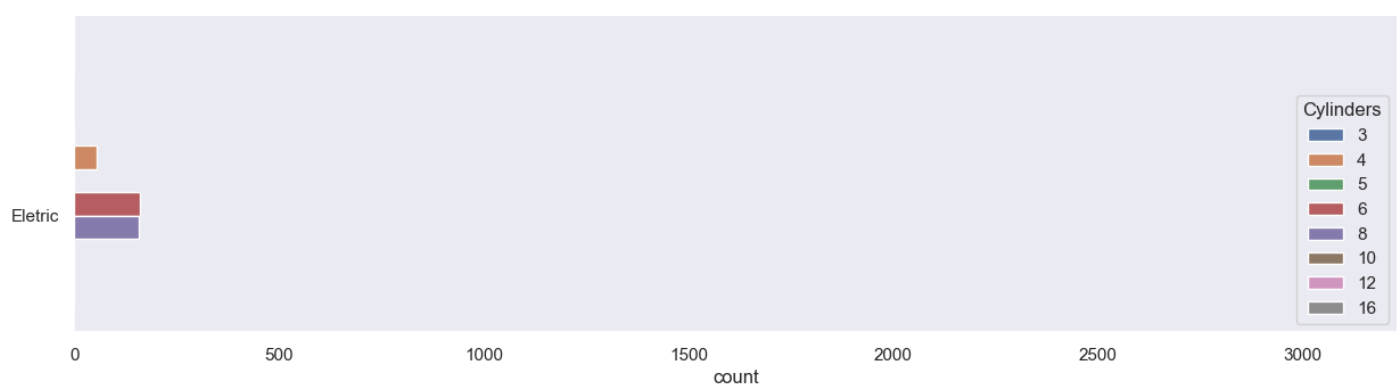
```
cel =df['Cylinders'].value_counts().reset_index()
fig = px.pie(cel, values='Cylinders', names='index')
fig.update_layout(title="Cylinders")
fig.show()
```

Shows the proportion of the fuel-type by the number of cylinders

`In [1202]:`

```
plt.figure(figsize = (15,8))
sns.countplot(y="Fuel Type", data=df, hue='Cylinders')
plt.title('Fuel-Type')
plt.show()
```

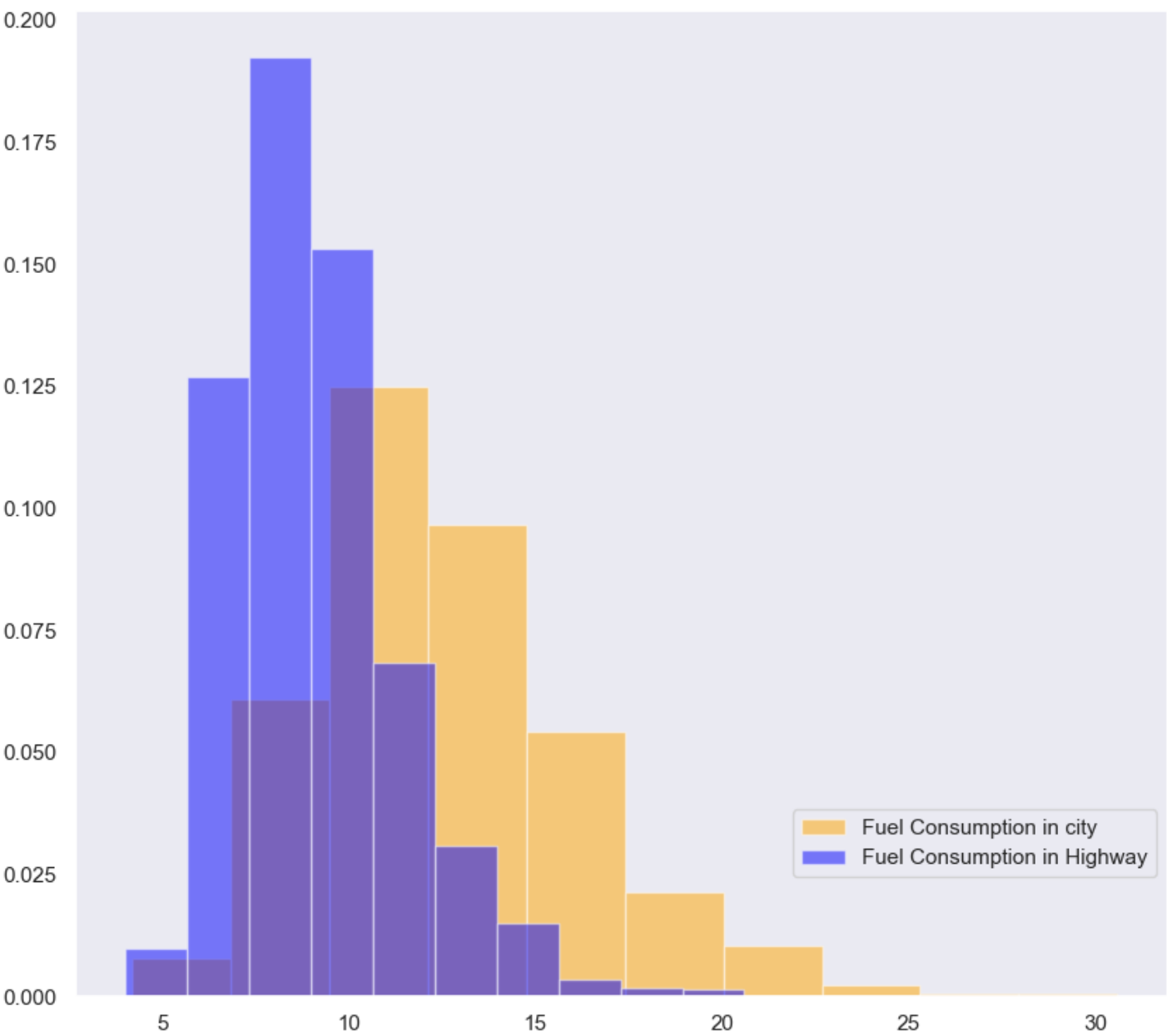




Shows the Fuel Consumption

In [1203]:

```
fig = plt.figure(figsize = (10,20))
ax = fig.add_subplot(2,1,1)
ax = plt.hist(df['fuel_cons_city'], color="orange", label="Fuel Consumption in city", de
nsity=True, alpha=0.5)
ax = plt.hist(df['fuel_cons_hwy'], color="blue", label="Fuel Consumption in Highway", de
nsity=True, alpha=0.5)
ax = plt.legend(bbox_to_anchor=(1, 0.2))
plt.show()
```



Dataset has 0 variance; skipping density estimate. Pass `warn_singular=False` to disable this warning.

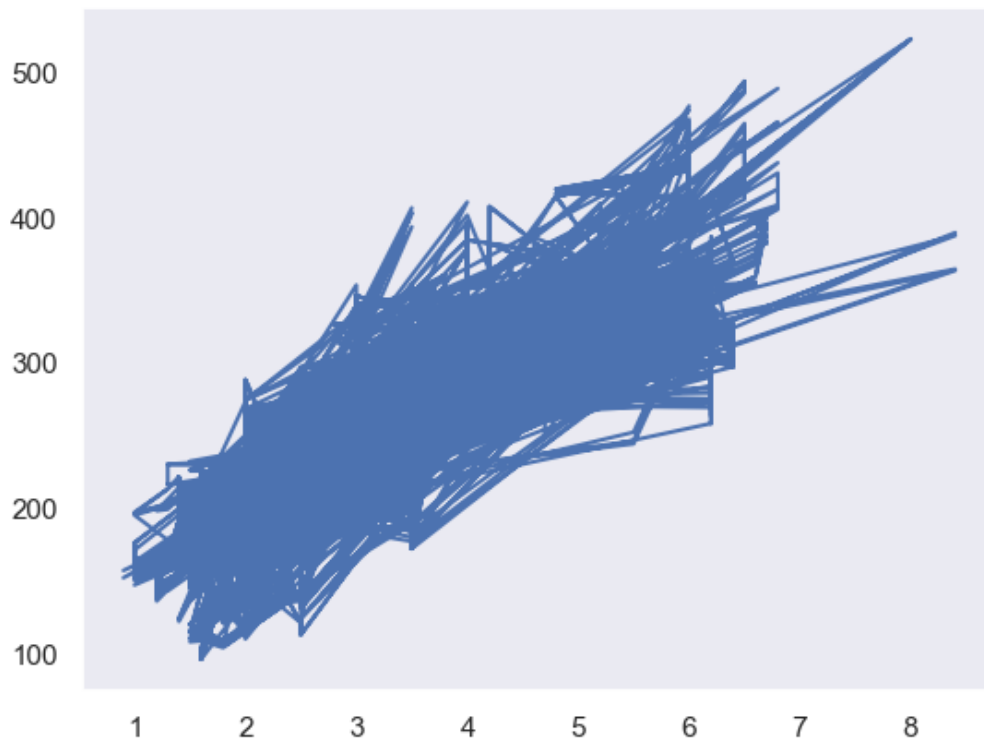
<AxesSubplot:xlabel='fuel_cons_hwy', ylabel='Density'>

In [1204]:

```
plt.plot(df["engine_size"], df["co2"])
```

Out[1204]:

[<matplotlib.lines.Line2D at 0x2799fa64990>]

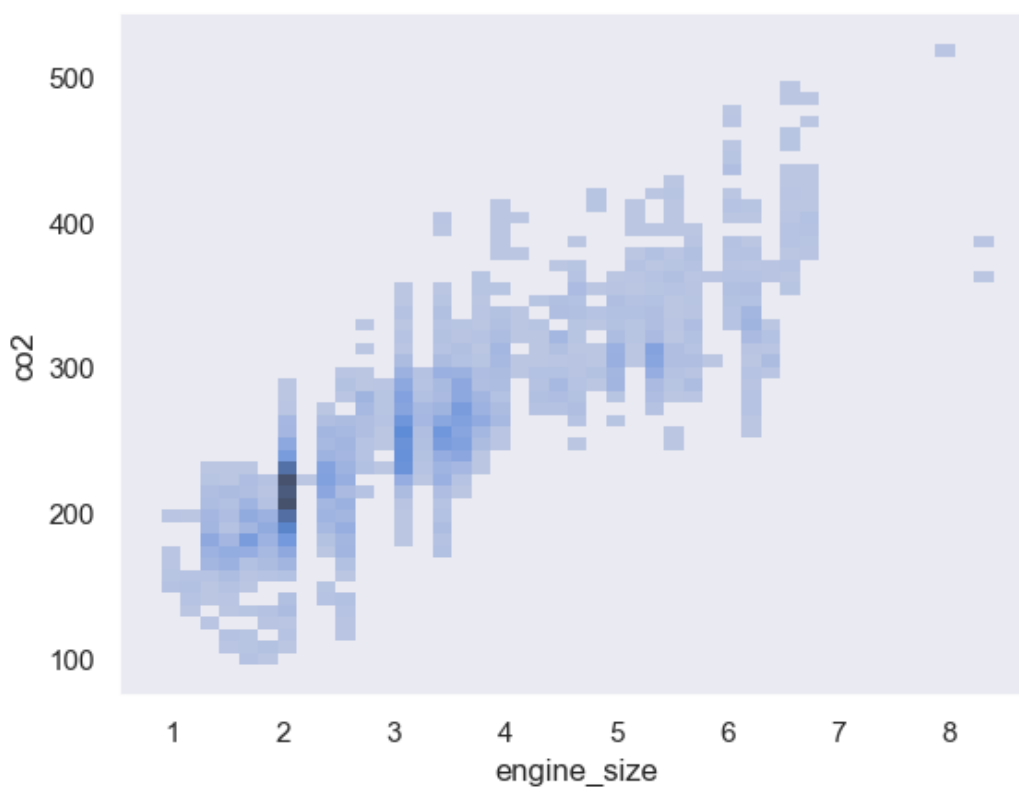


In [1205]:

```
sns.histplot(df, x="engine_size", y="co2")
```

Out[1205]:

<Axes: xlabel='engine_size', ylabel='co2'>



Shows the correlation of the data in a table and a heat map

In [1206]:

```
df.corr()

C:\Users\vasco\AppData\Local\Temp\ipykernel_16832\1134722465.py:1: FutureWarning:

The default value of numeric_only in DataFrame.corr is deprecated. In a future version, i
t will default to False. Select only valid columns or specify the value of numeric_only t
o silence this warning.
```

Out[1206]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	co2
engine_size	1.000000	0.927653	0.831379	0.761526	0.817060	0.851145
Cylinders	0.927653	1.000000	0.800702	0.715252	0.780534	0.832644
fuel_cons_city	0.831379	0.800702	1.000000	0.948180	0.993810	0.919592
fuel_cons_hwy	0.761526	0.715252	0.948180	1.000000	0.977299	0.883536
fuel_cons_comb	0.817060	0.780534	0.993810	0.977299	1.000000	0.918052
co2	0.851145	0.832644	0.919592	0.883536	0.918052	1.000000

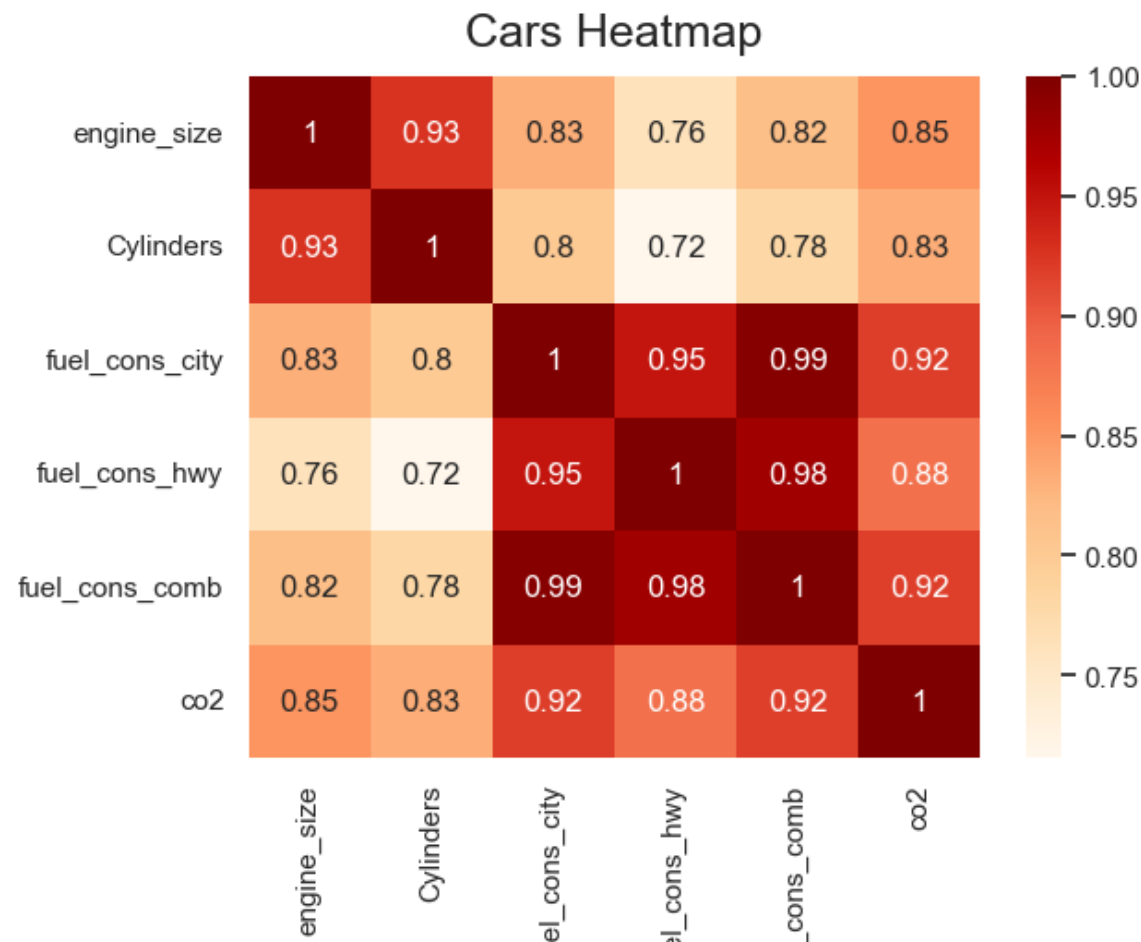
In [1207]:

```
cor = df.corr()
heatmap = sns.heatmap(cor, annot=True , cmap='OrRd')

heatmap.set_title('Cars Heatmap', fontdict={'fontsize':18}, pad=12);

C:\Users\vasco\AppData\Local\Temp\ipykernel_16832\3822008766.py:1: FutureWarning:

The default value of numeric_only in DataFrame.corr is deprecated. In a future version, i
t will default to False. Select only valid columns or specify the value of numeric_only t
o silence this warning.
```



Linear Regression

In [1208]:

```
from sklearn.linear_model import LinearRegression
from sklearn.metrics import r2_score
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import (StandardScaler,
                                    PolynomialFeatures)
```

In [1209]:

```
slr = LinearRegression()
y_col = "co2"

X = df.drop(y_col, axis=1)
y = df[y_col]
X = df[['engine_size', 'Cylinders', 'fuel_cons_city', 'fuel_cons_hwy', 'fuel_cons_comb']]
```

In [1210]:

```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=72018)
```

In [1211]:

```
s = StandardScaler()
X_train_s = s.fit_transform(X_train)
```

In [1212]:

```
slr.fit(X_train_s, y_train)
X_test_s = s.transform(X_test)
y_pred = slr.predict(X_test_s)
```

In [1213]:

```
print(f'R2 score is {r2_score(y_pred, y_test)}')
print("Residual sum of squares (MSE): %.2f" % np.mean((y_pred - y_test) ** 2))
```

R2 score is 0.8573322984476484
Residual sum of squares (MSE): 429.44

Deep Learning With Linear Regression Tensorflow Regression Problem -> <https://youtu.be/-vHQub0NXI4> Neural Networks from Scratch -> <https://youtu.be/levelYbxauw?list=PLQVvva0QuDcjD5BAw2DxE6OF2tius3V3>

In [1214]:

```
import tensorflow as tf
import seaborn as sns
from tensorflow import keras
from tensorflow.keras import layers
from keras.optimizers import RMSprop, Adam
```

Split the dataset into training and test

In [1215]:

```
train_dataset = df.sample(frac=0.8, random_state=0)
test_dataset = df.drop(train_dataset.index)
```

Shows the description of the training stats and pop's the CO2 label out of the stats

```
In [1216]:
```

```
train_stats = df.describe()
train_stats.pop("co2")
train_stats = train_stats.transpose()
train_stats
```

```
Out[1216]:
```

	count	mean	std	min	25%	50%	75%	max
engine_size	7385.0	3.160068	1.354170	0.9	2.0	3.0	3.7	8.4
Cylinders	7385.0	5.615030	1.828307	3.0	4.0	6.0	6.0	16.0
fuel_cons_city	7385.0	12.556534	3.500274	4.2	10.1	12.1	14.6	30.6
fuel_cons_hwy	7385.0	9.041706	2.224456	4.0	7.5	8.7	10.2	20.6
fuel_cons_comb	7385.0	10.975071	2.892506	4.1	8.9	10.6	12.6	26.1

Pops out the Make and Model out of the training dataset and the test dataset

```
In [1217]:
```

```
train_dataset.pop("Make")
train_dataset.pop("Model")

test_dataset.pop("Make")
test_dataset.pop("Model")
```

```
Out[1217]:
```

```
0          ILX
7          TL AWD
21         A4 QUATTRO
24         A5 QUATTRO
25         A5 QUATTRO
...
7360    Arteon 4MOTION
7363          Golf
7364    Golf GTI
7370    Passat
7382    XC60 T6 AWD
Name: Model, Length: 1477, dtype: object
```

Pops out the Fuel-Type out of the training dataset and the test dataset

```
In [1218]:
```

```
train_dataset.pop("Fuel Type")
test_dataset.pop("Fuel Type")
```

```
Out[1218]:
```

```
0      Petrol
7      Petrol
21      Petrol
24      Petrol
25      Petrol
...
7360      Petrol
7363      Petrol
7364      Petrol
7370      Petrol
7382      Petrol
Name: Fuel Type, Length: 1477, dtype: object
```

Pops out the Vehicle Class out of the training dataset and the test dataset

```
In [1219]:
```

```
train_dataset.pop("vehicle_class")
```

```
test_dataset.pop("vehicle_class")
```

Out[1219]:

```
0          COMPACT
7          MID-SIZE
21         COMPACT
24        SUBCOMPACT
25        SUBCOMPACT
...
7360       FULL-SIZE
7363       COMPACT
7364       COMPACT
7370       MID-SIZE
7382      SUV - SMALL
Name: vehicle_class, Length: 1477, dtype: object
```

Removing the CO2 Label of the dataset, so it does not give the model the right answer

In [1220]:

```
train_labels = train_dataset.pop("co2")
test_labels = test_dataset.pop("co2")
```

Since the range of the values are very different it is necessary to normalize the data before training, testing or predicting something

The features will fall between 0 and 1

In [1221]:

```
def norm(x):
    return (x - train_stats['mean']) / train_stats['std']
normed_train_data = norm(train_dataset)
normed_test_data = norm(test_dataset)
```

Build the model

I'm gonna use keras Sequential with results in a fully connected model with 4 layers

In [1222]:

```
def build_model():
    model = keras.Sequential([
        #It has 5 neuron because it is the number of features, and using the relu activation function
        layers.Dense(5, activation=tf.nn.relu, input_shape=[len(train_dataset.keys())]),
        #The next layer in the network has the double of the neurons, it should not be more than the double
        #so it does not make overfitting, and it uses the relu activation function
        layers.Dense(10, activation=tf.nn.relu),
        layers.Dense(11, activation=tf.nn.relu),
        #The last layer only has one neuron that means this is the output one and since we are predicting a value we only need one output
        layers.Dense(1)
    ])

    #Uses the RMSprop optimizer
    optimizer = RMSprop(learning_rate=0.0001)

    #mse -> mean square error
    #mae -> mean absolute error
    model.compile(loss='mse', optimizer=optimizer, metrics=['mae', 'mse'])
    return model
```

```
model = build_model()
```

In [1223]:

```
model.summary()
```

Model: "sequential_13"

Layer (type)	Output Shape	Param #
dense_50 (Dense)	(None, 5)	30
dense_51 (Dense)	(None, 10)	60
dense_52 (Dense)	(None, 11)	121
dense_53 (Dense)	(None, 1)	12

=====
Total params: 223
Trainable params: 223
Non-trainable params: 0
=====

Try out the model without training

In [1224]:

```
print(normed_train_data[:10])
```

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
6307	-0.118204	0.210561	-0.158997	-0.378387	-0.233386
5036	-0.856663	-0.883348	-0.958934	-0.558207	-0.855684
1995	0.472564	0.210561	-0.016151	-0.018749	0.008618
4156	-0.487433	-0.883348	-1.073211	-1.142619	-1.097689
6328	-0.118204	0.210561	-0.444689	-0.243523	-0.371675
1696	-0.561279	-0.883348	0.469525	0.385844	0.423484
4313	0.251026	0.210561	0.355248	1.150076	0.630916
5685	0.324872	0.210561	0.326679	0.206025	0.285195
4902	-1.152047	-0.883348	-1.016073	-0.468297	-0.821112
6873	-0.339741	-0.883348	0.040987	0.880347	0.354339

In [1225]:

```
example_batch = normed_train_data[:10]  
example_result = model.predict(example_batch)  
example_result
```

1/1 [=====] - 0s 74ms/step

Out[1225]:

```
array([[ 6.2894635e-04],  
       [-1.1915225e-01],  
       [ 9.7031686e-03],  
       [-9.5963299e-02],  
       [ 5.1169768e-03],  
       [-6.6730413e-03],  
       [ 1.2819767e-03],  
       [ 3.6199144e-03],  
       [-1.3224593e-01],  
       [ 9.2778355e-05]], dtype=float32)
```

In [1226]:

```
print(train_labels)
```

```
6307    241  
5036    229  
1995    253  
4156    183  
6328    231
```



```
...
5720    339
6580    206
542     253
2725    179
2454    306
Name: co2, Length: 5908, dtype: int64
```

Train the model Train the model for 1000 epochs, and record the training and validation accuracy in the history object

In [1227]:

```
#Display training process by printing a single dot for each completed epoch
class PrintDot(keras.callbacks.Callback):

    def on_epoch_end(self, epoch, logs):
        if epoch % 100 == 0:
            print('')
            print('.', end='')

EPOCHS = 2000

history = model.fit(
    normed_train_data, train_labels,
    epochs=EPOCHS, validation_split=0.2, verbose=1,
    callbacks=[PrintDot()]
)
```

Epoch 1/2000

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\keras\engine\data_adapter.py:1700: FutureWarning:

The behavior of `series[i:j]` with an integer-dtype index is deprecated. In a future version, this will be treated as **label-based** indexing, consistent with e.g. `series[i]` lookups. To retain the old behavior, use `series.iloc[i:j]`. To get the future behavior, use `series.loc[i:j]`.

```
148/148 [=====] - ETA: 0s - loss: 66212.3750 - mae: 250.6802 - mse: 66212.3750
148/148 [=====] - 1s 3ms/step - loss: 66212.3750 - mae: 250.6802 - mse: 66212.3750 - val_loss: 66849.7500 - val_mae: 251.5673 - val_mse: 66849.7500
Epoch 2/2000
148/148 [=====] - 0s 2ms/step - loss: 66147.4609 - mae: 250.5379 - mse: 66147.4609 - val_loss: 66782.7891 - val_mae: 251.4206 - val_mse: 66782.7891
Epoch 3/2000
148/148 [=====] - 0s 2ms/step - loss: 66077.0469 - mae: 250.3853 - mse: 66077.0469 - val_loss: 66709.0078 - val_mae: 251.2617 - val_mse: 66709.0078
Epoch 4/2000
148/148 [=====] - 0s 2ms/step - loss: 65998.0000 - mae: 250.2168 - mse: 65998.0000 - val_loss: 66625.5469 - val_mae: 251.0845 - val_mse: 66625.5469
Epoch 5/2000
148/148 [=====] - 0s 2ms/step - loss: 65908.4844 - mae: 250.0276 - mse: 65908.4844 - val_loss: 66530.7578 - val_mae: 250.8846 - val_mse: 66530.7578
Epoch 6/2000
148/148 [=====] - 0s 2ms/step - loss: 65806.4766 - mae: 249.8136 - mse: 65806.4766 - val_loss: 66423.4141 - val_mae: 250.6594 - val_mse: 66423.4141
Epoch 7/2000
148/148 [=====] - 0s 2ms/step - loss: 65690.9766 - mae: 249.5714 - mse: 65690.9766 - val_loss: 66300.9844 - val_mae: 250.4025 - val_mse: 66300.9844
Epoch 8/2000
148/148 [=====] - 0s 2ms/step - loss: 65560.1250 - mae: 249.2969 - mse: 65560.1250 - val_loss: 66162.8750 - val_mae: 250.1123 - val_mse: 66162.8750
Epoch 9/2000
148/148 [=====] - 0s 3ms/step - loss: 65412.7461 - mae: 248.9864 - mse: 65412.7461 - val_loss: 66007.1172 - val_mae: 249.7840 - val_mse: 66007.1172
Epoch 10/2000
148/148 [=====] - 0s 3ms/step - loss: 65244.5664 - mae: 248.6316 - mse: 65244.5664 - val_loss: 65826.4688 - val_mae: 249.4001 - val_mse: 65826.4688
Epoch 11/2000
```

Epoch 11/2000
148/148 [=====] - 0s 3ms/step - loss: 65046.0664 - mae: 248.2079
- mse: 65046.0664 - val_loss: 65611.6016 - val_mae: 248.9382 - val_mse: 65611.6016
Epoch 12/2000
148/148 [=====] - 0s 2ms/step - loss: 64817.8203 - mae: 247.7169
- mse: 64817.8203 - val_loss: 65369.9219 - val_mae: 248.4165 - val_mse: 65369.9219
Epoch 13/2000
148/148 [=====] - 0s 2ms/step - loss: 64557.5430 - mae: 247.1531
- mse: 64557.5430 - val_loss: 65095.6562 - val_mae: 247.8218 - val_mse: 65095.6562
Epoch 14/2000
148/148 [=====] - 0s 3ms/step - loss: 64263.7578 - mae: 246.5159
- mse: 64263.7578 - val_loss: 64786.5391 - val_mae: 247.1479 - val_mse: 64786.5391
Epoch 15/2000
148/148 [=====] - 0s 3ms/step - loss: 63935.2344 - mae: 245.7972
- mse: 63935.2344 - val_loss: 64438.0781 - val_mae: 246.3826 - val_mse: 64438.0781
Epoch 16/2000
148/148 [=====] - 0s 3ms/step - loss: 63560.0430 - mae: 244.9734
- mse: 63560.0430 - val_loss: 64043.1953 - val_mae: 245.5070 - val_mse: 64043.1953
Epoch 17/2000
148/148 [=====] - 0s 3ms/step - loss: 63136.6562 - mae: 244.0324
- mse: 63136.6562 - val_loss: 63599.1055 - val_mae: 244.5145 - val_mse: 63599.1055
Epoch 18/2000
148/148 [=====] - 0s 3ms/step - loss: 62668.4844 - mae: 242.9788
- mse: 62668.4844 - val_loss: 63109.1250 - val_mae: 243.4090 - val_mse: 63109.1250
Epoch 19/2000
148/148 [=====] - 0s 3ms/step - loss: 62147.3242 - mae: 241.8005
- mse: 62147.3242 - val_loss: 62565.9414 - val_mae: 242.1731 - val_mse: 62565.9414
Epoch 20/2000
148/148 [=====] - 0s 3ms/step - loss: 61568.3242 - mae: 240.4808
- mse: 61568.3242 - val_loss: 61967.1602 - val_mae: 240.7966 - val_mse: 61967.1602
Epoch 21/2000
148/148 [=====] - 0s 3ms/step - loss: 60936.4766 - mae: 239.0252
- mse: 60936.4766 - val_loss: 61311.9922 - val_mae: 239.2759 - val_mse: 61311.9922
Epoch 22/2000
148/148 [=====] - 0s 2ms/step - loss: 60243.6367 - mae: 237.4114
- mse: 60243.6367 - val_loss: 60594.4570 - val_mae: 237.5908 - val_mse: 60594.4570
Epoch 23/2000
148/148 [=====] - 0s 2ms/step - loss: 59486.0352 - mae: 235.6320
- mse: 59486.0352 - val_loss: 59814.5391 - val_mae: 235.7364 - val_mse: 59814.5391
Epoch 24/2000
148/148 [=====] - 0s 3ms/step - loss: 58666.1367 - mae: 233.6755
- mse: 58666.1367 - val_loss: 58969.5820 - val_mae: 233.7013 - val_mse: 58969.5820
Epoch 25/2000
148/148 [=====] - 0s 3ms/step - loss: 57774.3672 - mae: 231.5162
- mse: 57774.3672 - val_loss: 58055.2891 - val_mae: 231.4643 - val_mse: 58055.2891
Epoch 26/2000
148/148 [=====] - 0s 2ms/step - loss: 56815.6211 - mae: 229.1600
- mse: 56815.6211 - val_loss: 57069.8672 - val_mae: 229.0158 - val_mse: 57069.8672
Epoch 27/2000
148/148 [=====] - 0s 2ms/step - loss: 55776.1992 - mae: 226.5587
- mse: 55776.1992 - val_loss: 55998.4375 - val_mae: 226.2996 - val_mse: 55998.4375
Epoch 28/2000
148/148 [=====] - 0s 2ms/step - loss: 54647.0039 - mae: 223.6725
- mse: 54647.0039 - val_loss: 54851.1289 - val_mae: 223.3226 - val_mse: 54851.1289
Epoch 29/2000
148/148 [=====] - 0s 3ms/step - loss: 53446.4102 - mae: 220.5399
- mse: 53446.4102 - val_loss: 53626.1133 - val_mae: 220.0821 - val_mse: 53626.1133
Epoch 30/2000
148/148 [=====] - 0s 2ms/step - loss: 52170.2031 - mae: 217.1412
- mse: 52170.2031 - val_loss: 52329.6758 - val_mae: 216.5738 - val_mse: 52329.6758
Epoch 31/2000
148/148 [=====] - 0s 2ms/step - loss: 50805.6211 - mae: 213.4615
- mse: 50805.6211 - val_loss: 50950.7266 - val_mae: 212.8035 - val_mse: 50950.7266
Epoch 32/2000
148/148 [=====] - 0s 2ms/step - loss: 49374.2539 - mae: 209.4927
- mse: 49374.2539 - val_loss: 49495.9141 - val_mae: 208.7746 - val_mse: 49495.9141
Epoch 33/2000
148/148 [=====] - 0s 2ms/step - loss: 47851.3555 - mae: 205.2216
- mse: 47851.3555 - val_loss: 47952.3516 - val_mae: 204.4200 - val_mse: 47952.3516
Epoch 34/2000
148/148 [=====] - 0s 2ms/step - loss: 46246.2422 - mae: 200.6960
- mse: 46246.2422 - val_loss: 46335.2578 - val_mae: 199.7854 - val_mse: 46335.2578
Epoch 35/2000

Epoch 35/2000
148/148 [=====] - 0s 2ms/step - loss: 44568.1445 - mae: 195.8268
- mse: 44568.1445 - val_loss: 44655.1914 - val_mae: 194.9402 - val_mse: 44655.1914
Epoch 36/2000
148/148 [=====] - 0s 2ms/step - loss: 42840.7344 - mae: 190.7407
- mse: 42840.7344 - val_loss: 42923.8633 - val_mae: 189.9126 - val_mse: 42923.8633
Epoch 37/2000
148/148 [=====] - 0s 2ms/step - loss: 41051.6094 - mae: 185.3542
- mse: 41051.6094 - val_loss: 41151.2031 - val_mae: 184.6423 - val_mse: 41151.2031
Epoch 38/2000
148/148 [=====] - 0s 2ms/step - loss: 39222.8477 - mae: 179.6702
- mse: 39222.8477 - val_loss: 39354.4180 - val_mae: 179.0829 - val_mse: 39354.4180
Epoch 39/2000
148/148 [=====] - 0s 2ms/step - loss: 37404.2031 - mae: 173.8672
- mse: 37404.2031 - val_loss: 37558.2188 - val_mae: 173.5207 - val_mse: 37558.2188
Epoch 40/2000
148/148 [=====] - 0s 2ms/step - loss: 35561.4961 - mae: 168.1937
- mse: 35561.4961 - val_loss: 35776.0586 - val_mae: 168.2319 - val_mse: 35776.0586
Epoch 41/2000
148/148 [=====] - 0s 2ms/step - loss: 33745.7578 - mae: 162.6652
- mse: 33745.7578 - val_loss: 34041.5781 - val_mae: 163.2806 - val_mse: 34041.5781
Epoch 42/2000
148/148 [=====] - 0s 2ms/step - loss: 32025.0527 - mae: 157.7045
- mse: 32025.0527 - val_loss: 32406.7383 - val_mae: 158.8550 - val_mse: 32406.7383
Epoch 43/2000
148/148 [=====] - 0s 2ms/step - loss: 30388.8926 - mae: 153.0996
- mse: 30388.8926 - val_loss: 30847.6523 - val_mae: 154.8123 - val_mse: 30847.6523
Epoch 44/2000
148/148 [=====] - 0s 2ms/step - loss: 28841.5703 - mae: 148.9804
- mse: 28841.5703 - val_loss: 29381.9805 - val_mae: 151.1948 - val_mse: 29381.9805
Epoch 45/2000
148/148 [=====] - 0s 2ms/step - loss: 27385.2324 - mae: 145.1832
- mse: 27385.2324 - val_loss: 27956.3125 - val_mae: 147.7321 - val_mse: 27956.3125
Epoch 46/2000
148/148 [=====] - 0s 2ms/step - loss: 25953.0332 - mae: 141.4560
- mse: 25953.0332 - val_loss: 26550.2148 - val_mae: 144.1743 - val_mse: 26550.2148
Epoch 47/2000
148/148 [=====] - 0s 2ms/step - loss: 24554.5586 - mae: 137.7035
- mse: 24554.5586 - val_loss: 25167.2148 - val_mae: 140.4910 - val_mse: 25167.2148
Epoch 48/2000
148/148 [=====] - 0s 2ms/step - loss: 23186.0098 - mae: 133.7880
- mse: 23186.0098 - val_loss: 23789.9082 - val_mae: 136.6125 - val_mse: 23789.9082
Epoch 49/2000
148/148 [=====] - 0s 2ms/step - loss: 21841.6367 - mae: 129.7745
- mse: 21841.6367 - val_loss: 22446.6133 - val_mae: 132.6183 - val_mse: 22446.6133
Epoch 50/2000
148/148 [=====] - 0s 2ms/step - loss: 20554.5371 - mae: 125.7240
- mse: 20554.5371 - val_loss: 21126.2207 - val_mae: 128.4962 - val_mse: 21126.2207
Epoch 51/2000
148/148 [=====] - 0s 2ms/step - loss: 19254.3438 - mae: 121.3928
- mse: 19254.3438 - val_loss: 19812.5762 - val_mae: 124.1152 - val_mse: 19812.5762
Epoch 52/2000
148/148 [=====] - 0s 2ms/step - loss: 18040.9727 - mae: 117.1763
- mse: 18040.9727 - val_loss: 18592.6992 - val_mae: 119.9495 - val_mse: 18592.6992
Epoch 53/2000
148/148 [=====] - 0s 2ms/step - loss: 16899.1465 - mae: 113.1294
- mse: 16899.1465 - val_loss: 17429.8887 - val_mae: 115.8220 - val_mse: 17429.8887
Epoch 54/2000
148/148 [=====] - 0s 2ms/step - loss: 15836.1846 - mae: 109.2189
- mse: 15836.1846 - val_loss: 16359.3115 - val_mae: 111.6865 - val_mse: 16359.3115
Epoch 55/2000
148/148 [=====] - 0s 2ms/step - loss: 14884.9092 - mae: 105.3339
- mse: 14884.9092 - val_loss: 15406.3066 - val_mae: 107.8739 - val_mse: 15406.3066
Epoch 56/2000
148/148 [=====] - 0s 2ms/step - loss: 14088.0381 - mae: 101.9360
- mse: 14088.0381 - val_loss: 14622.4463 - val_mae: 104.7376 - val_mse: 14622.4463
Epoch 57/2000
148/148 [=====] - 0s 2ms/step - loss: 13427.5010 - mae: 99.0828
- mse: 13427.5010 - val_loss: 13947.8008 - val_mae: 102.0179 - val_mse: 13947.8008
Epoch 58/2000
148/148 [=====] - 0s 2ms/step - loss: 12883.0635 - mae: 96.6242
- mse: 12883.0635 - val_loss: 13404.3613 - val_mae: 99.7519 - val_mse: 13404.3613
Epoch 59/2000

Epoch 59/2000
148/148 [=====] - 0s 2ms/step - loss: 12472.6650 - mae: 94.7768
- mse: 12472.6650 - val_loss: 12974.9355 - val_mae: 97.9020 - val_mse: 12974.9355
Epoch 60/2000
148/148 [=====] - 0s 2ms/step - loss: 12126.2061 - mae: 93.1701
- mse: 12126.2061 - val_loss: 12612.7334 - val_mae: 96.3057 - val_mse: 12612.7334
Epoch 61/2000
148/148 [=====] - 0s 2ms/step - loss: 11833.6982 - mae: 91.8427
- mse: 11833.6982 - val_loss: 12300.7373 - val_mae: 94.9042 - val_mse: 12300.7373
Epoch 62/2000
148/148 [=====] - 0s 2ms/step - loss: 11571.4512 - mae: 90.6526
- mse: 11571.4512 - val_loss: 12008.2861 - val_mae: 93.5704 - val_mse: 12008.2861
Epoch 63/2000
148/148 [=====] - 0s 2ms/step - loss: 11321.7832 - mae: 89.5105
- mse: 11321.7832 - val_loss: 11738.7686 - val_mae: 92.3884 - val_mse: 11738.7686
Epoch 64/2000
148/148 [=====] - 0s 2ms/step - loss: 11089.2236 - mae: 88.5222
- mse: 11089.2236 - val_loss: 11483.1084 - val_mae: 91.2771 - val_mse: 11483.1084
Epoch 65/2000
148/148 [=====] - 0s 2ms/step - loss: 10860.9873 - mae: 87.5408
- mse: 10860.9873 - val_loss: 11236.4648 - val_mae: 90.2288 - val_mse: 11236.4648
Epoch 66/2000
148/148 [=====] - 0s 2ms/step - loss: 10634.7812 - mae: 86.5736
- mse: 10634.7812 - val_loss: 10993.6348 - val_mae: 89.1869 - val_mse: 10993.6348
Epoch 67/2000
148/148 [=====] - 0s 2ms/step - loss: 10413.8789 - mae: 85.6376
- mse: 10413.8789 - val_loss: 10754.4395 - val_mae: 88.1499 - val_mse: 10754.4395
Epoch 68/2000
148/148 [=====] - 0s 2ms/step - loss: 10191.0254 - mae: 84.7235
- mse: 10191.0254 - val_loss: 10518.4746 - val_mae: 87.0995 - val_mse: 10518.4746
Epoch 69/2000
148/148 [=====] - 0s 2ms/step - loss: 9975.5381 - mae: 83.7523 -
mse: 9975.5381 - val_loss: 10285.1172 - val_mae: 86.1151 - val_mse: 10285.1172
Epoch 70/2000
148/148 [=====] - 0s 2ms/step - loss: 9754.8818 - mae: 82.7969 -
mse: 9754.8818 - val_loss: 10048.4209 - val_mae: 85.0991 - val_mse: 10048.4209
Epoch 71/2000
148/148 [=====] - 0s 2ms/step - loss: 9532.4814 - mae: 81.8699 -
mse: 9532.4814 - val_loss: 9811.7324 - val_mae: 84.0608 - val_mse: 9811.7324
Epoch 72/2000
148/148 [=====] - 0s 2ms/step - loss: 9309.0859 - mae: 80.8536 -
mse: 9309.0859 - val_loss: 9579.7812 - val_mae: 83.0701 - val_mse: 9579.7812
Epoch 73/2000
148/148 [=====] - 0s 2ms/step - loss: 9087.7998 - mae: 79.9219 -
mse: 9087.7998 - val_loss: 9340.2900 - val_mae: 82.0126 - val_mse: 9340.2900
Epoch 74/2000
148/148 [=====] - 0s 2ms/step - loss: 8857.0693 - mae: 78.9058 -
mse: 8857.0693 - val_loss: 9100.9414 - val_mae: 80.9483 - val_mse: 9100.9414
Epoch 75/2000
148/148 [=====] - 0s 2ms/step - loss: 8633.4951 - mae: 77.9003 -
mse: 8633.4951 - val_loss: 8868.2119 - val_mae: 79.8724 - val_mse: 8868.2119
Epoch 76/2000
148/148 [=====] - 0s 2ms/step - loss: 8408.7510 - mae: 76.8712 -
mse: 8408.7510 - val_loss: 8629.0684 - val_mae: 78.7794 - val_mse: 8629.0684
Epoch 77/2000
148/148 [=====] - 0s 2ms/step - loss: 8181.9033 - mae: 75.7817 -
mse: 8181.9033 - val_loss: 8390.9268 - val_mae: 77.6898 - val_mse: 8390.9268
Epoch 78/2000
148/148 [=====] - 0s 2ms/step - loss: 7950.2241 - mae: 74.7227 -
mse: 7950.2241 - val_loss: 8145.7734 - val_mae: 76.5450 - val_mse: 8145.7734
Epoch 79/2000
148/148 [=====] - 0s 2ms/step - loss: 7721.4126 - mae: 73.6345 -
mse: 7721.4126 - val_loss: 7907.4351 - val_mae: 75.3763 - val_mse: 7907.4351
Epoch 80/2000
148/148 [=====] - 0s 3ms/step - loss: 7497.2998 - mae: 72.5155 -
mse: 7497.2998 - val_loss: 7667.5806 - val_mae: 74.2080 - val_mse: 7667.5806
Epoch 81/2000
148/148 [=====] - 0s 3ms/step - loss: 7267.6514 - mae: 71.3923 -
mse: 7267.6514 - val_loss: 7426.2520 - val_mae: 73.0083 - val_mse: 7426.2520
Epoch 82/2000
148/148 [=====] - 0s 3ms/step - loss: 7034.5161 - mae: 70.2392 -
mse: 7034.5161 - val_loss: 7177.3848 - val_mae: 71.7554 - val_mse: 7177.3848
Epoch 83/2000

Epoch 83/2000
148/148 [=====] - 0s 2ms/step - loss: 6800.2681 - mae: 69.0484 - mse: 6800.2681 - val_loss: 6929.2285 - val_mae: 70.4395 - val_mse: 6929.2285
Epoch 84/2000
148/148 [=====] - 0s 2ms/step - loss: 6565.3145 - mae: 67.7833 - mse: 6565.3145 - val_loss: 6681.1528 - val_mae: 69.1151 - val_mse: 6681.1528
Epoch 85/2000
148/148 [=====] - 0s 2ms/step - loss: 6333.1909 - mae: 66.5562 - mse: 6333.1909 - val_loss: 6433.2690 - val_mae: 67.7768 - val_mse: 6433.2690
Epoch 86/2000
148/148 [=====] - 0s 3ms/step - loss: 6097.4717 - mae: 65.2287 - mse: 6097.4717 - val_loss: 6187.0737 - val_mae: 66.4237 - val_mse: 6187.0737
Epoch 87/2000
148/148 [=====] - 0s 2ms/step - loss: 5868.3389 - mae: 63.9794 - mse: 5868.3389 - val_loss: 5941.7275 - val_mae: 64.9438 - val_mse: 5941.7275
Epoch 88/2000
148/148 [=====] - 0s 2ms/step - loss: 5641.7007 - mae: 62.6200 - mse: 5641.7007 - val_loss: 5703.1890 - val_mae: 63.5958 - val_mse: 5703.1890
Epoch 89/2000
148/148 [=====] - 0s 3ms/step - loss: 5413.2397 - mae: 61.2886 - mse: 5413.2397 - val_loss: 5462.1011 - val_mae: 62.1446 - val_mse: 5462.1011
Epoch 90/2000
148/148 [=====] - 0s 2ms/step - loss: 5183.5708 - mae: 59.8820 - mse: 5183.5708 - val_loss: 5223.7290 - val_mae: 60.6795 - val_mse: 5223.7290
Epoch 91/2000
148/148 [=====] - 0s 2ms/step - loss: 4962.6890 - mae: 58.4802 - mse: 4962.6890 - val_loss: 4989.1152 - val_mae: 59.1750 - val_mse: 4989.1152
Epoch 92/2000
148/148 [=====] - 0s 2ms/step - loss: 4738.6963 - mae: 56.9912 - mse: 4738.6963 - val_loss: 4754.6250 - val_mae: 57.6693 - val_mse: 4754.6250
Epoch 93/2000
148/148 [=====] - 0s 2ms/step - loss: 4520.5190 - mae: 55.6561 - mse: 4520.5190 - val_loss: 4524.4146 - val_mae: 56.0296 - val_mse: 4524.4146
Epoch 94/2000
148/148 [=====] - 0s 2ms/step - loss: 4295.8247 - mae: 54.0445 - mse: 4295.8247 - val_loss: 4289.9097 - val_mae: 54.4101 - val_mse: 4289.9097
Epoch 95/2000
148/148 [=====] - 0s 2ms/step - loss: 4080.3005 - mae: 52.5590 - mse: 4080.3005 - val_loss: 4065.0229 - val_mae: 52.8036 - val_mse: 4065.0229
Epoch 96/2000
148/148 [=====] - 0s 2ms/step - loss: 3861.9504 - mae: 50.9239 - mse: 3861.9504 - val_loss: 3840.8979 - val_mae: 51.1444 - val_mse: 3840.8979
Epoch 97/2000
148/148 [=====] - 0s 2ms/step - loss: 3646.5200 - mae: 49.3648 - mse: 3646.5200 - val_loss: 3619.6375 - val_mae: 49.4397 - val_mse: 3619.6375
Epoch 98/2000
148/148 [=====] - 0s 2ms/step - loss: 3439.8684 - mae: 47.7675 - mse: 3439.8684 - val_loss: 3405.2463 - val_mae: 47.7313 - val_mse: 3405.2463
Epoch 99/2000
148/148 [=====] - 0s 2ms/step - loss: 3235.6213 - mae: 46.1984 - mse: 3235.6213 - val_loss: 3193.6606 - val_mae: 45.9300 - val_mse: 3193.6606
Epoch 100/2000
148/148 [=====] - 0s 2ms/step - loss: 3034.1785 - mae: 44.5046 - mse: 3034.1785 - val_loss: 2984.2034 - val_mae: 44.1334 - val_mse: 2984.2034
Epoch 101/2000
132/148 [=====>....] - ETA: 0s - loss: 2833.1211 - mae: 42.7662 - mse : 2833.1211
148/148 [=====] - 0s 2ms/step - loss: 2834.1309 - mae: 42.7461 - mse: 2834.1309 - val_loss: 2784.3838 - val_mae: 42.3986 - val_mse: 2784.3838
Epoch 102/2000
148/148 [=====] - 0s 2ms/step - loss: 2645.1074 - mae: 41.1140 - mse: 2645.1074 - val_loss: 2590.2561 - val_mae: 40.6586 - val_mse: 2590.2561
Epoch 103/2000
148/148 [=====] - 0s 2ms/step - loss: 2463.8074 - mae: 39.4767 - mse: 2463.8074 - val_loss: 2406.8313 - val_mae: 38.8401 - val_mse: 2406.8313
Epoch 104/2000
148/148 [=====] - 0s 2ms/step - loss: 2289.2910 - mae: 37.8081 - mse: 2289.2910 - val_loss: 2233.1797 - val_mae: 37.1112 - val_mse: 2233.1797
Epoch 105/2000
148/148 [=====] - 0s 2ms/step - loss: 2122.7598 - mae: 36.1691 - mse: 2122.7598 - val_loss: 2067.1533 - val_mae: 35.5244 - val_mse: 2067.1533
Epoch 106/2000
148/148 [=====] - 0s 2ms/step - loss: 1973.0722 - mae: 34.7017 - mse: 1973.0722 - val_loss: 1923.7017 - val_mae: 33.2417 - val_mse: 1923.7017

148/148 [=====] - 0s 2ms/step - loss: 1973.0728 - mae: 34.7917 -
mse: 1973.0728 - val_loss: 1921.1204 - val_mae: 34.0546 - val_mse: 1921.1204
Epoch 107/2000
148/148 [=====] - 0s 2ms/step - loss: 1832.5170 - mae: 33.4465 -
mse: 1832.5170 - val_loss: 1782.1484 - val_mae: 32.6997 - val_mse: 1782.1484
Epoch 108/2000
148/148 [=====] - 0s 2ms/step - loss: 1704.4989 - mae: 32.2031 -
mse: 1704.4989 - val_loss: 1656.1946 - val_mae: 31.4824 - val_mse: 1656.1946
Epoch 109/2000
148/148 [=====] - 0s 2ms/step - loss: 1585.4851 - mae: 31.0535 -
mse: 1585.4851 - val_loss: 1539.5222 - val_mae: 30.2553 - val_mse: 1539.5222
Epoch 110/2000
148/148 [=====] - 0s 2ms/step - loss: 1479.5284 - mae: 29.9733 -
mse: 1479.5284 - val_loss: 1431.0415 - val_mae: 29.0441 - val_mse: 1431.0415
Epoch 111/2000
148/148 [=====] - 0s 2ms/step - loss: 1380.8479 - mae: 28.8404 -
mse: 1380.8479 - val_loss: 1337.0242 - val_mae: 28.0232 - val_mse: 1337.0242
Epoch 112/2000
148/148 [=====] - 0s 2ms/step - loss: 1291.6589 - mae: 27.8482 -
mse: 1291.6589 - val_loss: 1249.1110 - val_mae: 27.0494 - val_mse: 1249.1110
Epoch 113/2000
148/148 [=====] - 0s 2ms/step - loss: 1208.0360 - mae: 26.8641 -
mse: 1208.0360 - val_loss: 1164.8308 - val_mae: 25.9929 - val_mse: 1164.8308
Epoch 114/2000
148/148 [=====] - 0s 2ms/step - loss: 1131.9399 - mae: 25.9317 -
mse: 1131.9399 - val_loss: 1091.0216 - val_mae: 25.0191 - val_mse: 1091.0216
Epoch 115/2000
148/148 [=====] - 0s 2ms/step - loss: 1063.9010 - mae: 24.9758 -
mse: 1063.9010 - val_loss: 1025.9661 - val_mae: 24.1504 - val_mse: 1025.9661
Epoch 116/2000
148/148 [=====] - 0s 2ms/step - loss: 1003.3670 - mae: 24.1367 -
mse: 1003.3670 - val_loss: 967.3476 - val_mae: 23.3068 - val_mse: 967.3476
Epoch 117/2000
148/148 [=====] - 0s 2ms/step - loss: 946.8566 - mae: 23.3595 -
mse: 946.8566 - val_loss: 912.7455 - val_mae: 22.4753 - val_mse: 912.7455
Epoch 118/2000
148/148 [=====] - 0s 2ms/step - loss: 898.9709 - mae: 22.5571 -
mse: 898.9709 - val_loss: 868.9283 - val_mae: 21.8523 - val_mse: 868.9283
Epoch 119/2000
148/148 [=====] - 0s 2ms/step - loss: 855.3873 - mae: 21.8533 -
mse: 855.3873 - val_loss: 825.3697 - val_mae: 21.1988 - val_mse: 825.3697
Epoch 120/2000
148/148 [=====] - 0s 2ms/step - loss: 815.2638 - mae: 21.2733 -
mse: 815.2638 - val_loss: 784.2670 - val_mae: 20.3711 - val_mse: 784.2670
Epoch 121/2000
148/148 [=====] - 0s 2ms/step - loss: 780.2129 - mae: 20.4568 -
mse: 780.2129 - val_loss: 752.1499 - val_mae: 20.0827 - val_mse: 752.1499
Epoch 122/2000
148/148 [=====] - 0s 2ms/step - loss: 748.3442 - mae: 20.0221 -
mse: 748.3442 - val_loss: 720.3168 - val_mae: 19.4143 - val_mse: 720.3168
Epoch 123/2000
148/148 [=====] - 0s 2ms/step - loss: 718.9204 - mae: 19.3431 -
mse: 718.9204 - val_loss: 694.1882 - val_mae: 19.0879 - val_mse: 694.1882
Epoch 124/2000
148/148 [=====] - 0s 2ms/step - loss: 693.0317 - mae: 19.0271 -
mse: 693.0317 - val_loss: 664.8754 - val_mae: 18.2528 - val_mse: 664.8754
Epoch 125/2000
148/148 [=====] - 0s 2ms/step - loss: 668.9851 - mae: 18.3388 -
mse: 668.9851 - val_loss: 641.6746 - val_mae: 18.0293 - val_mse: 641.6746
Epoch 126/2000
148/148 [=====] - 0s 2ms/step - loss: 645.2046 - mae: 17.8874 -
mse: 645.2046 - val_loss: 620.1721 - val_mae: 17.6925 - val_mse: 620.1721
Epoch 127/2000
148/148 [=====] - 0s 2ms/step - loss: 624.7655 - mae: 17.5441 -
mse: 624.7655 - val_loss: 599.3491 - val_mae: 17.2543 - val_mse: 599.3491
Epoch 128/2000
148/148 [=====] - 0s 2ms/step - loss: 605.7408 - mae: 17.1787 -
mse: 605.7408 - val_loss: 578.6686 - val_mae: 16.7071 - val_mse: 578.6686
Epoch 129/2000
148/148 [=====] - 0s 2ms/step - loss: 587.9077 - mae: 16.7495 -
mse: 587.9077 - val_loss: 561.9221 - val_mae: 16.4275 - val_mse: 561.9221
Epoch 130/2000
148/148 [=====] - 0s 2ms/step - loss: 570.8402 - mae: 16.3803 -
mse: 570.8402 - val_loss: 546.8402 - val_mae: 16.0803 - val_mse: 546.8402

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148/148 [=====] - 0s 2ms/step - loss: 570.8493 - mae: 16.3993 -  
mse: 570.8493 - val_loss: 546.4111 - val_mae: 16.1963 - val_mse: 546.4111  
Epoch 131/2000  
148/148 [=====] - 0s 3ms/step - loss: 555.3591 - mae: 16.0677 -  
mse: 555.3591 - val_loss: 533.6934 - val_mae: 16.0291 - val_mse: 533.6934  
Epoch 132/2000  
148/148 [=====] - 0s 2ms/step - loss: 542.7524 - mae: 15.8029 -  
mse: 542.7524 - val_loss: 521.7910 - val_mae: 15.7722 - val_mse: 521.7910  
Epoch 133/2000  
148/148 [=====] - 0s 2ms/step - loss: 531.0510 - mae: 15.6307 -  
mse: 531.0510 - val_loss: 507.3385 - val_mae: 15.3333 - val_mse: 507.3385  
Epoch 134/2000  
148/148 [=====] - 0s 2ms/step - loss: 520.4588 - mae: 15.3380 -  
mse: 520.4588 - val_loss: 497.7781 - val_mae: 15.1509 - val_mse: 497.7781  
Epoch 135/2000  
148/148 [=====] - 0s 2ms/step - loss: 510.7253 - mae: 15.1307 -  
mse: 510.7253 - val_loss: 488.4240 - val_mae: 14.9803 - val_mse: 488.4240  
Epoch 136/2000  
148/148 [=====] - 0s 2ms/step - loss: 501.9308 - mae: 14.9078 -  
mse: 501.9308 - val_loss: 481.9571 - val_mae: 14.9203 - val_mse: 481.9571  
Epoch 137/2000  
148/148 [=====] - 0s 2ms/step - loss: 494.3806 - mae: 14.8258 -  
mse: 494.3806 - val_loss: 473.2536 - val_mae: 14.6789 - val_mse: 473.2536  
Epoch 138/2000  
148/148 [=====] - 0s 2ms/step - loss: 487.0838 - mae: 14.6127 -  
mse: 487.0838 - val_loss: 466.7489 - val_mae: 14.5441 - val_mse: 466.7489  
Epoch 139/2000  
148/148 [=====] - 0s 2ms/step - loss: 479.8315 - mae: 14.4729 -  
mse: 479.8315 - val_loss: 458.4604 - val_mae: 14.3279 - val_mse: 458.4604  
Epoch 140/2000  
148/148 [=====] - 0s 2ms/step - loss: 473.1943 - mae: 14.2869 -  
mse: 473.1943 - val_loss: 453.0092 - val_mae: 14.2980 - val_mse: 453.0092  
Epoch 141/2000  
148/148 [=====] - 0s 2ms/step - loss: 467.3253 - mae: 14.2392 -  
mse: 467.3253 - val_loss: 446.5060 - val_mae: 14.1344 - val_mse: 446.5060  
Epoch 142/2000  
148/148 [=====] - 0s 2ms/step - loss: 461.6345 - mae: 14.0497 -  
mse: 461.6345 - val_loss: 443.9825 - val_mae: 14.1913 - val_mse: 443.9825  
Epoch 143/2000  
148/148 [=====] - 0s 2ms/step - loss: 457.0009 - mae: 14.0613 -  
mse: 457.0009 - val_loss: 435.3101 - val_mae: 13.8360 - val_mse: 435.3101  
Epoch 144/2000  
148/148 [=====] - 0s 2ms/step - loss: 452.6552 - mae: 13.8678 -  
mse: 452.6552 - val_loss: 432.8166 - val_mae: 13.8968 - val_mse: 432.8166  
Epoch 145/2000  
148/148 [=====] - 0s 2ms/step - loss: 448.5681 - mae: 13.8330 -  
mse: 448.5681 - val_loss: 427.7178 - val_mae: 13.7560 - val_mse: 427.7178  
Epoch 146/2000  
148/148 [=====] - 0s 2ms/step - loss: 444.5912 - mae: 13.7678 -  
mse: 444.5912 - val_loss: 423.9156 - val_mae: 13.7147 - val_mse: 423.9156  
Epoch 147/2000  
148/148 [=====] - 0s 2ms/step - loss: 441.0119 - mae: 13.6926 -  
mse: 441.0119 - val_loss: 421.4000 - val_mae: 13.7127 - val_mse: 421.4000  
Epoch 148/2000  
148/148 [=====] - 0s 2ms/step - loss: 437.5833 - mae: 13.7264 -  
mse: 437.5833 - val_loss: 414.6009 - val_mae: 13.4206 - val_mse: 414.6009  
Epoch 149/2000  
148/148 [=====] - 0s 2ms/step - loss: 435.5032 - mae: 13.5753 -  
mse: 435.5032 - val_loss: 412.9952 - val_mae: 13.4911 - val_mse: 412.9952  
Epoch 150/2000  
148/148 [=====] - 0s 2ms/step - loss: 432.5821 - mae: 13.5998 -  
mse: 432.5821 - val_loss: 410.0372 - val_mae: 13.4165 - val_mse: 410.0372  
Epoch 151/2000  
148/148 [=====] - 0s 2ms/step - loss: 430.0527 - mae: 13.4898 -  
mse: 430.0527 - val_loss: 409.8646 - val_mae: 13.5037 - val_mse: 409.8646  
Epoch 152/2000  
148/148 [=====] - 0s 2ms/step - loss: 427.6897 - mae: 13.5138 -  
mse: 427.6897 - val_loss: 405.6554 - val_mae: 13.3748 - val_mse: 405.6554  
Epoch 153/2000  
148/148 [=====] - 0s 2ms/step - loss: 425.3182 - mae: 13.3755 -  
mse: 425.3182 - val_loss: 407.2324 - val_mae: 13.5670 - val_mse: 407.2324  
Epoch 154/2000  
148/148 [=====] - 0s 2ms/step - loss: 422.7200 - mae: 13.4400 -
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148/148 [=====] - 0s 2ms/step - loss: 423.7300 - mae: 13.4488 -  
mse: 423.7300 - val_loss: 401.9691 - val_mae: 13.3637 - val_mse: 401.9691  
Epoch 155/2000  
148/148 [=====] - 0s 2ms/step - loss: 421.3891 - mae: 13.4074 -  
mse: 421.3891 - val_loss: 397.7027 - val_mae: 13.1932 - val_mse: 397.7027  
Epoch 156/2000  
148/148 [=====] - 0s 2ms/step - loss: 419.3779 - mae: 13.3241 -  
mse: 419.3779 - val_loss: 399.9947 - val_mae: 13.4354 - val_mse: 399.9947  
Epoch 157/2000  
148/148 [=====] - 0s 2ms/step - loss: 417.6620 - mae: 13.3793 -  
mse: 417.6620 - val_loss: 395.2448 - val_mae: 13.2501 - val_mse: 395.2448  
Epoch 158/2000  
148/148 [=====] - 0s 2ms/step - loss: 415.5829 - mae: 13.2506 -  
mse: 415.5829 - val_loss: 397.2443 - val_mae: 13.4130 - val_mse: 397.2443  
Epoch 159/2000  
148/148 [=====] - 0s 3ms/step - loss: 414.3712 - mae: 13.3816 -  
mse: 414.3712 - val_loss: 391.1396 - val_mae: 13.1416 - val_mse: 391.1396  
Epoch 160/2000  
148/148 [=====] - 0s 2ms/step - loss: 413.8499 - mae: 13.1885 -  
mse: 413.8499 - val_loss: 391.3376 - val_mae: 13.2366 - val_mse: 391.3376  
Epoch 161/2000  
148/148 [=====] - 0s 2ms/step - loss: 412.1318 - mae: 13.2620 -  
mse: 412.1318 - val_loss: 389.8231 - val_mae: 13.1958 - val_mse: 389.8231  
Epoch 162/2000  
148/148 [=====] - 0s 2ms/step - loss: 411.0606 - mae: 13.2035 -  
mse: 411.0606 - val_loss: 388.2703 - val_mae: 13.1728 - val_mse: 388.2703  
Epoch 163/2000  
148/148 [=====] - 0s 2ms/step - loss: 409.5843 - mae: 13.1856 -  
mse: 409.5843 - val_loss: 388.4692 - val_mae: 13.2301 - val_mse: 388.4692  
Epoch 164/2000  
148/148 [=====] - 0s 2ms/step - loss: 408.7018 - mae: 13.2155 -  
mse: 408.7018 - val_loss: 387.1336 - val_mae: 13.2081 - val_mse: 387.1336  
Epoch 165/2000  
148/148 [=====] - 0s 2ms/step - loss: 407.5884 - mae: 13.1719 -  
mse: 407.5884 - val_loss: 384.7346 - val_mae: 13.1333 - val_mse: 384.7346  
Epoch 166/2000  
148/148 [=====] - 0s 2ms/step - loss: 406.3212 - mae: 13.1706 -  
mse: 406.3212 - val_loss: 382.7638 - val_mae: 13.0844 - val_mse: 382.7638  
Epoch 167/2000  
148/148 [=====] - 0s 2ms/step - loss: 405.2689 - mae: 13.1164 -  
mse: 405.2689 - val_loss: 381.8800 - val_mae: 13.0837 - val_mse: 381.8800  
Epoch 168/2000  
148/148 [=====] - 0s 2ms/step - loss: 404.2677 - mae: 13.0889 -  
mse: 404.2676 - val_loss: 381.5840 - val_mae: 13.1034 - val_mse: 381.5840  
Epoch 169/2000  
148/148 [=====] - 0s 2ms/step - loss: 403.2137 - mae: 13.1133 -  
mse: 403.2137 - val_loss: 381.0078 - val_mae: 13.1252 - val_mse: 381.0078  
Epoch 170/2000  
148/148 [=====] - 0s 2ms/step - loss: 402.3150 - mae: 13.1260 -  
mse: 402.3150 - val_loss: 379.0649 - val_mae: 13.0665 - val_mse: 379.0649  
Epoch 171/2000  
148/148 [=====] - 0s 2ms/step - loss: 401.1461 - mae: 13.1098 -  
mse: 401.1461 - val_loss: 376.1035 - val_mae: 12.9505 - val_mse: 376.1035  
Epoch 172/2000  
148/148 [=====] - 0s 2ms/step - loss: 400.1372 - mae: 13.0799 -  
mse: 400.1372 - val_loss: 374.5167 - val_mae: 12.8967 - val_mse: 374.5167  
Epoch 173/2000  
148/148 [=====] - 0s 2ms/step - loss: 399.6961 - mae: 12.9878 -  
mse: 399.6961 - val_loss: 376.8683 - val_mae: 13.0709 - val_mse: 376.8683  
Epoch 174/2000  
148/148 [=====] - 0s 2ms/step - loss: 398.7929 - mae: 13.0522 -  
mse: 398.7929 - val_loss: 374.3750 - val_mae: 12.9729 - val_mse: 374.3750  
Epoch 175/2000  
148/148 [=====] - 0s 2ms/step - loss: 397.8165 - mae: 13.0211 -  
mse: 397.8165 - val_loss: 374.5099 - val_mae: 13.0160 - val_mse: 374.5099  
Epoch 176/2000  
148/148 [=====] - 0s 2ms/step - loss: 397.0360 - mae: 13.0335 -  
mse: 397.0360 - val_loss: 372.2578 - val_mae: 12.9331 - val_mse: 372.2578  
Epoch 177/2000  
148/148 [=====] - 0s 2ms/step - loss: 396.2044 - mae: 12.9731 -  
mse: 396.2044 - val_loss: 373.0031 - val_mae: 12.9968 - val_mse: 373.0031  
Epoch 178/2000  
148/148 [=====] - 0s 2ms/step - loss: 395.5602 - mae: 12.9887 -
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148/148 [=====] - 0s 2ms/step - loss: 395.5692 - mae: 12.9987 -  
mse: 395.5692 - val_loss: 369.7900 - val_mae: 12.8627 - val_mse: 369.7900  
Epoch 179/2000  
148/148 [=====] - 0s 2ms/step - loss: 394.6715 - mae: 12.8976 -  
mse: 394.6715 - val_loss: 372.4582 - val_mae: 13.0198 - val_mse: 372.4582  
Epoch 180/2000  
148/148 [=====] - 0s 2ms/step - loss: 394.1492 - mae: 12.9511 -  
mse: 394.1492 - val_loss: 369.8551 - val_mae: 12.9140 - val_mse: 369.8551  
Epoch 181/2000  
148/148 [=====] - 0s 2ms/step - loss: 393.4854 - mae: 12.9208 -  
mse: 393.4854 - val_loss: 368.9601 - val_mae: 12.8974 - val_mse: 368.9601  
Epoch 182/2000  
148/148 [=====] - 0s 2ms/step - loss: 392.6966 - mae: 12.9041 -  
mse: 392.6966 - val_loss: 368.4166 - val_mae: 12.8922 - val_mse: 368.4166  
Epoch 183/2000  
148/148 [=====] - 0s 2ms/step - loss: 392.2216 - mae: 12.8994 -  
mse: 392.2216 - val_loss: 366.6822 - val_mae: 12.8230 - val_mse: 366.6822  
Epoch 184/2000  
148/148 [=====] - 0s 2ms/step - loss: 391.3607 - mae: 12.8976 -  
mse: 391.3607 - val_loss: 365.4119 - val_mae: 12.7758 - val_mse: 365.4119  
Epoch 185/2000  
148/148 [=====] - 0s 2ms/step - loss: 390.7194 - mae: 12.8733 -  
mse: 390.7194 - val_loss: 365.3908 - val_mae: 12.8000 - val_mse: 365.3908  
Epoch 186/2000  
148/148 [=====] - 0s 2ms/step - loss: 390.1293 - mae: 12.8424 -  
mse: 390.1293 - val_loss: 365.6683 - val_mae: 12.8329 - val_mse: 365.6683  
Epoch 187/2000  
148/148 [=====] - 0s 2ms/step - loss: 389.4387 - mae: 12.8553 -  
mse: 389.4387 - val_loss: 364.4676 - val_mae: 12.7955 - val_mse: 364.4676  
Epoch 188/2000  
148/148 [=====] - 0s 2ms/step - loss: 388.9321 - mae: 12.8184 -  
mse: 388.9321 - val_loss: 362.6049 - val_mae: 12.7157 - val_mse: 362.6049  
Epoch 189/2000  
148/148 [=====] - 0s 2ms/step - loss: 387.9548 - mae: 12.8177 -  
mse: 387.9548 - val_loss: 361.8615 - val_mae: 12.7019 - val_mse: 361.8615  
Epoch 190/2000  
148/148 [=====] - 0s 2ms/step - loss: 387.4723 - mae: 12.7691 -  
mse: 387.4723 - val_loss: 363.7618 - val_mae: 12.8098 - val_mse: 363.7618  
Epoch 191/2000  
148/148 [=====] - 0s 2ms/step - loss: 386.8461 - mae: 12.7430 -  
mse: 386.8461 - val_loss: 364.0883 - val_mae: 12.8347 - val_mse: 364.0883  
Epoch 192/2000  
148/148 [=====] - 0s 2ms/step - loss: 386.4806 - mae: 12.7847 -  
mse: 386.4806 - val_loss: 362.9446 - val_mae: 12.8045 - val_mse: 362.9446  
Epoch 193/2000  
148/148 [=====] - 0s 2ms/step - loss: 385.5609 - mae: 12.7530 -  
mse: 385.5609 - val_loss: 362.9346 - val_mae: 12.8232 - val_mse: 362.9346  
Epoch 194/2000  
148/148 [=====] - 0s 2ms/step - loss: 385.0304 - mae: 12.7535 -  
mse: 385.0304 - val_loss: 359.8456 - val_mae: 12.6858 - val_mse: 359.8456  
Epoch 195/2000  
148/148 [=====] - 0s 2ms/step - loss: 384.5711 - mae: 12.7425 -  
mse: 384.5711 - val_loss: 359.1241 - val_mae: 12.6696 - val_mse: 359.1241  
Epoch 196/2000  
148/148 [=====] - 0s 2ms/step - loss: 383.9749 - mae: 12.7294 -  
mse: 383.9749 - val_loss: 359.3965 - val_mae: 12.7045 - val_mse: 359.3965  
Epoch 197/2000  
148/148 [=====] - 0s 2ms/step - loss: 383.1679 - mae: 12.7613 -  
mse: 383.1679 - val_loss: 356.7296 - val_mae: 12.5895 - val_mse: 356.7296  
Epoch 198/2000  
148/148 [=====] - 0s 2ms/step - loss: 382.3270 - mae: 12.6482 -  
mse: 382.3270 - val_loss: 360.5259 - val_mae: 12.7918 - val_mse: 360.5259  
Epoch 199/2000  
148/148 [=====] - 0s 2ms/step - loss: 382.0352 - mae: 12.7389 -  
mse: 382.0352 - val_loss: 355.7180 - val_mae: 12.5774 - val_mse: 355.7180  
Epoch 200/2000  
148/148 [=====] - 0s 2ms/step - loss: 381.3110 - mae: 12.6852 -  
mse: 381.3110 - val_loss: 355.2427 - val_mae: 12.5677 - val_mse: 355.2427  
Epoch 201/2000  
123/148 [=====>.....] - ETA: 0s - loss: 378.0977 - mae: 12.6144 - mse:  
378.0977  
148/148 [=====] - 0s 2ms/step - loss: 380.8209 - mae: 12.6577 -  
mse: 380.8209 - val_loss: 355.1550 - val_mae: 12.5866 - val_mse: 355.1550
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mse: 380.8209 - val_loss: 353.1550 - val_mae: 12.5866 - val_mse: 353.1550
Epoch 202/2000
148/148 [=====] - 0s 2ms/step - loss: 380.4474 - mae: 12.6348 -
mse: 380.4474 - val_loss: 353.6616 - val_mae: 12.5213 - val_mse: 353.6616
Epoch 203/2000
148/148 [=====] - 0s 3ms/step - loss: 379.7491 - mae: 12.6209 -
mse: 379.7491 - val_loss: 353.1215 - val_mae: 12.5010 - val_mse: 353.1215
Epoch 204/2000
148/148 [=====] - 0s 2ms/step - loss: 379.1220 - mae: 12.6060 -
mse: 379.1220 - val_loss: 353.6115 - val_mae: 12.5474 - val_mse: 353.6115
Epoch 205/2000
148/148 [=====] - 0s 2ms/step - loss: 378.4555 - mae: 12.6052 -
mse: 378.4555 - val_loss: 353.4277 - val_mae: 12.5593 - val_mse: 353.4277
Epoch 206/2000
148/148 [=====] - 0s 3ms/step - loss: 377.9095 - mae: 12.5883 -
mse: 377.9095 - val_loss: 352.3492 - val_mae: 12.5200 - val_mse: 352.3492
Epoch 207/2000
148/148 [=====] - 0s 2ms/step - loss: 377.1405 - mae: 12.5375 -
mse: 377.1405 - val_loss: 353.5900 - val_mae: 12.5969 - val_mse: 353.5900
Epoch 208/2000
148/148 [=====] - 0s 2ms/step - loss: 376.6442 - mae: 12.5401 -
mse: 376.6442 - val_loss: 352.3234 - val_mae: 12.5530 - val_mse: 352.3234
Epoch 209/2000
148/148 [=====] - 0s 3ms/step - loss: 376.0445 - mae: 12.5633 -
mse: 376.0445 - val_loss: 351.2237 - val_mae: 12.5108 - val_mse: 351.2237
Epoch 210/2000
148/148 [=====] - 0s 2ms/step - loss: 375.4775 - mae: 12.5426 -
mse: 375.4775 - val_loss: 350.3101 - val_mae: 12.4862 - val_mse: 350.3101
Epoch 211/2000
148/148 [=====] - 0s 2ms/step - loss: 374.5634 - mae: 12.5454 -
mse: 374.5634 - val_loss: 348.7450 - val_mae: 12.4154 - val_mse: 348.7450
Epoch 212/2000
148/148 [=====] - 0s 3ms/step - loss: 374.4626 - mae: 12.4909 -
mse: 374.4626 - val_loss: 348.3394 - val_mae: 12.4059 - val_mse: 348.3394
Epoch 213/2000
148/148 [=====] - 0s 3ms/step - loss: 373.8340 - mae: 12.4756 -
mse: 373.8340 - val_loss: 347.9056 - val_mae: 12.3994 - val_mse: 347.9056
Epoch 214/2000
148/148 [=====] - 0s 3ms/step - loss: 372.9602 - mae: 12.4121 -
mse: 372.9602 - val_loss: 350.4744 - val_mae: 12.5335 - val_mse: 350.4744
Epoch 215/2000
148/148 [=====] - 0s 3ms/step - loss: 372.6232 - mae: 12.5060 -
mse: 372.6232 - val_loss: 346.5822 - val_mae: 12.3565 - val_mse: 346.5822
Epoch 216/2000
148/148 [=====] - 0s 2ms/step - loss: 372.1443 - mae: 12.4203 -
mse: 372.1443 - val_loss: 347.5932 - val_mae: 12.4233 - val_mse: 347.5932
Epoch 217/2000
148/148 [=====] - 0s 2ms/step - loss: 371.5468 - mae: 12.4447 -
mse: 371.5468 - val_loss: 345.9813 - val_mae: 12.3547 - val_mse: 345.9813
Epoch 218/2000
148/148 [=====] - 0s 2ms/step - loss: 371.0805 - mae: 12.4012 -
mse: 371.0805 - val_loss: 345.8521 - val_mae: 12.3592 - val_mse: 345.8521
Epoch 219/2000
148/148 [=====] - 0s 3ms/step - loss: 370.4058 - mae: 12.3849 -
mse: 370.4058 - val_loss: 345.7484 - val_mae: 12.3664 - val_mse: 345.7484
Epoch 220/2000
148/148 [=====] - 0s 2ms/step - loss: 369.7500 - mae: 12.4266 -
mse: 369.7500 - val_loss: 343.2591 - val_mae: 12.2568 - val_mse: 343.2591
Epoch 221/2000
148/148 [=====] - 0s 2ms/step - loss: 369.2469 - mae: 12.3709 -
mse: 369.2469 - val_loss: 343.2167 - val_mae: 12.2704 - val_mse: 343.2167
Epoch 222/2000
148/148 [=====] - 0s 2ms/step - loss: 368.7041 - mae: 12.3454 -
mse: 368.7041 - val_loss: 343.2184 - val_mae: 12.2803 - val_mse: 343.2184
Epoch 223/2000
148/148 [=====] - 0s 2ms/step - loss: 368.0288 - mae: 12.3147 -
mse: 368.0288 - val_loss: 344.0138 - val_mae: 12.3288 - val_mse: 344.0138
Epoch 224/2000
148/148 [=====] - 0s 2ms/step - loss: 367.3899 - mae: 12.3494 -
mse: 367.3899 - val_loss: 340.6738 - val_mae: 12.1717 - val_mse: 340.6738
Epoch 225/2000
148/148 [=====] - 0s 2ms/step - loss: 366.6787 - mae: 12.2650 -
mse: 366.6787 - val_loss: 342.1404 - val_mae: 12.2640 - val_mse: 342.1404
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mse: 366.6787 - val_loss: 342.1494 - val_mae: 12.2649 - val_mse: 342.1494
Epoch 226/2000
148/148 [=====] - 0s 2ms/step - loss: 366.2892 - mae: 12.2576 -
mse: 366.2892 - val_loss: 341.2729 - val_mae: 12.2272 - val_mse: 341.2729
Epoch 227/2000
148/148 [=====] - 0s 2ms/step - loss: 365.5567 - mae: 12.2494 -
mse: 365.5567 - val_loss: 341.2086 - val_mae: 12.2342 - val_mse: 341.2086
Epoch 228/2000
148/148 [=====] - 0s 2ms/step - loss: 364.9713 - mae: 12.2796 -
mse: 364.9713 - val_loss: 339.3755 - val_mae: 12.1605 - val_mse: 339.3755
Epoch 229/2000
148/148 [=====] - 0s 2ms/step - loss: 364.3031 - mae: 12.1811 -
mse: 364.3031 - val_loss: 341.6448 - val_mae: 12.2742 - val_mse: 341.6448
Epoch 230/2000
148/148 [=====] - 0s 2ms/step - loss: 363.7073 - mae: 12.2697 -
mse: 363.7073 - val_loss: 338.1779 - val_mae: 12.1251 - val_mse: 338.1779
Epoch 231/2000
148/148 [=====] - 0s 2ms/step - loss: 362.8793 - mae: 12.2346 -
mse: 362.8793 - val_loss: 336.3564 - val_mae: 12.0378 - val_mse: 336.3564
Epoch 232/2000
148/148 [=====] - 0s 2ms/step - loss: 362.4082 - mae: 12.1823 -
mse: 362.4082 - val_loss: 336.0749 - val_mae: 12.0391 - val_mse: 336.0749
Epoch 233/2000
148/148 [=====] - 0s 2ms/step - loss: 361.9668 - mae: 12.1322 -
mse: 361.9668 - val_loss: 336.6719 - val_mae: 12.0813 - val_mse: 336.6719
Epoch 234/2000
148/148 [=====] - 0s 2ms/step - loss: 361.0762 - mae: 12.1657 -
mse: 361.0762 - val_loss: 334.2754 - val_mae: 11.9629 - val_mse: 334.2754
Epoch 235/2000
148/148 [=====] - 0s 2ms/step - loss: 360.7539 - mae: 12.1293 -
mse: 360.7539 - val_loss: 334.4316 - val_mae: 11.9866 - val_mse: 334.4316
Epoch 236/2000
148/148 [=====] - 0s 2ms/step - loss: 359.9976 - mae: 12.1003 -
mse: 359.9976 - val_loss: 334.8596 - val_mae: 12.0230 - val_mse: 334.8596
Epoch 237/2000
148/148 [=====] - 0s 2ms/step - loss: 359.3729 - mae: 12.1009 -
mse: 359.3729 - val_loss: 333.7269 - val_mae: 11.9773 - val_mse: 333.7269
Epoch 238/2000
148/148 [=====] - 0s 2ms/step - loss: 358.7234 - mae: 12.0687 -
mse: 358.7234 - val_loss: 335.3881 - val_mae: 12.0760 - val_mse: 335.3881
Epoch 239/2000
148/148 [=====] - 0s 2ms/step - loss: 358.1238 - mae: 12.0838 -
mse: 358.1238 - val_loss: 333.7765 - val_mae: 12.0093 - val_mse: 333.7765
Epoch 240/2000
148/148 [=====] - 0s 2ms/step - loss: 357.2866 - mae: 12.0497 -
mse: 357.2866 - val_loss: 333.3188 - val_mae: 12.0042 - val_mse: 333.3188
Epoch 241/2000
148/148 [=====] - 0s 2ms/step - loss: 356.6373 - mae: 12.0284 -
mse: 356.6373 - val_loss: 334.6517 - val_mae: 12.0719 - val_mse: 334.6517
Epoch 242/2000
148/148 [=====] - 0s 2ms/step - loss: 355.8679 - mae: 12.0594 -
mse: 355.8679 - val_loss: 331.7263 - val_mae: 11.9469 - val_mse: 331.7263
Epoch 243/2000
148/148 [=====] - 0s 2ms/step - loss: 355.3314 - mae: 11.9903 -
mse: 355.3314 - val_loss: 333.8687 - val_mae: 12.0555 - val_mse: 333.8687
Epoch 244/2000
148/148 [=====] - 0s 2ms/step - loss: 354.9398 - mae: 12.0335 -
mse: 354.9398 - val_loss: 330.6391 - val_mae: 11.9194 - val_mse: 330.6391
Epoch 245/2000
148/148 [=====] - 0s 2ms/step - loss: 353.7463 - mae: 11.9195 -
mse: 353.7463 - val_loss: 334.4166 - val_mae: 12.0844 - val_mse: 334.4166
Epoch 246/2000
148/148 [=====] - 0s 2ms/step - loss: 353.6617 - mae: 11.9959 -
mse: 353.6617 - val_loss: 330.8729 - val_mae: 11.9461 - val_mse: 330.8729
Epoch 247/2000
148/148 [=====] - 0s 2ms/step - loss: 352.7857 - mae: 11.9333 -
mse: 352.7857 - val_loss: 331.8355 - val_mae: 11.9911 - val_mse: 331.8355
Epoch 248/2000
148/148 [=====] - 0s 2ms/step - loss: 352.3208 - mae: 11.9247 -
mse: 352.3208 - val_loss: 329.3322 - val_mae: 11.8871 - val_mse: 329.3322
Epoch 249/2000
148/148 [=====] - 0s 2ms/step - loss: 351.5490 - mae: 11.8903 -
mse: 351.5490 - val_loss: 329.0165 - val_mae: 11.8846 - val_mse: 329.0165
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mse: 351.5490 - val_loss: 329.0165 - val_mae: 11.8846 - val_mse: 329.0165
Epoch 250/2000
148/148 [=====] - 0s 2ms/step - loss: 350.9526 - mae: 11.8967 -
mse: 350.9526 - val_loss: 327.9331 - val_mae: 11.8494 - val_mse: 327.9331
Epoch 251/2000
148/148 [=====] - 0s 2ms/step - loss: 350.1696 - mae: 11.8932 -
mse: 350.1696 - val_loss: 326.5126 - val_mae: 11.7947 - val_mse: 326.5126
Epoch 252/2000
148/148 [=====] - 0s 2ms/step - loss: 349.5428 - mae: 11.8664 -
mse: 349.5428 - val_loss: 325.3795 - val_mae: 11.7478 - val_mse: 325.3795
Epoch 253/2000
148/148 [=====] - 0s 2ms/step - loss: 348.8757 - mae: 11.8364 -
mse: 348.8757 - val_loss: 324.8138 - val_mae: 11.7312 - val_mse: 324.8138
Epoch 254/2000
148/148 [=====] - 0s 2ms/step - loss: 348.0377 - mae: 11.7883 -
mse: 348.0377 - val_loss: 325.9135 - val_mae: 11.7848 - val_mse: 325.9135
Epoch 255/2000
148/148 [=====] - 0s 2ms/step - loss: 346.9202 - mae: 11.7676 -
mse: 346.9202 - val_loss: 326.8776 - val_mae: 11.8330 - val_mse: 326.8776
Epoch 256/2000
148/148 [=====] - 0s 2ms/step - loss: 346.7692 - mae: 11.8069 -
mse: 346.7692 - val_loss: 322.7983 - val_mae: 11.6563 - val_mse: 322.7983
Epoch 257/2000
148/148 [=====] - 0s 2ms/step - loss: 346.1366 - mae: 11.7464 -
mse: 346.1366 - val_loss: 322.9595 - val_mae: 11.6803 - val_mse: 322.9595
Epoch 258/2000
148/148 [=====] - 0s 2ms/step - loss: 345.3438 - mae: 11.7212 -
mse: 345.3438 - val_loss: 322.9185 - val_mae: 11.6863 - val_mse: 322.9185
Epoch 259/2000
148/148 [=====] - 0s 2ms/step - loss: 344.6569 - mae: 11.7063 -
mse: 344.6569 - val_loss: 323.1898 - val_mae: 11.7052 - val_mse: 323.1898
Epoch 260/2000
148/148 [=====] - 0s 3ms/step - loss: 343.8403 - mae: 11.6842 -
mse: 343.8403 - val_loss: 323.1152 - val_mae: 11.7039 - val_mse: 323.1152
Epoch 261/2000
148/148 [=====] - 0s 2ms/step - loss: 343.3380 - mae: 11.6560 -
mse: 343.3380 - val_loss: 323.8060 - val_mae: 11.7354 - val_mse: 323.8060
Epoch 262/2000
148/148 [=====] - 0s 2ms/step - loss: 342.7005 - mae: 11.6996 -
mse: 342.7005 - val_loss: 319.7753 - val_mae: 11.5695 - val_mse: 319.7753
Epoch 263/2000
148/148 [=====] - 0s 2ms/step - loss: 342.1278 - mae: 11.6348 -
mse: 342.1278 - val_loss: 320.0640 - val_mae: 11.5899 - val_mse: 320.0640
Epoch 264/2000
148/148 [=====] - 0s 2ms/step - loss: 341.1617 - mae: 11.6057 -
mse: 341.1617 - val_loss: 320.1860 - val_mae: 11.5996 - val_mse: 320.1860
Epoch 265/2000
148/148 [=====] - 0s 2ms/step - loss: 340.6615 - mae: 11.5784 -
mse: 340.6615 - val_loss: 319.9691 - val_mae: 11.5965 - val_mse: 319.9691
Epoch 266/2000
148/148 [=====] - 0s 2ms/step - loss: 339.8908 - mae: 11.6031 -
mse: 339.8908 - val_loss: 316.9361 - val_mae: 11.4658 - val_mse: 316.9361
Epoch 267/2000
148/148 [=====] - 0s 2ms/step - loss: 339.3973 - mae: 11.5385 -
mse: 339.3973 - val_loss: 317.5779 - val_mae: 11.5065 - val_mse: 317.5779
Epoch 268/2000
148/148 [=====] - 0s 2ms/step - loss: 338.4713 - mae: 11.5037 -
mse: 338.4713 - val_loss: 318.1696 - val_mae: 11.5356 - val_mse: 318.1696
Epoch 269/2000
148/148 [=====] - 0s 2ms/step - loss: 337.9065 - mae: 11.5146 -
mse: 337.9065 - val_loss: 316.4957 - val_mae: 11.4652 - val_mse: 316.4957
Epoch 270/2000
148/148 [=====] - 0s 3ms/step - loss: 337.1115 - mae: 11.4926 -
mse: 337.1115 - val_loss: 314.4487 - val_mae: 11.3715 - val_mse: 314.4487
Epoch 271/2000
148/148 [=====] - 0s 2ms/step - loss: 336.6068 - mae: 11.4696 -
mse: 336.6068 - val_loss: 314.3234 - val_mae: 11.3752 - val_mse: 314.3234
Epoch 272/2000
148/148 [=====] - 0s 2ms/step - loss: 335.7979 - mae: 11.4318 -
mse: 335.7979 - val_loss: 314.7545 - val_mae: 11.4030 - val_mse: 314.7545
Epoch 273/2000
148/148 [=====] - 0s 2ms/step - loss: 335.1209 - mae: 11.4007 -
mse: 335.1209 - val_loss: 315.1520 - val_mae: 11.4205 - val_mse: 315.1520
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mse: 335.1209 - val_loss: 315.1538 - val_mae: 11.4295 - val_mse: 315.1538
Epoch 274/2000
148/148 [=====] - 0s 3ms/step - loss: 334.3773 - mae: 11.4170 -
mse: 334.3773 - val_loss: 312.9128 - val_mae: 11.3304 - val_mse: 312.9128
Epoch 275/2000
148/148 [=====] - 0s 2ms/step - loss: 333.6893 - mae: 11.3763 -
mse: 333.6893 - val_loss: 312.7657 - val_mae: 11.3316 - val_mse: 312.7657
Epoch 276/2000
148/148 [=====] - 0s 2ms/step - loss: 332.8606 - mae: 11.3338 -
mse: 332.8606 - val_loss: 313.4161 - val_mae: 11.3682 - val_mse: 313.4161
Epoch 277/2000
148/148 [=====] - 0s 2ms/step - loss: 331.9587 - mae: 11.3298 -
mse: 331.9587 - val_loss: 312.7373 - val_mae: 11.3429 - val_mse: 312.7373
Epoch 278/2000
148/148 [=====] - 0s 2ms/step - loss: 331.4564 - mae: 11.3304 -
mse: 331.4564 - val_loss: 311.3566 - val_mae: 11.2854 - val_mse: 311.3566
Epoch 279/2000
148/148 [=====] - 0s 2ms/step - loss: 330.6948 - mae: 11.2759 -
mse: 330.6948 - val_loss: 311.5739 - val_mae: 11.2994 - val_mse: 311.5739
Epoch 280/2000
148/148 [=====] - 0s 3ms/step - loss: 329.8320 - mae: 11.2416 -
mse: 329.8320 - val_loss: 312.5822 - val_mae: 11.3410 - val_mse: 312.5822
Epoch 281/2000
148/148 [=====] - 0s 3ms/step - loss: 329.1386 - mae: 11.2603 -
mse: 329.1386 - val_loss: 311.5005 - val_mae: 11.3039 - val_mse: 311.5005
Epoch 282/2000
148/148 [=====] - 0s 2ms/step - loss: 328.3771 - mae: 11.2467 -
mse: 328.3771 - val_loss: 308.0932 - val_mae: 11.1576 - val_mse: 308.0932
Epoch 283/2000
148/148 [=====] - 0s 3ms/step - loss: 327.7326 - mae: 11.1961 -
mse: 327.7326 - val_loss: 307.3803 - val_mae: 11.1299 - val_mse: 307.3803
Epoch 284/2000
148/148 [=====] - 0s 2ms/step - loss: 326.9407 - mae: 11.1469 -
mse: 326.9407 - val_loss: 308.8281 - val_mae: 11.1987 - val_mse: 308.8281
Epoch 285/2000
148/148 [=====] - 0s 3ms/step - loss: 326.2906 - mae: 11.1461 -
mse: 326.2906 - val_loss: 307.1088 - val_mae: 11.1314 - val_mse: 307.1088
Epoch 286/2000
148/148 [=====] - 0s 2ms/step - loss: 325.4399 - mae: 11.1427 -
mse: 325.4399 - val_loss: 306.0417 - val_mae: 11.0882 - val_mse: 306.0417
Epoch 287/2000
148/148 [=====] - 0s 2ms/step - loss: 324.6259 - mae: 11.1219 -
mse: 324.6259 - val_loss: 304.1987 - val_mae: 11.0100 - val_mse: 304.1987
Epoch 288/2000
148/148 [=====] - 0s 3ms/step - loss: 323.8710 - mae: 11.1085 -
mse: 323.8710 - val_loss: 304.0907 - val_mae: 11.0123 - val_mse: 304.0907
Epoch 289/2000
148/148 [=====] - 0s 2ms/step - loss: 323.2267 - mae: 11.0352 -
mse: 323.2267 - val_loss: 304.5627 - val_mae: 11.0352 - val_mse: 304.5627
Epoch 290/2000
148/148 [=====] - 0s 2ms/step - loss: 322.0638 - mae: 11.0501 -
mse: 322.0638 - val_loss: 302.4792 - val_mae: 10.9370 - val_mse: 302.4792
Epoch 291/2000
148/148 [=====] - 0s 2ms/step - loss: 321.7882 - mae: 10.9791 -
mse: 321.7882 - val_loss: 304.3473 - val_mae: 11.0300 - val_mse: 304.3473
Epoch 292/2000
148/148 [=====] - 0s 2ms/step - loss: 320.8229 - mae: 10.9801 -
mse: 320.8229 - val_loss: 303.6001 - val_mae: 11.0002 - val_mse: 303.6001
Epoch 293/2000
148/148 [=====] - 0s 2ms/step - loss: 319.9844 - mae: 11.0166 -
mse: 319.9844 - val_loss: 300.6664 - val_mae: 10.8758 - val_mse: 300.6664
Epoch 294/2000
148/148 [=====] - 0s 2ms/step - loss: 319.5399 - mae: 10.9344 -
mse: 319.5399 - val_loss: 301.1835 - val_mae: 10.9033 - val_mse: 301.1835
Epoch 295/2000
148/148 [=====] - 0s 2ms/step - loss: 318.5711 - mae: 10.9150 -
mse: 318.5711 - val_loss: 301.2313 - val_mae: 10.9038 - val_mse: 301.2313
Epoch 296/2000
148/148 [=====] - 0s 2ms/step - loss: 317.9481 - mae: 10.8876 -
mse: 317.9481 - val_loss: 299.4948 - val_mae: 10.8277 - val_mse: 299.4948
Epoch 297/2000
148/148 [=====] - 0s 2ms/step - loss: 317.2893 - mae: 10.8690 -
mse: 317.2893 - val_loss: 299.5755 - val_mae: 10.7888 - val_mse: 299.5755
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mse: 317.2893 - val_loss: 298.5755 - val_mae: 10.7889 - val_mse: 298.5755
Epoch 298/2000
148/148 [=====] - 0s 3ms/step - loss: 316.3387 - mae: 10.8026 -
mse: 316.3387 - val_loss: 299.9615 - val_mae: 10.8524 - val_mse: 299.9615
Epoch 299/2000
148/148 [=====] - 0s 2ms/step - loss: 315.7194 - mae: 10.8156 -
mse: 315.7194 - val_loss: 297.9528 - val_mae: 10.7666 - val_mse: 297.9528
Epoch 300/2000
148/148 [=====] - 0s 2ms/step - loss: 314.8676 - mae: 10.7682 -
mse: 314.8676 - val_loss: 297.2829 - val_mae: 10.7261 - val_mse: 297.2829
Epoch 301/2000
122/148 [=====>.....] - ETA: 0s - loss: 312.2744 - mae: 10.7124 - mse:
312.2744
148/148 [=====] - 0s 2ms/step - loss: 313.9679 - mae: 10.7519 -
mse: 313.9679 - val_loss: 295.4946 - val_mae: 10.6450 - val_mse: 295.4946
Epoch 302/2000
148/148 [=====] - 0s 2ms/step - loss: 313.2699 - mae: 10.7417 -
mse: 313.2699 - val_loss: 294.5526 - val_mae: 10.6006 - val_mse: 294.5526
Epoch 303/2000
148/148 [=====] - 0s 3ms/step - loss: 312.9919 - mae: 10.6752 -
mse: 312.9919 - val_loss: 295.4415 - val_mae: 10.6520 - val_mse: 295.4415
Epoch 304/2000
148/148 [=====] - 0s 2ms/step - loss: 312.0508 - mae: 10.6856 -
mse: 312.0508 - val_loss: 294.5688 - val_mae: 10.6151 - val_mse: 294.5688
Epoch 305/2000
148/148 [=====] - 0s 2ms/step - loss: 311.2930 - mae: 10.6458 -
mse: 311.2930 - val_loss: 294.1853 - val_mae: 10.6040 - val_mse: 294.1853
Epoch 306/2000
148/148 [=====] - 0s 2ms/step - loss: 310.4498 - mae: 10.6153 -
mse: 310.4498 - val_loss: 294.5076 - val_mae: 10.6255 - val_mse: 294.5076
Epoch 307/2000
148/148 [=====] - 0s 2ms/step - loss: 309.6816 - mae: 10.6337 -
mse: 309.6816 - val_loss: 293.4035 - val_mae: 10.5782 - val_mse: 293.4035
Epoch 308/2000
148/148 [=====] - 0s 2ms/step - loss: 308.7723 - mae: 10.6004 -
mse: 308.7723 - val_loss: 291.6758 - val_mae: 10.5006 - val_mse: 291.6758
Epoch 309/2000
148/148 [=====] - 0s 2ms/step - loss: 308.1562 - mae: 10.5537 -
mse: 308.1562 - val_loss: 291.8549 - val_mae: 10.5140 - val_mse: 291.8549
Epoch 310/2000
148/148 [=====] - 0s 2ms/step - loss: 307.2297 - mae: 10.5134 -
mse: 307.2297 - val_loss: 292.9740 - val_mae: 10.5692 - val_mse: 292.9740
Epoch 311/2000
148/148 [=====] - 0s 2ms/step - loss: 306.5734 - mae: 10.5129 -
mse: 306.5734 - val_loss: 290.4996 - val_mae: 10.4560 - val_mse: 290.4996
Epoch 312/2000
148/148 [=====] - 0s 2ms/step - loss: 305.7051 - mae: 10.4684 -
mse: 305.7051 - val_loss: 289.5365 - val_mae: 10.4114 - val_mse: 289.5365
Epoch 313/2000
148/148 [=====] - 0s 2ms/step - loss: 305.0578 - mae: 10.4493 -
mse: 305.0578 - val_loss: 288.6922 - val_mae: 10.3759 - val_mse: 288.6922
Epoch 314/2000
148/148 [=====] - 0s 2ms/step - loss: 304.2567 - mae: 10.4168 -
mse: 304.2567 - val_loss: 288.3826 - val_mae: 10.3705 - val_mse: 288.3826
Epoch 315/2000
148/148 [=====] - 0s 2ms/step - loss: 303.5295 - mae: 10.3843 -
mse: 303.5295 - val_loss: 289.4887 - val_mae: 10.4149 - val_mse: 289.4887
Epoch 316/2000
148/148 [=====] - 0s 2ms/step - loss: 302.5947 - mae: 10.3447 -
mse: 302.5947 - val_loss: 289.8037 - val_mae: 10.4278 - val_mse: 289.8037
Epoch 317/2000
148/148 [=====] - 0s 2ms/step - loss: 301.6938 - mae: 10.3462 -
mse: 301.6938 - val_loss: 286.2672 - val_mae: 10.2766 - val_mse: 286.2672
Epoch 318/2000
148/148 [=====] - 0s 3ms/step - loss: 301.1026 - mae: 10.2798 -
mse: 301.1026 - val_loss: 287.0415 - val_mae: 10.3123 - val_mse: 287.0415
Epoch 319/2000
148/148 [=====] - 0s 2ms/step - loss: 300.0586 - mae: 10.2994 -
mse: 300.0586 - val_loss: 284.6057 - val_mae: 10.2096 - val_mse: 284.6057
Epoch 320/2000
148/148 [=====] - 0s 2ms/step - loss: 299.5193 - mae: 10.2420 -
mse: 299.5193 - val_loss: 284.8828 - val_mae: 10.2261 - val_mse: 284.8828
Epoch 321/2000
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Epoch 321/2000
148/148 [=====] - 0s 2ms/step - loss: 298.6084 - mae: 10.2245 - mse: 298.6084 - val_loss: 284.6842 - val_mae: 10.2299 - val_mse: 284.6842
Epoch 322/2000
148/148 [=====] - 0s 2ms/step - loss: 297.6536 - mae: 10.1810 - mse: 297.6536 - val_loss: 286.7173 - val_mae: 10.3120 - val_mse: 286.7173
Epoch 323/2000
148/148 [=====] - 0s 2ms/step - loss: 296.8243 - mae: 10.1927 - mse: 296.8243 - val_loss: 283.2032 - val_mae: 10.1700 - val_mse: 283.2032
Epoch 324/2000
148/148 [=====] - 0s 2ms/step - loss: 296.2088 - mae: 10.1539 - mse: 296.2088 - val_loss: 282.9269 - val_mae: 10.1574 - val_mse: 282.9269
Epoch 325/2000
148/148 [=====] - 0s 2ms/step - loss: 295.4803 - mae: 10.1185 - mse: 295.4803 - val_loss: 283.1130 - val_mae: 10.1699 - val_mse: 283.1130
Epoch 326/2000
148/148 [=====] - 0s 2ms/step - loss: 294.2162 - mae: 10.0664 - mse: 294.2162 - val_loss: 285.5986 - val_mae: 10.2732 - val_mse: 285.5986
Epoch 327/2000
148/148 [=====] - 0s 2ms/step - loss: 294.0085 - mae: 10.1202 - mse: 294.0085 - val_loss: 280.6375 - val_mae: 10.0836 - val_mse: 280.6375
Epoch 328/2000
148/148 [=====] - 0s 2ms/step - loss: 292.9798 - mae: 10.0542 - mse: 292.9798 - val_loss: 280.0682 - val_mae: 10.0538 - val_mse: 280.0682
Epoch 329/2000
148/148 [=====] - 0s 2ms/step - loss: 292.2648 - mae: 9.9832 - mse: 292.2648 - val_loss: 280.9552 - val_mae: 10.0855 - val_mse: 280.9552
Epoch 330/2000
148/148 [=====] - 0s 2ms/step - loss: 291.2985 - mae: 10.0007 - mse: 291.2985 - val_loss: 277.6662 - val_mae: 9.9469 - val_mse: 277.6662
Epoch 331/2000
148/148 [=====] - 0s 2ms/step - loss: 290.4698 - mae: 9.9400 - mse: 290.4698 - val_loss: 278.2599 - val_mae: 9.9788 - val_mse: 278.2599
Epoch 332/2000
148/148 [=====] - 0s 2ms/step - loss: 289.2280 - mae: 9.9763 - mse: 289.2280 - val_loss: 275.2854 - val_mae: 9.8426 - val_mse: 275.2854
Epoch 333/2000
148/148 [=====] - 0s 2ms/step - loss: 289.0703 - mae: 9.8739 - mse: 289.0703 - val_loss: 276.6294 - val_mae: 9.8957 - val_mse: 276.6294
Epoch 334/2000
148/148 [=====] - 0s 2ms/step - loss: 288.1304 - mae: 9.8710 - mse: 288.1304 - val_loss: 276.2138 - val_mae: 9.8823 - val_mse: 276.2138
Epoch 335/2000
148/148 [=====] - 0s 2ms/step - loss: 287.2226 - mae: 9.8137 - mse: 287.2226 - val_loss: 277.6177 - val_mae: 9.9510 - val_mse: 277.6177
Epoch 336/2000
148/148 [=====] - 0s 2ms/step - loss: 286.4366 - mae: 9.8400 - mse: 286.4366 - val_loss: 274.6315 - val_mae: 9.8225 - val_mse: 274.6315
Epoch 337/2000
148/148 [=====] - 0s 2ms/step - loss: 285.7549 - mae: 9.7834 - mse: 285.7549 - val_loss: 273.6117 - val_mae: 9.7747 - val_mse: 273.6117
Epoch 338/2000
148/148 [=====] - 0s 2ms/step - loss: 284.7784 - mae: 9.7619 - mse: 284.7784 - val_loss: 274.0163 - val_mae: 9.8078 - val_mse: 274.0163
Epoch 339/2000
148/148 [=====] - 0s 2ms/step - loss: 283.9270 - mae: 9.7307 - mse: 283.9270 - val_loss: 273.5235 - val_mae: 9.7819 - val_mse: 273.5235
Epoch 340/2000
148/148 [=====] - 0s 2ms/step - loss: 283.2362 - mae: 9.6869 - mse: 283.2362 - val_loss: 273.2483 - val_mae: 9.7672 - val_mse: 273.2483
Epoch 341/2000
148/148 [=====] - 0s 2ms/step - loss: 282.4251 - mae: 9.6940 - mse: 282.4251 - val_loss: 270.3197 - val_mae: 9.6446 - val_mse: 270.3197
Epoch 342/2000
148/148 [=====] - 0s 2ms/step - loss: 281.6631 - mae: 9.6323 - mse: 281.6631 - val_loss: 271.8808 - val_mae: 9.7135 - val_mse: 271.8808
Epoch 343/2000
148/148 [=====] - 0s 2ms/step - loss: 280.7169 - mae: 9.6001 - mse: 280.7169 - val_loss: 273.2787 - val_mae: 9.7720 - val_mse: 273.2787
Epoch 344/2000
148/148 [=====] - 0s 2ms/step - loss: 279.8874 - mae: 9.6387 - mse: 279.8874 - val_loss: 268.3300 - val_mae: 9.5660 - val_mse: 268.3300
Epoch 345/2000

Epoch 345/2000
148/148 [=====] - 0s 2ms/step - loss: 279.0887 - mae: 9.5464 - mse: 279.0887 - val_loss: 269.0363 - val_mae: 9.5905 - val_mse: 269.0363
Epoch 346/2000
148/148 [=====] - 0s 2ms/step - loss: 278.0493 - mae: 9.5375 - mse: 278.0493 - val_loss: 268.3608 - val_mae: 9.5626 - val_mse: 268.3608
Epoch 347/2000
148/148 [=====] - 0s 2ms/step - loss: 277.3158 - mae: 9.4998 - mse: 277.3158 - val_loss: 266.0952 - val_mae: 9.4582 - val_mse: 266.0952
Epoch 348/2000
148/148 [=====] - 0s 2ms/step - loss: 276.5644 - mae: 9.4489 - mse: 276.5644 - val_loss: 267.2211 - val_mae: 9.5129 - val_mse: 267.2211
Epoch 349/2000
148/148 [=====] - 0s 2ms/step - loss: 275.8850 - mae: 9.4323 - mse: 275.8850 - val_loss: 266.8883 - val_mae: 9.4954 - val_mse: 266.8883
Epoch 350/2000
148/148 [=====] - 0s 2ms/step - loss: 274.9915 - mae: 9.3999 - mse: 274.9915 - val_loss: 265.5960 - val_mae: 9.4421 - val_mse: 265.5960
Epoch 351/2000
148/148 [=====] - 0s 2ms/step - loss: 274.1336 - mae: 9.3669 - mse: 274.1336 - val_loss: 265.7299 - val_mae: 9.4508 - val_mse: 265.7299
Epoch 352/2000
148/148 [=====] - 0s 2ms/step - loss: 272.9486 - mae: 9.3123 - mse: 272.9486 - val_loss: 269.2014 - val_mae: 9.5933 - val_mse: 269.2014
Epoch 353/2000
148/148 [=====] - 0s 2ms/step - loss: 272.2694 - mae: 9.3499 - mse: 272.2694 - val_loss: 266.2352 - val_mae: 9.4617 - val_mse: 266.2352
Epoch 354/2000
148/148 [=====] - 0s 2ms/step - loss: 271.6541 - mae: 9.2944 - mse: 271.6541 - val_loss: 264.7879 - val_mae: 9.4087 - val_mse: 264.7879
Epoch 355/2000
148/148 [=====] - 0s 2ms/step - loss: 270.7295 - mae: 9.2753 - mse: 270.7295 - val_loss: 263.1301 - val_mae: 9.3431 - val_mse: 263.1301
Epoch 356/2000
148/148 [=====] - 0s 2ms/step - loss: 269.8150 - mae: 9.2283 - mse: 269.8150 - val_loss: 263.4601 - val_mae: 9.3394 - val_mse: 263.4601
Epoch 357/2000
148/148 [=====] - 0s 2ms/step - loss: 269.0725 - mae: 9.2187 - mse: 269.0725 - val_loss: 261.6182 - val_mae: 9.2789 - val_mse: 261.6182
Epoch 358/2000
148/148 [=====] - 0s 2ms/step - loss: 268.2051 - mae: 9.1740 - mse: 268.2051 - val_loss: 261.4374 - val_mae: 9.2675 - val_mse: 261.4374
Epoch 359/2000
148/148 [=====] - 0s 2ms/step - loss: 267.2202 - mae: 9.1796 - mse: 267.2202 - val_loss: 258.6024 - val_mae: 9.1547 - val_mse: 258.6024
Epoch 360/2000
148/148 [=====] - 0s 3ms/step - loss: 266.5090 - mae: 9.1074 - mse: 266.5090 - val_loss: 259.4675 - val_mae: 9.1796 - val_mse: 259.4675
Epoch 361/2000
148/148 [=====] - 0s 2ms/step - loss: 265.9265 - mae: 9.0872 - mse: 265.9265 - val_loss: 259.4980 - val_mae: 9.1816 - val_mse: 259.4980
Epoch 362/2000
148/148 [=====] - 0s 2ms/step - loss: 265.0277 - mae: 9.0509 - mse: 265.0277 - val_loss: 258.9131 - val_mae: 9.1576 - val_mse: 258.9131
Epoch 363/2000
148/148 [=====] - 0s 2ms/step - loss: 264.1956 - mae: 9.0300 - mse: 264.1956 - val_loss: 257.0642 - val_mae: 9.0735 - val_mse: 257.0642
Epoch 364/2000
148/148 [=====] - 0s 2ms/step - loss: 263.4052 - mae: 8.9776 - mse: 263.4052 - val_loss: 257.5661 - val_mae: 9.0961 - val_mse: 257.5661
Epoch 365/2000
148/148 [=====] - 0s 2ms/step - loss: 262.6834 - mae: 8.9471 - mse: 262.6834 - val_loss: 257.4424 - val_mae: 9.0892 - val_mse: 257.4424
Epoch 366/2000
148/148 [=====] - 0s 2ms/step - loss: 261.7418 - mae: 8.9297 - mse: 261.7418 - val_loss: 257.6700 - val_mae: 9.0764 - val_mse: 257.6700
Epoch 367/2000
148/148 [=====] - 0s 2ms/step - loss: 261.1086 - mae: 8.9360 - mse: 261.1086 - val_loss: 254.2477 - val_mae: 8.9699 - val_mse: 254.2477
Epoch 368/2000
148/148 [=====] - 0s 3ms/step - loss: 260.4425 - mae: 8.8865 - mse: 260.4425 - val_loss: 254.5506 - val_mae: 8.9665 - val_mse: 254.5506
Epoch 369/2000

Epoch 369/2000
148/148 [=====] - 0s 2ms/step - loss: 259.6489 - mae: 8.8462 - mse: 259.6489 - val_loss: 253.7339 - val_mae: 8.9199 - val_mse: 253.7339
Epoch 370/2000
148/148 [=====] - 0s 2ms/step - loss: 258.0620 - mae: 8.8021 - mse: 258.0620 - val_loss: 255.9598 - val_mae: 9.0029 - val_mse: 255.9598
Epoch 371/2000
148/148 [=====] - 0s 2ms/step - loss: 258.1688 - mae: 8.8287 - mse: 258.1688 - val_loss: 252.0739 - val_mae: 8.8535 - val_mse: 252.0739
Epoch 372/2000
148/148 [=====] - 0s 2ms/step - loss: 257.3604 - mae: 8.7358 - mse: 257.3604 - val_loss: 252.3746 - val_mae: 8.8638 - val_mse: 252.3746
Epoch 373/2000
148/148 [=====] - 0s 2ms/step - loss: 256.3995 - mae: 8.7323 - mse: 256.3995 - val_loss: 251.4057 - val_mae: 8.8090 - val_mse: 251.4057
Epoch 374/2000
148/148 [=====] - 0s 2ms/step - loss: 255.9059 - mae: 8.6884 - mse: 255.9059 - val_loss: 250.4556 - val_mae: 8.7689 - val_mse: 250.4556
Epoch 375/2000
148/148 [=====] - 0s 2ms/step - loss: 255.1505 - mae: 8.6785 - mse: 255.1505 - val_loss: 250.8729 - val_mae: 8.7755 - val_mse: 250.8729
Epoch 376/2000
148/148 [=====] - 0s 2ms/step - loss: 254.3928 - mae: 8.6364 - mse: 254.3928 - val_loss: 250.3965 - val_mae: 8.7487 - val_mse: 250.3965
Epoch 377/2000
148/148 [=====] - 0s 2ms/step - loss: 253.8108 - mae: 8.6136 - mse: 253.8108 - val_loss: 248.7604 - val_mae: 8.6828 - val_mse: 248.7604
Epoch 378/2000
148/148 [=====] - 0s 2ms/step - loss: 253.0504 - mae: 8.5745 - mse: 253.0504 - val_loss: 247.3403 - val_mae: 8.6263 - val_mse: 247.3403
Epoch 379/2000
148/148 [=====] - 0s 2ms/step - loss: 252.3942 - mae: 8.5366 - mse: 252.3942 - val_loss: 246.9152 - val_mae: 8.5981 - val_mse: 246.9152
Epoch 380/2000
148/148 [=====] - 0s 2ms/step - loss: 251.5127 - mae: 8.4648 - mse: 251.5127 - val_loss: 248.9803 - val_mae: 8.6577 - val_mse: 248.9803
Epoch 381/2000
148/148 [=====] - 0s 2ms/step - loss: 250.9274 - mae: 8.4927 - mse: 250.9274 - val_loss: 245.9299 - val_mae: 8.5429 - val_mse: 245.9299
Epoch 382/2000
148/148 [=====] - 0s 2ms/step - loss: 250.1210 - mae: 8.4217 - mse: 250.1210 - val_loss: 246.7677 - val_mae: 8.5691 - val_mse: 246.7677
Epoch 383/2000
148/148 [=====] - 0s 2ms/step - loss: 249.5339 - mae: 8.4171 - mse: 249.5339 - val_loss: 244.9802 - val_mae: 8.4930 - val_mse: 244.9802
Epoch 384/2000
148/148 [=====] - 0s 3ms/step - loss: 248.7060 - mae: 8.3362 - mse: 248.7060 - val_loss: 247.5609 - val_mae: 8.5937 - val_mse: 247.5609
Epoch 385/2000
148/148 [=====] - 0s 2ms/step - loss: 248.2198 - mae: 8.3667 - mse: 248.2198 - val_loss: 244.0576 - val_mae: 8.4807 - val_mse: 244.0576
Epoch 386/2000
148/148 [=====] - 0s 2ms/step - loss: 247.5410 - mae: 8.3448 - mse: 247.5410 - val_loss: 244.8154 - val_mae: 8.4754 - val_mse: 244.8154
Epoch 387/2000
148/148 [=====] - 0s 2ms/step - loss: 246.9934 - mae: 8.3016 - mse: 246.9934 - val_loss: 243.5654 - val_mae: 8.4424 - val_mse: 243.5654
Epoch 388/2000
148/148 [=====] - 0s 2ms/step - loss: 246.2253 - mae: 8.2510 - mse: 246.2253 - val_loss: 244.3122 - val_mae: 8.4466 - val_mse: 244.3122
Epoch 389/2000
148/148 [=====] - 0s 2ms/step - loss: 245.7456 - mae: 8.2587 - mse: 245.7456 - val_loss: 243.4854 - val_mae: 8.4166 - val_mse: 243.4854
Epoch 390/2000
148/148 [=====] - 0s 2ms/step - loss: 245.1775 - mae: 8.2277 - mse: 245.1775 - val_loss: 242.6349 - val_mae: 8.3807 - val_mse: 242.6349
Epoch 391/2000
148/148 [=====] - 0s 2ms/step - loss: 244.5587 - mae: 8.2017 - mse: 244.5587 - val_loss: 243.4567 - val_mae: 8.4027 - val_mse: 243.4567
Epoch 392/2000
148/148 [=====] - 0s 2ms/step - loss: 243.9141 - mae: 8.1778 - mse: 243.9141 - val_loss: 243.6317 - val_mae: 8.4001 - val_mse: 243.6317
Epoch 393/2000

Epoch 393/2000
148/148 [=====] - 0s 2ms/step - loss: 243.4130 - mae: 8.1780 - mse: 243.4130 - val_loss: 240.4366 - val_mae: 8.2996 - val_mse: 240.4366
Epoch 394/2000
148/148 [=====] - 0s 2ms/step - loss: 242.7418 - mae: 8.1438 - mse: 242.7418 - val_loss: 239.3239 - val_mae: 8.2747 - val_mse: 239.3239
Epoch 395/2000
148/148 [=====] - 0s 2ms/step - loss: 242.1106 - mae: 8.0851 - mse: 242.1106 - val_loss: 240.9076 - val_mae: 8.2838 - val_mse: 240.9076
Epoch 396/2000
148/148 [=====] - 0s 3ms/step - loss: 241.4578 - mae: 8.0614 - mse: 241.4578 - val_loss: 240.2072 - val_mae: 8.2545 - val_mse: 240.2072
Epoch 397/2000
148/148 [=====] - 0s 2ms/step - loss: 240.9841 - mae: 8.0862 - mse: 240.9841 - val_loss: 237.5773 - val_mae: 8.1772 - val_mse: 237.5773
Epoch 398/2000
148/148 [=====] - 0s 2ms/step - loss: 240.3092 - mae: 8.0008 - mse: 240.3092 - val_loss: 238.8948 - val_mae: 8.1932 - val_mse: 238.8948
Epoch 399/2000
148/148 [=====] - 0s 2ms/step - loss: 239.8105 - mae: 7.9783 - mse: 239.8105 - val_loss: 239.6026 - val_mae: 8.2148 - val_mse: 239.6026
Epoch 400/2000
148/148 [=====] - 0s 2ms/step - loss: 239.4616 - mae: 7.9975 - mse: 239.4616 - val_loss: 237.5157 - val_mae: 8.1410 - val_mse: 237.5157
Epoch 401/2000
143/148 [=====>..] - ETA: 0s - loss: 238.4880 - mae: 7.9716 - mse: 238.4880
148/148 [=====] - 0s 3ms/step - loss: 238.5727 - mae: 7.9614 - mse: 238.5727 - val_loss: 235.7127 - val_mae: 8.0732 - val_mse: 235.7127
Epoch 402/2000
148/148 [=====] - 0s 2ms/step - loss: 238.1640 - mae: 7.8961 - mse: 238.1640 - val_loss: 235.7809 - val_mae: 8.0787 - val_mse: 235.7809
Epoch 403/2000
148/148 [=====] - 0s 2ms/step - loss: 237.5245 - mae: 7.8699 - mse: 237.5245 - val_loss: 238.0759 - val_mae: 8.1065 - val_mse: 238.0759
Epoch 404/2000
148/148 [=====] - 0s 2ms/step - loss: 237.2445 - mae: 7.8667 - mse: 237.2445 - val_loss: 234.5983 - val_mae: 8.0173 - val_mse: 234.5983
Epoch 405/2000
148/148 [=====] - 0s 3ms/step - loss: 236.6178 - mae: 7.8404 - mse: 236.6178 - val_loss: 234.4663 - val_mae: 7.9918 - val_mse: 234.4663
Epoch 406/2000
148/148 [=====] - 0s 3ms/step - loss: 235.7747 - mae: 7.8035 - mse: 235.7747 - val_loss: 235.8578 - val_mae: 8.0120 - val_mse: 235.8578
Epoch 407/2000
148/148 [=====] - 0s 2ms/step - loss: 235.5564 - mae: 7.7972 - mse: 235.5564 - val_loss: 234.2721 - val_mae: 7.9742 - val_mse: 234.2721
Epoch 408/2000
148/148 [=====] - 0s 3ms/step - loss: 235.0042 - mae: 7.7543 - mse: 235.0042 - val_loss: 234.3178 - val_mae: 7.9916 - val_mse: 234.3178
Epoch 409/2000
148/148 [=====] - 0s 2ms/step - loss: 234.5142 - mae: 7.7505 - mse: 234.5142 - val_loss: 234.3448 - val_mae: 7.9624 - val_mse: 234.3448
Epoch 410/2000
148/148 [=====] - 0s 2ms/step - loss: 234.0811 - mae: 7.7413 - mse: 234.0811 - val_loss: 232.8734 - val_mae: 7.9071 - val_mse: 232.8734
Epoch 411/2000
148/148 [=====] - 0s 2ms/step - loss: 233.6523 - mae: 7.6994 - mse: 233.6523 - val_loss: 232.6881 - val_mae: 7.8836 - val_mse: 232.6881
Epoch 412/2000
148/148 [=====] - 0s 2ms/step - loss: 233.0765 - mae: 7.6904 - mse: 233.0765 - val_loss: 232.0166 - val_mae: 7.8604 - val_mse: 232.0166
Epoch 413/2000
148/148 [=====] - 0s 2ms/step - loss: 232.6728 - mae: 7.6497 - mse: 232.6728 - val_loss: 232.4689 - val_mae: 7.8497 - val_mse: 232.4689
Epoch 414/2000
148/148 [=====] - 0s 2ms/step - loss: 232.1772 - mae: 7.6375 - mse: 232.1772 - val_loss: 231.2721 - val_mae: 7.8058 - val_mse: 231.2721
Epoch 415/2000
148/148 [=====] - 0s 3ms/step - loss: 231.6393 - mae: 7.6058 - mse: 231.6393 - val_loss: 229.8464 - val_mae: 7.7778 - val_mse: 229.8464
Epoch 416/2000
148/148 [=====] - 0s 2ms/step - loss: 231.2017 - mae: 7.5710 - mse: 231.2017 - val_loss: 229.8464 - val_mae: 7.7778 - val_mse: 229.8464

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148/148 [=====] - 0s 2ms/step - loss: 231.3017 - mae: 7.5712 - m
se: 231.3017 - val_loss: 230.3817 - val_mae: 7.7553 - val_mse: 230.3817
Epoch 417/2000
148/148 [=====] - 0s 2ms/step - loss: 230.8803 - mae: 7.5515 - m
se: 230.8803 - val_loss: 230.8225 - val_mae: 7.7497 - val_mse: 230.8225
Epoch 418/2000
148/148 [=====] - 0s 2ms/step - loss: 230.4268 - mae: 7.5430 - m
se: 230.4268 - val_loss: 230.2698 - val_mae: 7.7345 - val_mse: 230.2698
Epoch 419/2000
148/148 [=====] - 0s 2ms/step - loss: 230.0778 - mae: 7.5426 - m
se: 230.0778 - val_loss: 228.4812 - val_mae: 7.7070 - val_mse: 228.4812
Epoch 420/2000
148/148 [=====] - 0s 2ms/step - loss: 229.4613 - mae: 7.5178 - m
se: 229.4613 - val_loss: 228.2980 - val_mae: 7.6824 - val_mse: 228.2980
Epoch 421/2000
148/148 [=====] - 0s 2ms/step - loss: 229.0467 - mae: 7.4631 - m
se: 229.0467 - val_loss: 230.1487 - val_mae: 7.7104 - val_mse: 230.1487
Epoch 422/2000
148/148 [=====] - 0s 2ms/step - loss: 228.8847 - mae: 7.4625 - m
se: 228.8847 - val_loss: 228.8633 - val_mae: 7.6871 - val_mse: 228.8633
Epoch 423/2000
148/148 [=====] - 0s 2ms/step - loss: 227.8423 - mae: 7.4166 - m
se: 227.8423 - val_loss: 232.1416 - val_mae: 7.7682 - val_mse: 232.1416
Epoch 424/2000
148/148 [=====] - 0s 2ms/step - loss: 228.1228 - mae: 7.4667 - m
se: 228.1228 - val_loss: 227.0510 - val_mae: 7.6122 - val_mse: 227.0510
Epoch 425/2000
148/148 [=====] - 0s 2ms/step - loss: 227.5769 - mae: 7.3848 - m
se: 227.5769 - val_loss: 226.7496 - val_mae: 7.6043 - val_mse: 226.7496
Epoch 426/2000
148/148 [=====] - 0s 2ms/step - loss: 227.2174 - mae: 7.3729 - m
se: 227.2174 - val_loss: 226.6613 - val_mae: 7.5950 - val_mse: 226.6613
Epoch 427/2000
148/148 [=====] - 0s 2ms/step - loss: 226.8352 - mae: 7.3470 - m
se: 226.8352 - val_loss: 227.0676 - val_mae: 7.5890 - val_mse: 227.0676
Epoch 428/2000
148/148 [=====] - 0s 2ms/step - loss: 226.3935 - mae: 7.3553 - m
se: 226.3935 - val_loss: 226.8129 - val_mae: 7.5620 - val_mse: 226.8129
Epoch 429/2000
148/148 [=====] - 0s 2ms/step - loss: 226.1342 - mae: 7.3293 - m
se: 226.1342 - val_loss: 226.3234 - val_mae: 7.5565 - val_mse: 226.3234
Epoch 430/2000
148/148 [=====] - 0s 2ms/step - loss: 225.8804 - mae: 7.3193 - m
se: 225.8804 - val_loss: 225.6303 - val_mae: 7.5267 - val_mse: 225.6303
Epoch 431/2000
148/148 [=====] - 0s 2ms/step - loss: 225.4760 - mae: 7.2844 - m
se: 225.4760 - val_loss: 224.8286 - val_mae: 7.4843 - val_mse: 224.8286
Epoch 432/2000
148/148 [=====] - 0s 2ms/step - loss: 225.1157 - mae: 7.2653 - m
se: 225.1157 - val_loss: 226.4075 - val_mae: 7.5128 - val_mse: 226.4075
Epoch 433/2000
148/148 [=====] - 0s 2ms/step - loss: 224.8110 - mae: 7.2675 - m
se: 224.8110 - val_loss: 224.1186 - val_mae: 7.4463 - val_mse: 224.1186
Epoch 434/2000
148/148 [=====] - 0s 2ms/step - loss: 224.5621 - mae: 7.2280 - m
se: 224.5621 - val_loss: 223.9537 - val_mae: 7.4643 - val_mse: 223.9537
Epoch 435/2000
148/148 [=====] - 0s 2ms/step - loss: 224.2040 - mae: 7.1897 - m
se: 224.2040 - val_loss: 224.9082 - val_mae: 7.4409 - val_mse: 224.9082
Epoch 436/2000
148/148 [=====] - 0s 2ms/step - loss: 223.8339 - mae: 7.2068 - m
se: 223.8339 - val_loss: 223.2625 - val_mae: 7.4256 - val_mse: 223.2625
Epoch 437/2000
148/148 [=====] - 0s 2ms/step - loss: 223.5503 - mae: 7.1794 - m
se: 223.5503 - val_loss: 223.4892 - val_mae: 7.4072 - val_mse: 223.4892
Epoch 438/2000
148/148 [=====] - 0s 2ms/step - loss: 223.2389 - mae: 7.1592 - m
se: 223.2389 - val_loss: 223.2643 - val_mae: 7.3820 - val_mse: 223.2643
Epoch 439/2000
148/148 [=====] - 0s 2ms/step - loss: 222.8878 - mae: 7.1521 - m
se: 222.8878 - val_loss: 223.7159 - val_mae: 7.3597 - val_mse: 223.7159
Epoch 440/2000
148/148 [=====] - 0s 2ms/step - loss: 222.5057 - mae: 7.1242 - m
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148/148 [=====] - 0s 2ms/step - loss: 222.5857 - mae: 7.1242 - m
se: 222.5857 - val_loss: 223.2983 - val_mae: 7.3537 - val_mse: 223.2983
Epoch 441/2000
148/148 [=====] - 0s 2ms/step - loss: 222.2720 - mae: 7.1066 - m
se: 222.2720 - val_loss: 223.6831 - val_mae: 7.3553 - val_mse: 223.6831
Epoch 442/2000
148/148 [=====] - 0s 2ms/step - loss: 221.9767 - mae: 7.1133 - m
se: 221.9767 - val_loss: 222.1336 - val_mae: 7.3416 - val_mse: 222.1336
Epoch 443/2000
148/148 [=====] - 0s 2ms/step - loss: 221.7265 - mae: 7.0960 - m
se: 221.7265 - val_loss: 222.3755 - val_mae: 7.3163 - val_mse: 222.3755
Epoch 444/2000
148/148 [=====] - 0s 2ms/step - loss: 221.2808 - mae: 7.0495 - m
se: 221.2808 - val_loss: 223.5949 - val_mae: 7.3455 - val_mse: 223.5949
Epoch 445/2000
148/148 [=====] - 0s 2ms/step - loss: 221.1197 - mae: 7.0692 - m
se: 221.1197 - val_loss: 221.1729 - val_mae: 7.2642 - val_mse: 221.1729
Epoch 446/2000
148/148 [=====] - 0s 2ms/step - loss: 220.8533 - mae: 7.0305 - m
se: 220.8533 - val_loss: 221.5522 - val_mae: 7.2616 - val_mse: 221.5522
Epoch 447/2000
148/148 [=====] - 0s 2ms/step - loss: 220.5372 - mae: 7.0094 - m
se: 220.5372 - val_loss: 222.5289 - val_mae: 7.2740 - val_mse: 222.5289
Epoch 448/2000
148/148 [=====] - 0s 2ms/step - loss: 220.3444 - mae: 7.0030 - m
se: 220.3444 - val_loss: 221.9365 - val_mae: 7.2736 - val_mse: 221.9365
Epoch 449/2000
148/148 [=====] - 0s 2ms/step - loss: 220.2697 - mae: 7.0016 - m
se: 220.2697 - val_loss: 220.9549 - val_mae: 7.2518 - val_mse: 220.9549
Epoch 450/2000
148/148 [=====] - 0s 2ms/step - loss: 219.6068 - mae: 6.9704 - m
se: 219.6068 - val_loss: 222.4921 - val_mae: 7.2811 - val_mse: 222.4921
Epoch 451/2000
148/148 [=====] - 0s 2ms/step - loss: 219.3003 - mae: 6.9955 - m
se: 219.3003 - val_loss: 218.7724 - val_mae: 7.2142 - val_mse: 218.7724
Epoch 452/2000
148/148 [=====] - 0s 2ms/step - loss: 219.3112 - mae: 6.9585 - m
se: 219.3112 - val_loss: 218.1817 - val_mae: 7.2384 - val_mse: 218.1817
Epoch 453/2000
148/148 [=====] - 0s 2ms/step - loss: 219.3148 - mae: 6.9284 - m
se: 219.3148 - val_loss: 218.3064 - val_mae: 7.1621 - val_mse: 218.3064
Epoch 454/2000
148/148 [=====] - 0s 2ms/step - loss: 218.9953 - mae: 6.9179 - m
se: 218.9953 - val_loss: 218.7590 - val_mae: 7.1618 - val_mse: 218.7590
Epoch 455/2000
148/148 [=====] - 0s 2ms/step - loss: 218.3583 - mae: 6.9158 - m
se: 218.3583 - val_loss: 218.5906 - val_mae: 7.1164 - val_mse: 218.5906
Epoch 456/2000
148/148 [=====] - 0s 2ms/step - loss: 218.2536 - mae: 6.8755 - m
se: 218.2536 - val_loss: 219.6226 - val_mae: 7.1478 - val_mse: 219.6226
Epoch 457/2000
148/148 [=====] - 0s 2ms/step - loss: 218.2034 - mae: 6.9060 - m
se: 218.2034 - val_loss: 218.6097 - val_mae: 7.1412 - val_mse: 218.6097
Epoch 458/2000
148/148 [=====] - 0s 2ms/step - loss: 217.7696 - mae: 6.8884 - m
se: 217.7696 - val_loss: 217.2327 - val_mae: 7.1425 - val_mse: 217.2327
Epoch 459/2000
148/148 [=====] - 0s 2ms/step - loss: 217.8460 - mae: 6.8707 - m
se: 217.8460 - val_loss: 217.4690 - val_mae: 7.1211 - val_mse: 217.4690
Epoch 460/2000
148/148 [=====] - 0s 2ms/step - loss: 217.5891 - mae: 6.8494 - m
se: 217.5891 - val_loss: 218.3439 - val_mae: 7.1100 - val_mse: 218.3439
Epoch 461/2000
148/148 [=====] - 0s 2ms/step - loss: 217.3570 - mae: 6.8425 - m
se: 217.3570 - val_loss: 217.8799 - val_mae: 7.0924 - val_mse: 217.8799
Epoch 462/2000
148/148 [=====] - 0s 2ms/step - loss: 217.0973 - mae: 6.8377 - m
se: 217.0973 - val_loss: 217.4622 - val_mae: 7.0645 - val_mse: 217.4622
Epoch 463/2000
148/148 [=====] - 0s 2ms/step - loss: 216.7316 - mae: 6.8018 - m
se: 216.7316 - val_loss: 217.7226 - val_mae: 7.0550 - val_mse: 217.7226
Epoch 464/2000
148/148 [=====] - 0s 2ms/step - loss: 216.7316 - mae: 6.7882 - m
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148/148 [=====] - 0s 2ms/step - loss: 216.7212 - mae: 6.7992 - m
se: 216.7212 - val_loss: 217.6577 - val_mae: 7.0543 - val_mse: 217.6577
Epoch 465/2000
148/148 [=====] - 0s 3ms/step - loss: 216.4409 - mae: 6.8031 - m
se: 216.4409 - val_loss: 217.0335 - val_mae: 7.0257 - val_mse: 217.0335
Epoch 466/2000
148/148 [=====] - 0s 2ms/step - loss: 216.2282 - mae: 6.7691 - m
se: 216.2282 - val_loss: 217.7764 - val_mae: 7.0260 - val_mse: 217.7764
Epoch 467/2000
148/148 [=====] - 0s 2ms/step - loss: 215.9682 - mae: 6.7563 - m
se: 215.9682 - val_loss: 218.1177 - val_mae: 7.0529 - val_mse: 218.1177
Epoch 468/2000
148/148 [=====] - 0s 3ms/step - loss: 215.8501 - mae: 6.7694 - m
se: 215.8501 - val_loss: 216.2897 - val_mae: 7.0390 - val_mse: 216.2897
Epoch 469/2000
148/148 [=====] - 0s 2ms/step - loss: 215.6567 - mae: 6.7591 - m
se: 215.6567 - val_loss: 216.8604 - val_mae: 7.0261 - val_mse: 216.8604
Epoch 470/2000
148/148 [=====] - 0s 3ms/step - loss: 215.6028 - mae: 6.7399 - m
se: 215.6028 - val_loss: 216.7220 - val_mae: 6.9979 - val_mse: 216.7220
Epoch 471/2000
148/148 [=====] - 0s 3ms/step - loss: 215.2391 - mae: 6.7480 - m
se: 215.2391 - val_loss: 215.7868 - val_mae: 6.9786 - val_mse: 215.7868
Epoch 472/2000
148/148 [=====] - 0s 2ms/step - loss: 214.9412 - mae: 6.6892 - m
se: 214.9412 - val_loss: 218.1735 - val_mae: 7.0217 - val_mse: 218.1735
Epoch 473/2000
148/148 [=====] - 0s 2ms/step - loss: 215.0075 - mae: 6.7290 - m
se: 215.0075 - val_loss: 215.5916 - val_mae: 7.0049 - val_mse: 215.5916
Epoch 474/2000
148/148 [=====] - 0s 3ms/step - loss: 214.7508 - mae: 6.7061 - m
se: 214.7508 - val_loss: 215.8941 - val_mae: 6.9508 - val_mse: 215.8941
Epoch 475/2000
148/148 [=====] - 0s 2ms/step - loss: 214.5264 - mae: 6.6796 - m
se: 214.5264 - val_loss: 217.3226 - val_mae: 6.9897 - val_mse: 217.3226
Epoch 476/2000
148/148 [=====] - 0s 2ms/step - loss: 214.3726 - mae: 6.6887 - m
se: 214.3726 - val_loss: 215.5490 - val_mae: 6.9381 - val_mse: 215.5490
Epoch 477/2000
148/148 [=====] - 0s 3ms/step - loss: 214.4673 - mae: 6.6826 - m
se: 214.4673 - val_loss: 215.0462 - val_mae: 6.9505 - val_mse: 215.0462
Epoch 478/2000
148/148 [=====] - 0s 2ms/step - loss: 214.1830 - mae: 6.6631 - m
se: 214.1830 - val_loss: 215.2574 - val_mae: 6.9359 - val_mse: 215.2574
Epoch 479/2000
148/148 [=====] - 0s 2ms/step - loss: 213.8841 - mae: 6.6545 - m
se: 213.8841 - val_loss: 216.1491 - val_mae: 6.9354 - val_mse: 216.1491
Epoch 480/2000
148/148 [=====] - 0s 2ms/step - loss: 213.6367 - mae: 6.6817 - m
se: 213.6367 - val_loss: 214.0727 - val_mae: 6.9225 - val_mse: 214.0727
Epoch 481/2000
148/148 [=====] - 0s 2ms/step - loss: 212.8829 - mae: 6.6268 - m
se: 212.8829 - val_loss: 217.2580 - val_mae: 6.9775 - val_mse: 217.2580
Epoch 482/2000
148/148 [=====] - 0s 2ms/step - loss: 213.5123 - mae: 6.6340 - m
se: 213.5123 - val_loss: 215.1199 - val_mae: 6.9210 - val_mse: 215.1199
Epoch 483/2000
148/148 [=====] - 0s 2ms/step - loss: 213.2916 - mae: 6.6282 - m
se: 213.2916 - val_loss: 214.8838 - val_mae: 6.8760 - val_mse: 214.8838
Epoch 484/2000
148/148 [=====] - 0s 2ms/step - loss: 213.1478 - mae: 6.5977 - m
se: 213.1478 - val_loss: 213.9886 - val_mae: 6.9085 - val_mse: 213.9886
Epoch 485/2000
148/148 [=====] - 0s 2ms/step - loss: 213.0280 - mae: 6.6079 - m
se: 213.0280 - val_loss: 213.4812 - val_mae: 6.8768 - val_mse: 213.4812
Epoch 486/2000
148/148 [=====] - 0s 2ms/step - loss: 212.4967 - mae: 6.5798 - m
se: 212.4967 - val_loss: 216.5125 - val_mae: 6.9335 - val_mse: 216.5125
Epoch 487/2000
148/148 [=====] - 0s 2ms/step - loss: 212.6772 - mae: 6.6094 - m
se: 212.6772 - val_loss: 212.7459 - val_mae: 6.8354 - val_mse: 212.7459
Epoch 488/2000
148/148 [=====] - 0s 2ms/step - loss: 212.4100 - mae: 6.5720 - m
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148/148 [=====] - 0s 2ms/step - loss: 212.4100 - mae: 6.5720 - m
se: 212.4100 - val_loss: 212.2337 - val_mae: 6.8196 - val_mse: 212.2337
Epoch 489/2000
148/148 [=====] - 0s 2ms/step - loss: 212.3583 - mae: 6.5492 - m
se: 212.3583 - val_loss: 212.6264 - val_mae: 6.8255 - val_mse: 212.6264
Epoch 490/2000
148/148 [=====] - 0s 2ms/step - loss: 212.1554 - mae: 6.5549 - m
se: 212.1554 - val_loss: 213.1378 - val_mae: 6.8179 - val_mse: 213.1378
Epoch 491/2000
148/148 [=====] - 0s 2ms/step - loss: 212.0321 - mae: 6.5445 - m
se: 212.0321 - val_loss: 213.9808 - val_mae: 6.8189 - val_mse: 213.9808
Epoch 492/2000
148/148 [=====] - 0s 2ms/step - loss: 211.9616 - mae: 6.5363 - m
se: 211.9616 - val_loss: 212.6756 - val_mae: 6.8142 - val_mse: 212.6756
Epoch 493/2000
148/148 [=====] - 0s 2ms/step - loss: 211.8561 - mae: 6.5359 - m
se: 211.8561 - val_loss: 212.1668 - val_mae: 6.8165 - val_mse: 212.1668
Epoch 494/2000
148/148 [=====] - 0s 2ms/step - loss: 211.4792 - mae: 6.5149 - m
se: 211.4792 - val_loss: 213.7222 - val_mae: 6.8305 - val_mse: 213.7222
Epoch 495/2000
148/148 [=====] - 0s 2ms/step - loss: 211.3872 - mae: 6.5259 - m
se: 211.3872 - val_loss: 214.5949 - val_mae: 6.8514 - val_mse: 214.5949
Epoch 496/2000
148/148 [=====] - 0s 2ms/step - loss: 211.4495 - mae: 6.5157 - m
se: 211.4495 - val_loss: 213.0405 - val_mae: 6.8364 - val_mse: 213.0405
Epoch 497/2000
148/148 [=====] - 0s 2ms/step - loss: 211.1264 - mae: 6.5173 - m
se: 211.1264 - val_loss: 212.7688 - val_mae: 6.7886 - val_mse: 212.7688
Epoch 498/2000
148/148 [=====] - 0s 2ms/step - loss: 211.0152 - mae: 6.5086 - m
se: 211.0152 - val_loss: 210.8936 - val_mae: 6.7727 - val_mse: 210.8936
Epoch 499/2000
148/148 [=====] - 0s 2ms/step - loss: 210.7014 - mae: 6.4745 - m
se: 210.7014 - val_loss: 213.3267 - val_mae: 6.8137 - val_mse: 213.3267
Epoch 500/2000
148/148 [=====] - 0s 2ms/step - loss: 210.8934 - mae: 6.5064 - m
se: 210.8934 - val_loss: 211.3305 - val_mae: 6.7677 - val_mse: 211.3305
Epoch 501/2000
123/148 [=====>.....] - ETA: 0s - loss: 210.5378 - mae: 6.4262 - mse:
210.5378
148/148 [=====] - 0s 2ms/step - loss: 210.6484 - mae: 6.4705 - m
se: 210.6484 - val_loss: 213.6404 - val_mae: 6.8038 - val_mse: 213.6404
Epoch 502/2000
148/148 [=====] - 0s 2ms/step - loss: 210.6216 - mae: 6.4848 - m
se: 210.6216 - val_loss: 212.1706 - val_mae: 6.7463 - val_mse: 212.1706
Epoch 503/2000
148/148 [=====] - 0s 2ms/step - loss: 210.5052 - mae: 6.4686 - m
se: 210.5052 - val_loss: 210.5698 - val_mae: 6.7391 - val_mse: 210.5698
Epoch 504/2000
148/148 [=====] - 0s 2ms/step - loss: 210.1395 - mae: 6.4857 - m
se: 210.1395 - val_loss: 210.1867 - val_mae: 6.7060 - val_mse: 210.1867
Epoch 505/2000
148/148 [=====] - 0s 2ms/step - loss: 210.1353 - mae: 6.4548 - m
se: 210.1353 - val_loss: 213.0847 - val_mae: 6.7664 - val_mse: 213.0847
Epoch 506/2000
148/148 [=====] - 0s 2ms/step - loss: 210.0794 - mae: 6.4634 - m
se: 210.0794 - val_loss: 210.0292 - val_mae: 6.6912 - val_mse: 210.0292
Epoch 507/2000
148/148 [=====] - 0s 2ms/step - loss: 209.8429 - mae: 6.4442 - m
se: 209.8429 - val_loss: 211.5638 - val_mae: 6.7244 - val_mse: 211.5638
Epoch 508/2000
148/148 [=====] - 0s 2ms/step - loss: 209.9310 - mae: 6.4218 - m
se: 209.9310 - val_loss: 211.1909 - val_mae: 6.7253 - val_mse: 211.1909
Epoch 509/2000
148/148 [=====] - 0s 2ms/step - loss: 209.8008 - mae: 6.4192 - m
se: 209.8008 - val_loss: 210.3662 - val_mae: 6.7407 - val_mse: 210.3662
Epoch 510/2000
148/148 [=====] - 0s 2ms/step - loss: 209.6569 - mae: 6.4419 - m
se: 209.6569 - val_loss: 209.9197 - val_mae: 6.7057 - val_mse: 209.9197
Epoch 511/2000
148/148 [=====] - 0s 2ms/step - loss: 209.6269 - mae: 6.4110 - m
se: 209.6269 - val_loss: 209.8200 - val_mae: 6.7014 - val_mse: 209.8200
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se: 209.6269 - val_loss: 209.8208 - val_mae: 6.7014 - val_mse: 209.8208
Epoch 512/2000
148/148 [=====] - 0s 2ms/step - loss: 209.3438 - mae: 6.4009 - m
se: 209.3438 - val_loss: 211.9340 - val_mae: 6.7347 - val_mse: 211.9340
Epoch 513/2000
148/148 [=====] - 0s 2ms/step - loss: 209.3100 - mae: 6.4248 - m
se: 209.3100 - val_loss: 209.1070 - val_mae: 6.7417 - val_mse: 209.1070
Epoch 514/2000
148/148 [=====] - 0s 2ms/step - loss: 208.9999 - mae: 6.4021 - m
se: 208.9999 - val_loss: 211.9417 - val_mae: 6.7304 - val_mse: 211.9417
Epoch 515/2000
148/148 [=====] - 0s 2ms/step - loss: 209.0705 - mae: 6.4276 - m
se: 209.0705 - val_loss: 209.2925 - val_mae: 6.6876 - val_mse: 209.2925
Epoch 516/2000
148/148 [=====] - 0s 2ms/step - loss: 208.9171 - mae: 6.3858 - m
se: 208.9171 - val_loss: 211.1207 - val_mae: 6.7164 - val_mse: 211.1207
Epoch 517/2000
148/148 [=====] - 0s 2ms/step - loss: 208.6620 - mae: 6.4020 - m
se: 208.6620 - val_loss: 209.1682 - val_mae: 6.6603 - val_mse: 209.1682
Epoch 518/2000
148/148 [=====] - 0s 2ms/step - loss: 208.5311 - mae: 6.3614 - m
se: 208.5311 - val_loss: 211.5028 - val_mae: 6.7314 - val_mse: 211.5028
Epoch 519/2000
148/148 [=====] - 0s 2ms/step - loss: 208.5952 - mae: 6.3931 - m
se: 208.5952 - val_loss: 208.8416 - val_mae: 6.6743 - val_mse: 208.8416
Epoch 520/2000
148/148 [=====] - 0s 2ms/step - loss: 208.5080 - mae: 6.3746 - m
se: 208.5080 - val_loss: 210.3333 - val_mae: 6.6693 - val_mse: 210.3333
Epoch 521/2000
148/148 [=====] - 0s 2ms/step - loss: 208.5009 - mae: 6.3763 - m
se: 208.5009 - val_loss: 209.1252 - val_mae: 6.6407 - val_mse: 209.1252
Epoch 522/2000
148/148 [=====] - 0s 2ms/step - loss: 208.3590 - mae: 6.3638 - m
se: 208.3590 - val_loss: 209.0513 - val_mae: 6.6191 - val_mse: 209.0513
Epoch 523/2000
148/148 [=====] - 0s 2ms/step - loss: 208.1410 - mae: 6.3394 - m
se: 208.1410 - val_loss: 208.6206 - val_mae: 6.6377 - val_mse: 208.6206
Epoch 524/2000
148/148 [=====] - 0s 2ms/step - loss: 208.1515 - mae: 6.3570 - m
se: 208.1515 - val_loss: 208.9021 - val_mae: 6.6166 - val_mse: 208.9021
Epoch 525/2000
148/148 [=====] - 0s 2ms/step - loss: 207.9333 - mae: 6.3252 - m
se: 207.9333 - val_loss: 210.1190 - val_mae: 6.6616 - val_mse: 210.1190
Epoch 526/2000
148/148 [=====] - 0s 2ms/step - loss: 207.7557 - mae: 6.3488 - m
se: 207.7557 - val_loss: 208.5462 - val_mae: 6.6263 - val_mse: 208.5462
Epoch 527/2000
148/148 [=====] - 0s 2ms/step - loss: 207.6352 - mae: 6.3420 - m
se: 207.6352 - val_loss: 209.4185 - val_mae: 6.6119 - val_mse: 209.4185
Epoch 528/2000
148/148 [=====] - 0s 2ms/step - loss: 207.6253 - mae: 6.3312 - m
se: 207.6253 - val_loss: 209.3179 - val_mae: 6.6237 - val_mse: 209.3179
Epoch 529/2000
148/148 [=====] - 0s 2ms/step - loss: 207.6098 - mae: 6.3187 - m
se: 207.6098 - val_loss: 209.4351 - val_mae: 6.6287 - val_mse: 209.4351
Epoch 530/2000
148/148 [=====] - 0s 2ms/step - loss: 207.6137 - mae: 6.3400 - m
se: 207.6137 - val_loss: 209.0650 - val_mae: 6.6075 - val_mse: 209.0650
Epoch 531/2000
148/148 [=====] - 0s 2ms/step - loss: 207.2392 - mae: 6.3366 - m
se: 207.2392 - val_loss: 207.5800 - val_mae: 6.5788 - val_mse: 207.5800
Epoch 532/2000
148/148 [=====] - 0s 2ms/step - loss: 207.1771 - mae: 6.2970 - m
se: 207.1771 - val_loss: 207.8243 - val_mae: 6.6033 - val_mse: 207.8243
Epoch 533/2000
148/148 [=====] - 0s 2ms/step - loss: 207.0253 - mae: 6.3116 - m
se: 207.0253 - val_loss: 207.6537 - val_mae: 6.5637 - val_mse: 207.6537
Epoch 534/2000
148/148 [=====] - 0s 2ms/step - loss: 207.2120 - mae: 6.2927 - m
se: 207.2120 - val_loss: 208.1197 - val_mae: 6.5705 - val_mse: 208.1197
Epoch 535/2000
148/148 [=====] - 0s 2ms/step - loss: 207.0105 - mae: 6.2922 - m
se: 207.0105 - val_loss: 208.2160 - val_mae: 6.5722 - val_mse: 208.2160
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se: 207.0105 - val_loss: 208.2169 - val_mae: 6.5723 - val_mse: 208.2169
Epoch 536/2000
148/148 [=====] - 0s 2ms/step - loss: 206.8836 - mae: 6.3016 - m
se: 206.8836 - val_loss: 207.3967 - val_mae: 6.5897 - val_mse: 207.3967
Epoch 537/2000
148/148 [=====] - 0s 2ms/step - loss: 206.8191 - mae: 6.2882 - m
se: 206.8191 - val_loss: 207.6515 - val_mae: 6.5720 - val_mse: 207.6515
Epoch 538/2000
148/148 [=====] - 0s 2ms/step - loss: 206.7161 - mae: 6.3043 - m
se: 206.7161 - val_loss: 206.8340 - val_mae: 6.5527 - val_mse: 206.8340
Epoch 539/2000
148/148 [=====] - 0s 2ms/step - loss: 206.5753 - mae: 6.2781 - m
se: 206.5753 - val_loss: 207.3843 - val_mae: 6.5624 - val_mse: 207.3843
Epoch 540/2000
148/148 [=====] - 0s 2ms/step - loss: 206.1597 - mae: 6.2602 - m
se: 206.1597 - val_loss: 209.1505 - val_mae: 6.6075 - val_mse: 209.1505
Epoch 541/2000
148/148 [=====] - 0s 2ms/step - loss: 206.5023 - mae: 6.2788 - m
se: 206.5023 - val_loss: 206.2661 - val_mae: 6.5861 - val_mse: 206.2661
Epoch 542/2000
148/148 [=====] - 0s 2ms/step - loss: 206.3463 - mae: 6.2625 - m
se: 206.3463 - val_loss: 206.8766 - val_mae: 6.5556 - val_mse: 206.8766
Epoch 543/2000
148/148 [=====] - 0s 2ms/step - loss: 206.2847 - mae: 6.2720 - m
se: 206.2847 - val_loss: 206.6537 - val_mae: 6.5307 - val_mse: 206.6537
Epoch 544/2000
148/148 [=====] - 0s 2ms/step - loss: 206.1685 - mae: 6.2601 - m
se: 206.1685 - val_loss: 206.4656 - val_mae: 6.5398 - val_mse: 206.4656
Epoch 545/2000
148/148 [=====] - 0s 2ms/step - loss: 206.0880 - mae: 6.2475 - m
se: 206.0880 - val_loss: 206.7479 - val_mae: 6.5483 - val_mse: 206.7479
Epoch 546/2000
148/148 [=====] - 0s 2ms/step - loss: 205.9696 - mae: 6.2473 - m
se: 205.9696 - val_loss: 207.5248 - val_mae: 6.5422 - val_mse: 207.5248
Epoch 547/2000
148/148 [=====] - 0s 2ms/step - loss: 205.8361 - mae: 6.2471 - m
se: 205.8361 - val_loss: 207.0775 - val_mae: 6.5451 - val_mse: 207.0775
Epoch 548/2000
148/148 [=====] - 0s 2ms/step - loss: 205.7606 - mae: 6.2519 - m
se: 205.7606 - val_loss: 206.9589 - val_mae: 6.5311 - val_mse: 206.9589
Epoch 549/2000
148/148 [=====] - 0s 2ms/step - loss: 205.5580 - mae: 6.2341 - m
se: 205.5580 - val_loss: 207.7449 - val_mae: 6.5639 - val_mse: 207.7449
Epoch 550/2000
148/148 [=====] - 0s 2ms/step - loss: 205.5905 - mae: 6.2520 - m
se: 205.5905 - val_loss: 207.7550 - val_mae: 6.5656 - val_mse: 207.7550
Epoch 551/2000
148/148 [=====] - 0s 2ms/step - loss: 205.6694 - mae: 6.2525 - m
se: 205.6694 - val_loss: 206.4504 - val_mae: 6.5465 - val_mse: 206.4504
Epoch 552/2000
148/148 [=====] - 0s 2ms/step - loss: 205.4822 - mae: 6.2366 - m
se: 205.4822 - val_loss: 206.7091 - val_mae: 6.5352 - val_mse: 206.7091
Epoch 553/2000
148/148 [=====] - 0s 3ms/step - loss: 205.4139 - mae: 6.2209 - m
se: 205.4139 - val_loss: 206.4469 - val_mae: 6.5121 - val_mse: 206.4469
Epoch 554/2000
148/148 [=====] - 0s 2ms/step - loss: 205.3229 - mae: 6.2234 - m
se: 205.3229 - val_loss: 206.6671 - val_mae: 6.5039 - val_mse: 206.6671
Epoch 555/2000
148/148 [=====] - 0s 2ms/step - loss: 205.1928 - mae: 6.2156 - m
se: 205.1928 - val_loss: 207.2849 - val_mae: 6.5289 - val_mse: 207.2849
Epoch 556/2000
148/148 [=====] - 0s 2ms/step - loss: 205.1829 - mae: 6.2142 - m
se: 205.1829 - val_loss: 205.6156 - val_mae: 6.4828 - val_mse: 205.6156
Epoch 557/2000
148/148 [=====] - 0s 2ms/step - loss: 205.1361 - mae: 6.2090 - m
se: 205.1361 - val_loss: 206.2624 - val_mae: 6.4953 - val_mse: 206.2624
Epoch 558/2000
148/148 [=====] - 0s 2ms/step - loss: 204.9232 - mae: 6.2083 - m
se: 204.9232 - val_loss: 205.9027 - val_mae: 6.5062 - val_mse: 205.9027
Epoch 559/2000
148/148 [=====] - 0s 2ms/step - loss: 204.8787 - mae: 6.1989 - m
se: 204.8787 - val_loss: 205.6655 - val_mae: 6.4880 - val_mse: 205.6655
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se: 204.8787 - val_loss: 205.6655 - val_mae: 6.4880 - val_mse: 205.6655
Epoch 560/2000
148/148 [=====] - 0s 2ms/step - loss: 204.6781 - mae: 6.1903 - m
se: 204.6781 - val_loss: 207.0209 - val_mae: 6.5092 - val_mse: 207.0209
Epoch 561/2000
148/148 [=====] - 0s 2ms/step - loss: 204.4256 - mae: 6.2091 - m
se: 204.4256 - val_loss: 207.1326 - val_mae: 6.5219 - val_mse: 207.1326
Epoch 562/2000
148/148 [=====] - 0s 2ms/step - loss: 204.5381 - mae: 6.1944 - m
se: 204.5381 - val_loss: 207.5696 - val_mae: 6.5430 - val_mse: 207.5696
Epoch 563/2000
148/148 [=====] - 0s 2ms/step - loss: 204.6123 - mae: 6.1967 - m
se: 204.6123 - val_loss: 207.5752 - val_mae: 6.5274 - val_mse: 207.5752
Epoch 564/2000
148/148 [=====] - 0s 2ms/step - loss: 204.4458 - mae: 6.2130 - m
se: 204.4458 - val_loss: 205.2188 - val_mae: 6.4713 - val_mse: 205.2188
Epoch 565/2000
148/148 [=====] - 0s 2ms/step - loss: 204.1993 - mae: 6.1667 - m
se: 204.1993 - val_loss: 207.1696 - val_mae: 6.5097 - val_mse: 207.1696
Epoch 566/2000
148/148 [=====] - 0s 2ms/step - loss: 204.3383 - mae: 6.1834 - m
se: 204.3383 - val_loss: 206.5317 - val_mae: 6.4844 - val_mse: 206.5317
Epoch 567/2000
148/148 [=====] - 0s 2ms/step - loss: 204.3456 - mae: 6.1842 - m
se: 204.3456 - val_loss: 205.4918 - val_mae: 6.4523 - val_mse: 205.4918
Epoch 568/2000
148/148 [=====] - 0s 2ms/step - loss: 204.1667 - mae: 6.1656 - m
se: 204.1667 - val_loss: 204.7842 - val_mae: 6.4714 - val_mse: 204.7842
Epoch 569/2000
148/148 [=====] - 0s 2ms/step - loss: 204.0032 - mae: 6.1754 - m
se: 204.0032 - val_loss: 204.3632 - val_mae: 6.4314 - val_mse: 204.3632
Epoch 570/2000
148/148 [=====] - 0s 2ms/step - loss: 203.9923 - mae: 6.1568 - m
se: 203.9923 - val_loss: 204.5102 - val_mae: 6.4163 - val_mse: 204.5102
Epoch 571/2000
148/148 [=====] - 0s 2ms/step - loss: 203.8879 - mae: 6.1470 - m
se: 203.8879 - val_loss: 205.1429 - val_mae: 6.4272 - val_mse: 205.1429
Epoch 572/2000
148/148 [=====] - 0s 2ms/step - loss: 203.9369 - mae: 6.1602 - m
se: 203.9369 - val_loss: 204.6209 - val_mae: 6.4619 - val_mse: 204.6209
Epoch 573/2000
148/148 [=====] - 0s 2ms/step - loss: 203.7664 - mae: 6.1545 - m
se: 203.7664 - val_loss: 204.6186 - val_mae: 6.4299 - val_mse: 204.6186
Epoch 574/2000
148/148 [=====] - 0s 2ms/step - loss: 203.4539 - mae: 6.1422 - m
se: 203.4539 - val_loss: 205.3294 - val_mae: 6.4471 - val_mse: 205.3294
Epoch 575/2000
148/148 [=====] - 0s 3ms/step - loss: 203.6497 - mae: 6.1528 - m
se: 203.6497 - val_loss: 205.5166 - val_mae: 6.4256 - val_mse: 205.5166
Epoch 576/2000
148/148 [=====] - 0s 2ms/step - loss: 203.5020 - mae: 6.1297 - m
se: 203.5020 - val_loss: 205.2821 - val_mae: 6.4466 - val_mse: 205.2821
Epoch 577/2000
148/148 [=====] - 0s 2ms/step - loss: 203.6299 - mae: 6.1437 - m
se: 203.6299 - val_loss: 204.6653 - val_mae: 6.4284 - val_mse: 204.6653
Epoch 578/2000
148/148 [=====] - 0s 2ms/step - loss: 203.3224 - mae: 6.1409 - m
se: 203.3224 - val_loss: 205.0471 - val_mae: 6.4174 - val_mse: 205.0471
Epoch 579/2000
148/148 [=====] - 0s 2ms/step - loss: 203.2505 - mae: 6.1328 - m
se: 203.2505 - val_loss: 205.1156 - val_mae: 6.4202 - val_mse: 205.1156
Epoch 580/2000
148/148 [=====] - 0s 2ms/step - loss: 203.3585 - mae: 6.1391 - m
se: 203.3585 - val_loss: 204.2705 - val_mae: 6.4052 - val_mse: 204.2705
Epoch 581/2000
148/148 [=====] - 0s 2ms/step - loss: 203.0405 - mae: 6.1282 - m
se: 203.0405 - val_loss: 205.9577 - val_mae: 6.4418 - val_mse: 205.9577
Epoch 582/2000
148/148 [=====] - 0s 2ms/step - loss: 203.2678 - mae: 6.1245 - m
se: 203.2678 - val_loss: 204.0664 - val_mae: 6.3785 - val_mse: 204.0664
Epoch 583/2000
148/148 [=====] - 0s 2ms/step - loss: 202.9916 - mae: 6.1111 - m
se: 202.9916 - val_loss: 203.8104 - val_mae: 6.2672 - val_mse: 203.8104
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se: 202.9916 - val_loss: 203.8104 - val_mae: 6.3672 - val_mse: 203.8104
Epoch 584/2000
148/148 [=====] - 0s 2ms/step - loss: 202.7638 - mae: 6.1192 - m
se: 202.7638 - val_loss: 202.8923 - val_mae: 6.4036 - val_mse: 202.8923
Epoch 585/2000
148/148 [=====] - 0s 2ms/step - loss: 202.9933 - mae: 6.1094 - m
se: 202.9933 - val_loss: 203.7427 - val_mae: 6.3643 - val_mse: 203.7427
Epoch 586/2000
148/148 [=====] - 0s 2ms/step - loss: 202.8717 - mae: 6.0991 - m
se: 202.8717 - val_loss: 203.1474 - val_mae: 6.3691 - val_mse: 203.1474
Epoch 587/2000
148/148 [=====] - 0s 2ms/step - loss: 202.7975 - mae: 6.0937 - m
se: 202.7975 - val_loss: 204.1952 - val_mae: 6.3984 - val_mse: 204.1952
Epoch 588/2000
148/148 [=====] - 0s 3ms/step - loss: 202.6593 - mae: 6.1196 - m
se: 202.6593 - val_loss: 203.4792 - val_mae: 6.3707 - val_mse: 203.4792
Epoch 589/2000
148/148 [=====] - 0s 2ms/step - loss: 202.7019 - mae: 6.0979 - m
se: 202.7019 - val_loss: 203.5258 - val_mae: 6.3838 - val_mse: 203.5258
Epoch 590/2000
148/148 [=====] - 0s 2ms/step - loss: 202.3751 - mae: 6.1051 - m
se: 202.3751 - val_loss: 203.7920 - val_mae: 6.3646 - val_mse: 203.7920
Epoch 591/2000
148/148 [=====] - 0s 3ms/step - loss: 202.4873 - mae: 6.0909 - m
se: 202.4873 - val_loss: 203.5847 - val_mae: 6.3854 - val_mse: 203.5847
Epoch 592/2000
148/148 [=====] - 0s 2ms/step - loss: 202.2706 - mae: 6.1107 - m
se: 202.2706 - val_loss: 202.6979 - val_mae: 6.3391 - val_mse: 202.6979
Epoch 593/2000
148/148 [=====] - 0s 3ms/step - loss: 202.0827 - mae: 6.0958 - m
se: 202.0827 - val_loss: 202.1696 - val_mae: 6.3608 - val_mse: 202.1696
Epoch 594/2000
148/148 [=====] - 0s 3ms/step - loss: 202.1658 - mae: 6.0858 - m
se: 202.1658 - val_loss: 202.2739 - val_mae: 6.3771 - val_mse: 202.2739
Epoch 595/2000
148/148 [=====] - 0s 2ms/step - loss: 202.0920 - mae: 6.0889 - m
se: 202.0920 - val_loss: 203.6843 - val_mae: 6.3656 - val_mse: 203.6843
Epoch 596/2000
148/148 [=====] - 0s 2ms/step - loss: 202.1204 - mae: 6.0840 - m
se: 202.1204 - val_loss: 203.6149 - val_mae: 6.3554 - val_mse: 203.6149
Epoch 597/2000
148/148 [=====] - 0s 3ms/step - loss: 201.8227 - mae: 6.0714 - m
se: 201.8227 - val_loss: 202.4981 - val_mae: 6.3622 - val_mse: 202.4981
Epoch 598/2000
148/148 [=====] - 0s 3ms/step - loss: 201.9107 - mae: 6.0857 - m
se: 201.9107 - val_loss: 202.0334 - val_mae: 6.3542 - val_mse: 202.0334
Epoch 599/2000
148/148 [=====] - 0s 3ms/step - loss: 201.7928 - mae: 6.0907 - m
se: 201.7928 - val_loss: 203.3126 - val_mae: 6.3305 - val_mse: 203.3126
Epoch 600/2000
148/148 [=====] - 0s 3ms/step - loss: 201.7787 - mae: 6.0609 - m
se: 201.7787 - val_loss: 202.9137 - val_mae: 6.3385 - val_mse: 202.9137
Epoch 601/2000
131/148 [=====>....] - ETA: 0s - loss: 199.2468 - mae: 6.0426 - mse:
199.2468
148/148 [=====] - 0s 2ms/step - loss: 201.6330 - mae: 6.0758 - m
se: 201.6330 - val_loss: 202.4427 - val_mae: 6.3448 - val_mse: 202.4427
Epoch 602/2000
148/148 [=====] - 0s 2ms/step - loss: 201.6012 - mae: 6.0853 - m
se: 201.6012 - val_loss: 202.4957 - val_mae: 6.3305 - val_mse: 202.4957
Epoch 603/2000
148/148 [=====] - 0s 2ms/step - loss: 201.5408 - mae: 6.0681 - m
se: 201.5408 - val_loss: 203.3768 - val_mae: 6.3445 - val_mse: 203.3768
Epoch 604/2000
148/148 [=====] - 0s 2ms/step - loss: 201.5231 - mae: 6.0770 - m
se: 201.5231 - val_loss: 201.9370 - val_mae: 6.3374 - val_mse: 201.9370
Epoch 605/2000
148/148 [=====] - 0s 2ms/step - loss: 201.3960 - mae: 6.0752 - m
se: 201.3960 - val_loss: 203.4833 - val_mae: 6.3486 - val_mse: 203.4833
Epoch 606/2000
148/148 [=====] - 0s 2ms/step - loss: 201.3491 - mae: 6.0660 - m
se: 201.3491 - val_loss: 201.4827 - val_mae: 6.3221 - val_mse: 201.4827
Epoch 607/2000
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Epoch 607/2000
148/148 [=====] - 0s 2ms/step - loss: 201.2260 - mae: 6.0595 - mse: 201.2260 - val_loss: 202.5662 - val_mae: 6.3334 - val_mse: 202.5662
Epoch 608/2000
148/148 [=====] - 0s 3ms/step - loss: 201.2475 - mae: 6.0808 - mse: 201.2475 - val_loss: 202.8546 - val_mae: 6.3258 - val_mse: 202.8546
Epoch 609/2000
148/148 [=====] - 0s 2ms/step - loss: 201.0695 - mae: 6.0534 - mse: 201.0695 - val_loss: 202.8446 - val_mae: 6.3405 - val_mse: 202.8446
Epoch 610/2000
148/148 [=====] - 0s 2ms/step - loss: 201.0651 - mae: 6.0677 - mse: 201.0651 - val_loss: 203.1954 - val_mae: 6.3437 - val_mse: 203.1954
Epoch 611/2000
148/148 [=====] - 0s 2ms/step - loss: 201.1951 - mae: 6.0665 - mse: 201.1951 - val_loss: 201.3477 - val_mae: 6.3277 - val_mse: 201.3477
Epoch 612/2000
148/148 [=====] - 0s 2ms/step - loss: 200.8654 - mae: 6.0609 - mse: 200.8654 - val_loss: 203.5621 - val_mae: 6.3609 - val_mse: 203.5621
Epoch 613/2000
148/148 [=====] - 0s 2ms/step - loss: 200.9985 - mae: 6.0647 - mse: 200.9985 - val_loss: 201.8787 - val_mae: 6.3303 - val_mse: 201.8787
Epoch 614/2000
148/148 [=====] - 0s 2ms/step - loss: 200.9918 - mae: 6.0675 - mse: 200.9918 - val_loss: 201.5476 - val_mae: 6.3517 - val_mse: 201.5476
Epoch 615/2000
148/148 [=====] - 0s 2ms/step - loss: 200.5921 - mae: 6.0711 - mse: 200.5921 - val_loss: 201.0085 - val_mae: 6.3181 - val_mse: 201.0085
Epoch 616/2000
148/148 [=====] - 0s 2ms/step - loss: 200.6935 - mae: 6.0347 - mse: 200.6935 - val_loss: 202.5082 - val_mae: 6.3182 - val_mse: 202.5082
Epoch 617/2000
148/148 [=====] - 0s 2ms/step - loss: 200.6032 - mae: 6.0410 - mse: 200.6032 - val_loss: 200.6880 - val_mae: 6.3352 - val_mse: 200.6880
Epoch 618/2000
148/148 [=====] - 0s 2ms/step - loss: 200.5981 - mae: 6.0345 - mse: 200.5981 - val_loss: 201.2694 - val_mae: 6.3162 - val_mse: 201.2694
Epoch 619/2000
148/148 [=====] - 0s 2ms/step - loss: 200.6856 - mae: 6.0622 - mse: 200.6856 - val_loss: 201.1696 - val_mae: 6.3109 - val_mse: 201.1696
Epoch 620/2000
148/148 [=====] - 0s 2ms/step - loss: 200.2218 - mae: 6.0360 - mse: 200.2218 - val_loss: 200.7477 - val_mae: 6.3203 - val_mse: 200.7477
Epoch 621/2000
148/148 [=====] - 0s 2ms/step - loss: 200.4218 - mae: 6.0429 - mse: 200.4218 - val_loss: 200.9889 - val_mae: 6.2711 - val_mse: 200.9889
Epoch 622/2000
148/148 [=====] - 0s 2ms/step - loss: 200.3916 - mae: 6.0221 - mse: 200.3916 - val_loss: 201.3955 - val_mae: 6.3026 - val_mse: 201.3955
Epoch 623/2000
148/148 [=====] - 0s 2ms/step - loss: 199.9151 - mae: 6.0546 - mse: 199.9151 - val_loss: 203.5845 - val_mae: 6.3602 - val_mse: 203.5845
Epoch 624/2000
148/148 [=====] - 0s 2ms/step - loss: 200.3664 - mae: 6.0332 - mse: 200.3664 - val_loss: 201.7945 - val_mae: 6.3057 - val_mse: 201.7945
Epoch 625/2000
148/148 [=====] - 0s 2ms/step - loss: 200.2529 - mae: 6.0359 - mse: 200.2529 - val_loss: 202.1911 - val_mae: 6.3152 - val_mse: 202.1911
Epoch 626/2000
148/148 [=====] - 0s 2ms/step - loss: 200.0440 - mae: 6.0481 - mse: 200.0440 - val_loss: 201.2633 - val_mae: 6.2952 - val_mse: 201.2633
Epoch 627/2000
148/148 [=====] - 0s 2ms/step - loss: 200.0546 - mae: 6.0199 - mse: 200.0546 - val_loss: 200.7884 - val_mae: 6.2948 - val_mse: 200.7884
Epoch 628/2000
148/148 [=====] - 0s 2ms/step - loss: 199.9364 - mae: 6.0226 - mse: 199.9364 - val_loss: 201.0262 - val_mae: 6.2912 - val_mse: 201.0262
Epoch 629/2000
148/148 [=====] - 0s 2ms/step - loss: 199.8115 - mae: 6.0231 - mse: 199.8115 - val_loss: 199.9454 - val_mae: 6.3343 - val_mse: 199.9454
Epoch 630/2000
148/148 [=====] - 0s 2ms/step - loss: 199.9472 - mae: 6.0307 - mse: 199.9472 - val_loss: 200.8848 - val_mae: 6.2664 - val_mse: 200.8848
Epoch 631/2000

Epoch 631/2000
148/148 [=====] - 0s 2ms/step - loss: 199.8316 - mae: 6.0101 - mse: 199.8316 - val_loss: 200.4905 - val_mae: 6.2602 - val_mse: 200.4905
Epoch 632/2000
148/148 [=====] - 0s 2ms/step - loss: 199.7219 - mae: 6.0162 - mse: 199.7219 - val_loss: 200.6719 - val_mae: 6.2482 - val_mse: 200.6719
Epoch 633/2000
148/148 [=====] - 0s 2ms/step - loss: 199.3543 - mae: 6.0048 - mse: 199.3543 - val_loss: 202.1655 - val_mae: 6.3118 - val_mse: 202.1655
Epoch 634/2000
148/148 [=====] - 0s 2ms/step - loss: 199.5908 - mae: 6.0157 - mse: 199.5908 - val_loss: 201.5786 - val_mae: 6.2896 - val_mse: 201.5786
Epoch 635/2000
148/148 [=====] - 0s 2ms/step - loss: 199.4881 - mae: 6.0013 - mse: 199.4881 - val_loss: 200.3165 - val_mae: 6.2866 - val_mse: 200.3165
Epoch 636/2000
148/148 [=====] - 0s 2ms/step - loss: 199.0607 - mae: 6.0355 - mse: 199.0607 - val_loss: 201.1989 - val_mae: 6.2799 - val_mse: 201.1989
Epoch 637/2000
148/148 [=====] - 0s 2ms/step - loss: 199.4997 - mae: 6.0032 - mse: 199.4997 - val_loss: 200.4617 - val_mae: 6.2859 - val_mse: 200.4617
Epoch 638/2000
148/148 [=====] - 0s 2ms/step - loss: 199.3232 - mae: 6.0098 - mse: 199.3232 - val_loss: 199.7193 - val_mae: 6.2815 - val_mse: 199.7193
Epoch 639/2000
148/148 [=====] - 0s 2ms/step - loss: 199.2059 - mae: 5.9978 - mse: 199.2059 - val_loss: 200.8444 - val_mae: 6.2647 - val_mse: 200.8444
Epoch 640/2000
148/148 [=====] - 0s 2ms/step - loss: 199.2026 - mae: 5.9894 - mse: 199.2026 - val_loss: 200.0058 - val_mae: 6.2506 - val_mse: 200.0058
Epoch 641/2000
148/148 [=====] - 0s 2ms/step - loss: 199.1422 - mae: 5.9905 - mse: 199.1422 - val_loss: 199.6820 - val_mae: 6.2465 - val_mse: 199.6820
Epoch 642/2000
148/148 [=====] - 0s 3ms/step - loss: 199.0737 - mae: 5.9931 - mse: 199.0737 - val_loss: 199.4519 - val_mae: 6.2381 - val_mse: 199.4519
Epoch 643/2000
148/148 [=====] - 0s 2ms/step - loss: 198.9129 - mae: 5.9909 - mse: 198.9129 - val_loss: 199.7722 - val_mae: 6.2275 - val_mse: 199.7722
Epoch 644/2000
148/148 [=====] - 0s 2ms/step - loss: 199.0158 - mae: 5.9859 - mse: 199.0158 - val_loss: 200.1315 - val_mae: 6.2441 - val_mse: 200.1315
Epoch 645/2000
148/148 [=====] - 0s 2ms/step - loss: 198.8831 - mae: 5.9767 - mse: 198.8831 - val_loss: 199.9832 - val_mae: 6.2444 - val_mse: 199.9832
Epoch 646/2000
148/148 [=====] - 0s 2ms/step - loss: 198.8665 - mae: 5.9815 - mse: 198.8665 - val_loss: 199.4218 - val_mae: 6.2326 - val_mse: 199.4218
Epoch 647/2000
148/148 [=====] - 0s 3ms/step - loss: 198.7668 - mae: 5.9708 - mse: 198.7668 - val_loss: 200.0042 - val_mae: 6.2295 - val_mse: 200.0042
Epoch 648/2000
148/148 [=====] - 0s 2ms/step - loss: 198.8902 - mae: 5.9798 - mse: 198.8902 - val_loss: 199.7677 - val_mae: 6.2496 - val_mse: 199.7677
Epoch 649/2000
148/148 [=====] - 0s 2ms/step - loss: 198.5755 - mae: 5.9699 - mse: 198.5755 - val_loss: 200.6669 - val_mae: 6.2471 - val_mse: 200.6669
Epoch 650/2000
148/148 [=====] - 0s 2ms/step - loss: 198.6136 - mae: 5.9768 - mse: 198.6136 - val_loss: 200.1483 - val_mae: 6.2272 - val_mse: 200.1483
Epoch 651/2000
148/148 [=====] - 0s 2ms/step - loss: 198.5149 - mae: 5.9722 - mse: 198.5149 - val_loss: 198.9991 - val_mae: 6.2118 - val_mse: 198.9991
Epoch 652/2000
148/148 [=====] - 0s 2ms/step - loss: 198.3877 - mae: 5.9610 - mse: 198.3877 - val_loss: 199.8382 - val_mae: 6.2132 - val_mse: 199.8382
Epoch 653/2000
148/148 [=====] - 0s 2ms/step - loss: 198.4030 - mae: 5.9587 - mse: 198.4030 - val_loss: 198.9018 - val_mae: 6.2036 - val_mse: 198.9018
Epoch 654/2000
148/148 [=====] - 0s 2ms/step - loss: 198.4033 - mae: 5.9469 - mse: 198.4033 - val_loss: 198.4633 - val_mae: 6.2102 - val_mse: 198.4633
Epoch 655/2000

Epoch 655/2000
148/148 [=====] - 0s 2ms/step - loss: 198.1135 - mae: 5.9577 - mse: 198.1135 - val_loss: 200.5499 - val_mae: 6.2554 - val_mse: 200.5499
Epoch 656/2000
148/148 [=====] - 0s 2ms/step - loss: 198.0930 - mae: 5.9712 - mse: 198.0930 - val_loss: 198.4003 - val_mae: 6.2164 - val_mse: 198.4003
Epoch 657/2000
148/148 [=====] - 0s 2ms/step - loss: 198.1010 - mae: 5.9598 - mse: 198.1010 - val_loss: 198.5947 - val_mae: 6.1970 - val_mse: 198.5947
Epoch 658/2000
148/148 [=====] - 0s 2ms/step - loss: 197.9836 - mae: 5.9605 - mse: 197.9836 - val_loss: 200.0553 - val_mae: 6.2537 - val_mse: 200.0553
Epoch 659/2000
148/148 [=====] - 0s 2ms/step - loss: 198.1135 - mae: 5.9807 - mse: 198.1135 - val_loss: 199.1583 - val_mae: 6.2127 - val_mse: 199.1583
Epoch 660/2000
148/148 [=====] - 0s 3ms/step - loss: 197.9480 - mae: 5.9588 - mse: 197.9480 - val_loss: 198.7164 - val_mae: 6.1993 - val_mse: 198.7164
Epoch 661/2000
148/148 [=====] - 0s 3ms/step - loss: 197.8154 - mae: 5.9583 - mse: 197.8154 - val_loss: 198.0645 - val_mae: 6.1941 - val_mse: 198.0645
Epoch 662/2000
148/148 [=====] - 0s 2ms/step - loss: 197.6084 - mae: 5.9620 - mse: 197.6084 - val_loss: 197.7357 - val_mae: 6.2122 - val_mse: 197.7357
Epoch 663/2000
148/148 [=====] - 0s 3ms/step - loss: 197.7634 - mae: 5.9512 - mse: 197.7634 - val_loss: 198.2657 - val_mae: 6.1999 - val_mse: 198.2657
Epoch 664/2000
148/148 [=====] - 0s 3ms/step - loss: 197.6150 - mae: 5.9594 - mse: 197.6150 - val_loss: 198.0607 - val_mae: 6.1822 - val_mse: 198.0607
Epoch 665/2000
148/148 [=====] - 0s 3ms/step - loss: 197.5781 - mae: 5.9536 - mse: 197.5781 - val_loss: 198.1659 - val_mae: 6.2125 - val_mse: 198.1659
Epoch 666/2000
148/148 [=====] - 0s 3ms/step - loss: 197.5108 - mae: 5.9501 - mse: 197.5108 - val_loss: 198.4412 - val_mae: 6.1947 - val_mse: 198.4412
Epoch 667/2000
148/148 [=====] - 0s 2ms/step - loss: 197.5142 - mae: 5.9308 - mse: 197.5142 - val_loss: 199.2452 - val_mae: 6.2143 - val_mse: 199.2452
Epoch 668/2000
148/148 [=====] - 0s 2ms/step - loss: 197.2915 - mae: 5.9764 - mse: 197.2915 - val_loss: 197.5627 - val_mae: 6.1650 - val_mse: 197.5627
Epoch 669/2000
148/148 [=====] - 0s 3ms/step - loss: 197.2506 - mae: 5.9219 - mse: 197.2506 - val_loss: 198.8358 - val_mae: 6.1925 - val_mse: 198.8358
Epoch 670/2000
148/148 [=====] - 0s 2ms/step - loss: 197.2862 - mae: 5.9352 - mse: 197.2862 - val_loss: 197.8695 - val_mae: 6.1704 - val_mse: 197.8695
Epoch 671/2000
148/148 [=====] - 0s 2ms/step - loss: 197.1747 - mae: 5.9351 - mse: 197.1747 - val_loss: 198.9363 - val_mae: 6.1905 - val_mse: 198.9363
Epoch 672/2000
148/148 [=====] - 0s 2ms/step - loss: 197.2091 - mae: 5.9230 - mse: 197.2091 - val_loss: 198.9640 - val_mae: 6.2051 - val_mse: 198.9640
Epoch 673/2000
148/148 [=====] - 0s 2ms/step - loss: 197.0346 - mae: 5.9389 - mse: 197.0346 - val_loss: 198.2353 - val_mae: 6.1836 - val_mse: 198.2353
Epoch 674/2000
148/148 [=====] - 0s 2ms/step - loss: 197.0505 - mae: 5.9430 - mse: 197.0505 - val_loss: 197.1775 - val_mae: 6.1801 - val_mse: 197.1775
Epoch 675/2000
148/148 [=====] - 0s 2ms/step - loss: 197.1011 - mae: 5.9272 - mse: 197.1011 - val_loss: 197.8736 - val_mae: 6.1787 - val_mse: 197.8736
Epoch 676/2000
148/148 [=====] - 0s 2ms/step - loss: 196.7925 - mae: 5.9351 - mse: 196.7925 - val_loss: 198.2928 - val_mae: 6.1866 - val_mse: 198.2928
Epoch 677/2000
148/148 [=====] - 0s 2ms/step - loss: 196.9158 - mae: 5.9448 - mse: 196.9158 - val_loss: 199.1847 - val_mae: 6.2030 - val_mse: 199.1847
Epoch 678/2000
148/148 [=====] - 0s 2ms/step - loss: 196.8790 - mae: 5.9120 - mse: 196.8790 - val_loss: 198.5659 - val_mae: 6.1881 - val_mse: 198.5659
Epoch 679/2000

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Epoch 679/2000
148/148 [=====] - 0s 2ms/step - loss: 196.7656 - mae: 5.9347 - m
se: 196.7656 - val_loss: 197.0362 - val_mae: 6.1552 - val_mse: 197.0362
Epoch 680/2000
148/148 [=====] - 0s 2ms/step - loss: 196.7987 - mae: 5.9161 - m
se: 196.7987 - val_loss: 197.1987 - val_mae: 6.1636 - val_mse: 197.1987
Epoch 681/2000
148/148 [=====] - 0s 2ms/step - loss: 196.7197 - mae: 5.9194 - m
se: 196.7197 - val_loss: 197.3664 - val_mae: 6.1784 - val_mse: 197.3664
Epoch 682/2000
148/148 [=====] - 0s 2ms/step - loss: 196.5054 - mae: 5.9321 - m
se: 196.5054 - val_loss: 196.9388 - val_mae: 6.1541 - val_mse: 196.9388
Epoch 683/2000
148/148 [=====] - 0s 2ms/step - loss: 196.6345 - mae: 5.9143 - m
se: 196.6345 - val_loss: 197.5590 - val_mae: 6.1652 - val_mse: 197.5590
Epoch 684/2000
148/148 [=====] - 0s 2ms/step - loss: 196.4887 - mae: 5.9113 - m
se: 196.4887 - val_loss: 197.8441 - val_mae: 6.1756 - val_mse: 197.8441
Epoch 685/2000
148/148 [=====] - 0s 2ms/step - loss: 196.4552 - mae: 5.9183 - m
se: 196.4552 - val_loss: 196.9069 - val_mae: 6.1642 - val_mse: 196.9069
Epoch 686/2000
148/148 [=====] - 0s 2ms/step - loss: 196.4759 - mae: 5.9132 - m
se: 196.4759 - val_loss: 197.7510 - val_mae: 6.1585 - val_mse: 197.7510
Epoch 687/2000
148/148 [=====] - 0s 2ms/step - loss: 196.3720 - mae: 5.8996 - m
se: 196.3720 - val_loss: 197.4638 - val_mae: 6.1572 - val_mse: 197.4638
Epoch 688/2000
148/148 [=====] - 0s 2ms/step - loss: 196.1047 - mae: 5.9161 - m
se: 196.1047 - val_loss: 197.6024 - val_mae: 6.1508 - val_mse: 197.6024
Epoch 689/2000
148/148 [=====] - 0s 2ms/step - loss: 196.1776 - mae: 5.9193 - m
se: 196.1776 - val_loss: 197.2022 - val_mae: 6.1349 - val_mse: 197.2022
Epoch 690/2000
148/148 [=====] - 0s 2ms/step - loss: 196.2070 - mae: 5.9002 - m
se: 196.2070 - val_loss: 197.3285 - val_mae: 6.1534 - val_mse: 197.3285
Epoch 691/2000
148/148 [=====] - 0s 2ms/step - loss: 196.1385 - mae: 5.8930 - m
se: 196.1385 - val_loss: 196.5804 - val_mae: 6.1389 - val_mse: 196.5804
Epoch 692/2000
148/148 [=====] - 0s 2ms/step - loss: 195.9605 - mae: 5.8984 - m
se: 195.9605 - val_loss: 196.3383 - val_mae: 6.1605 - val_mse: 196.3383
Epoch 693/2000
148/148 [=====] - 0s 2ms/step - loss: 195.8501 - mae: 5.9057 - m
se: 195.8501 - val_loss: 197.8171 - val_mae: 6.1598 - val_mse: 197.8171
Epoch 694/2000
148/148 [=====] - 0s 2ms/step - loss: 195.9119 - mae: 5.8973 - m
se: 195.9119 - val_loss: 197.2346 - val_mae: 6.1489 - val_mse: 197.2346
Epoch 695/2000
148/148 [=====] - 0s 2ms/step - loss: 195.7690 - mae: 5.9066 - m
se: 195.7690 - val_loss: 195.9958 - val_mae: 6.1430 - val_mse: 195.9958
Epoch 696/2000
148/148 [=====] - 0s 2ms/step - loss: 195.7053 - mae: 5.8868 - m
se: 195.7053 - val_loss: 197.3123 - val_mae: 6.1635 - val_mse: 197.3123
Epoch 697/2000
148/148 [=====] - 0s 2ms/step - loss: 195.5435 - mae: 5.9111 - m
se: 195.5435 - val_loss: 197.0970 - val_mae: 6.1431 - val_mse: 197.0970
Epoch 698/2000
148/148 [=====] - 0s 2ms/step - loss: 195.7400 - mae: 5.9171 - m
se: 195.7400 - val_loss: 196.2010 - val_mae: 6.1192 - val_mse: 196.2010
Epoch 699/2000
148/148 [=====] - 0s 2ms/step - loss: 195.7225 - mae: 5.8860 - m
se: 195.7225 - val_loss: 197.2466 - val_mae: 6.1350 - val_mse: 197.2466
Epoch 700/2000
148/148 [=====] - 0s 2ms/step - loss: 195.5865 - mae: 5.8861 - m
se: 195.5865 - val_loss: 196.3941 - val_mae: 6.1172 - val_mse: 196.3941
Epoch 701/2000
123/148 [=====>.....] - ETA: 0s - loss: 198.9527 - mae: 5.8980 - mse:
198.9527
148/148 [=====] - 0s 2ms/step - loss: 195.3226 - mae: 5.8795 - m
se: 195.3226 - val_loss: 198.4164 - val_mae: 6.1904 - val_mse: 198.4164
Epoch 702/2000
148/148 [=====] - 0s 2ms/step - loss: 195.4887 - mae: 5.8820 - m
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148/148 [=====] - 0s 2ms/step - loss: 195.4887 - mae: 5.8829 - m
se: 195.4887 - val_loss: 199.0843 - val_mae: 6.2206 - val_mse: 199.0843
Epoch 703/2000
148/148 [=====] - 0s 2ms/step - loss: 195.5187 - mae: 5.8983 - m
se: 195.5187 - val_loss: 196.5586 - val_mae: 6.1385 - val_mse: 196.5586
Epoch 704/2000
148/148 [=====] - 0s 2ms/step - loss: 195.3383 - mae: 5.8851 - m
se: 195.3383 - val_loss: 196.4602 - val_mae: 6.1465 - val_mse: 196.4602
Epoch 705/2000
148/148 [=====] - 0s 2ms/step - loss: 195.3079 - mae: 5.8853 - m
se: 195.3079 - val_loss: 196.0988 - val_mae: 6.1251 - val_mse: 196.0988
Epoch 706/2000
148/148 [=====] - 0s 2ms/step - loss: 195.2786 - mae: 5.8724 - m
se: 195.2786 - val_loss: 197.1548 - val_mae: 6.1475 - val_mse: 197.1548
Epoch 707/2000
148/148 [=====] - 0s 2ms/step - loss: 195.1424 - mae: 5.8872 - m
se: 195.1424 - val_loss: 197.0897 - val_mae: 6.1429 - val_mse: 197.0897
Epoch 708/2000
148/148 [=====] - 0s 2ms/step - loss: 194.9840 - mae: 5.8730 - m
se: 194.9840 - val_loss: 197.1861 - val_mae: 6.1553 - val_mse: 197.1861
Epoch 709/2000
148/148 [=====] - 0s 2ms/step - loss: 194.9939 - mae: 5.8912 - m
se: 194.9939 - val_loss: 196.7032 - val_mae: 6.1277 - val_mse: 196.7032
Epoch 710/2000
148/148 [=====] - 0s 2ms/step - loss: 195.0003 - mae: 5.8701 - m
se: 195.0003 - val_loss: 196.5940 - val_mae: 6.1396 - val_mse: 196.5940
Epoch 711/2000
148/148 [=====] - 0s 2ms/step - loss: 195.0073 - mae: 5.8857 - m
se: 195.0073 - val_loss: 196.5877 - val_mae: 6.1374 - val_mse: 196.5877
Epoch 712/2000
148/148 [=====] - 0s 2ms/step - loss: 194.8989 - mae: 5.8741 - m
se: 194.8989 - val_loss: 196.7838 - val_mae: 6.1365 - val_mse: 196.7838
Epoch 713/2000
148/148 [=====] - 0s 2ms/step - loss: 194.7926 - mae: 5.8852 - m
se: 194.7926 - val_loss: 195.7402 - val_mae: 6.1044 - val_mse: 195.7402
Epoch 714/2000
148/148 [=====] - 0s 2ms/step - loss: 194.7337 - mae: 5.8759 - m
se: 194.7337 - val_loss: 196.0562 - val_mae: 6.1007 - val_mse: 196.0562
Epoch 715/2000
148/148 [=====] - 0s 3ms/step - loss: 194.6407 - mae: 5.8618 - m
se: 194.6407 - val_loss: 195.2132 - val_mae: 6.1178 - val_mse: 195.2132
Epoch 716/2000
148/148 [=====] - 0s 2ms/step - loss: 194.4371 - mae: 5.8817 - m
se: 194.4371 - val_loss: 196.1642 - val_mae: 6.1277 - val_mse: 196.1642
Epoch 717/2000
148/148 [=====] - 0s 2ms/step - loss: 194.5749 - mae: 5.8768 - m
se: 194.5749 - val_loss: 196.2018 - val_mae: 6.1244 - val_mse: 196.2018
Epoch 718/2000
148/148 [=====] - 0s 2ms/step - loss: 194.4402 - mae: 5.8625 - m
se: 194.4402 - val_loss: 195.6581 - val_mae: 6.1580 - val_mse: 195.6581
Epoch 719/2000
148/148 [=====] - 0s 2ms/step - loss: 194.4639 - mae: 5.8809 - m
se: 194.4639 - val_loss: 194.8690 - val_mae: 6.1069 - val_mse: 194.8690
Epoch 720/2000
148/148 [=====] - 0s 2ms/step - loss: 194.4354 - mae: 5.8543 - m
se: 194.4354 - val_loss: 195.7485 - val_mae: 6.0965 - val_mse: 195.7485
Epoch 721/2000
148/148 [=====] - 0s 2ms/step - loss: 194.2823 - mae: 5.8611 - m
se: 194.2823 - val_loss: 194.5075 - val_mae: 6.1072 - val_mse: 194.5075
Epoch 722/2000
148/148 [=====] - 0s 2ms/step - loss: 194.1347 - mae: 5.8723 - m
se: 194.1347 - val_loss: 194.4170 - val_mae: 6.0630 - val_mse: 194.4170
Epoch 723/2000
148/148 [=====] - 0s 2ms/step - loss: 194.2020 - mae: 5.8426 - m
se: 194.2020 - val_loss: 194.9041 - val_mae: 6.0809 - val_mse: 194.9041
Epoch 724/2000
148/148 [=====] - 0s 2ms/step - loss: 194.0843 - mae: 5.8555 - m
se: 194.0843 - val_loss: 194.8786 - val_mae: 6.0860 - val_mse: 194.8786
Epoch 725/2000
148/148 [=====] - 0s 2ms/step - loss: 194.2220 - mae: 5.8583 - m
se: 194.2220 - val_loss: 194.6981 - val_mae: 6.0978 - val_mse: 194.6981
Epoch 726/2000
148/148 [=====] - 0s 2ms/step - loss: 194.2278 - mae: 5.8574 - m
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148/148 [=====] - 0s 2ms/step - loss: 193.9378 - mae: 5.8374 - mse: 193.9378 - val_loss: 194.9535 - val_mae: 6.0951 - val_mse: 194.9535
Epoch 727/2000
148/148 [=====] - 0s 2ms/step - loss: 193.8329 - mae: 5.8747 - mse: 193.8329 - val_loss: 196.0310 - val_mae: 6.1066 - val_mse: 196.0310
Epoch 728/2000
148/148 [=====] - 0s 3ms/step - loss: 193.8807 - mae: 5.8450 - mse: 193.8807 - val_loss: 194.3476 - val_mae: 6.0941 - val_mse: 194.3476
Epoch 729/2000
148/148 [=====] - 0s 2ms/step - loss: 193.8279 - mae: 5.8585 - mse: 193.8279 - val_loss: 195.6408 - val_mae: 6.0972 - val_mse: 195.6408
Epoch 730/2000
148/148 [=====] - 0s 2ms/step - loss: 193.8379 - mae: 5.8529 - mse: 193.8379 - val_loss: 195.5738 - val_mae: 6.1046 - val_mse: 195.5738
Epoch 731/2000
148/148 [=====] - 0s 2ms/step - loss: 193.7897 - mae: 5.8550 - mse: 193.7897 - val_loss: 194.3942 - val_mae: 6.0992 - val_mse: 194.3942
Epoch 732/2000
148/148 [=====] - 0s 2ms/step - loss: 193.7869 - mae: 5.8519 - mse: 193.7869 - val_loss: 194.8781 - val_mae: 6.0756 - val_mse: 194.8781
Epoch 733/2000
148/148 [=====] - 0s 2ms/step - loss: 193.5796 - mae: 5.8326 - mse: 193.5796 - val_loss: 194.7672 - val_mae: 6.0925 - val_mse: 194.7672
Epoch 734/2000
148/148 [=====] - 0s 3ms/step - loss: 193.6573 - mae: 5.8538 - mse: 193.6573 - val_loss: 194.5160 - val_mae: 6.0729 - val_mse: 194.5160
Epoch 735/2000
148/148 [=====] - 0s 2ms/step - loss: 193.6327 - mae: 5.8405 - mse: 193.6327 - val_loss: 194.3308 - val_mae: 6.0835 - val_mse: 194.3308
Epoch 736/2000
148/148 [=====] - 0s 2ms/step - loss: 193.4656 - mae: 5.8346 - mse: 193.4656 - val_loss: 195.3802 - val_mae: 6.0917 - val_mse: 195.3802
Epoch 737/2000
148/148 [=====] - 0s 2ms/step - loss: 193.4775 - mae: 5.8359 - mse: 193.4775 - val_loss: 194.3322 - val_mae: 6.0868 - val_mse: 194.3322
Epoch 738/2000
148/148 [=====] - 0s 2ms/step - loss: 193.4080 - mae: 5.8349 - mse: 193.4080 - val_loss: 195.2516 - val_mae: 6.0903 - val_mse: 195.2516
Epoch 739/2000
148/148 [=====] - 0s 2ms/step - loss: 193.2357 - mae: 5.8339 - mse: 193.2357 - val_loss: 196.6506 - val_mae: 6.1369 - val_mse: 196.6506
Epoch 740/2000
148/148 [=====] - 0s 2ms/step - loss: 193.3699 - mae: 5.8380 - mse: 193.3699 - val_loss: 195.1334 - val_mae: 6.0778 - val_mse: 195.1334
Epoch 741/2000
148/148 [=====] - 0s 2ms/step - loss: 193.3036 - mae: 5.8280 - mse: 193.3036 - val_loss: 194.6026 - val_mae: 6.0768 - val_mse: 194.6026
Epoch 742/2000
148/148 [=====] - 0s 2ms/step - loss: 193.0901 - mae: 5.8290 - mse: 193.0901 - val_loss: 195.1108 - val_mae: 6.1110 - val_mse: 195.1108
Epoch 743/2000
148/148 [=====] - 0s 2ms/step - loss: 193.1356 - mae: 5.8456 - mse: 193.1356 - val_loss: 194.5382 - val_mae: 6.0900 - val_mse: 194.5382
Epoch 744/2000
148/148 [=====] - 0s 2ms/step - loss: 192.9632 - mae: 5.8472 - mse: 192.9632 - val_loss: 193.4946 - val_mae: 6.0554 - val_mse: 193.4946
Epoch 745/2000
148/148 [=====] - 0s 2ms/step - loss: 192.7660 - mae: 5.8327 - mse: 192.7660 - val_loss: 195.0243 - val_mae: 6.0688 - val_mse: 195.0243
Epoch 746/2000
148/148 [=====] - 0s 2ms/step - loss: 192.9826 - mae: 5.8165 - mse: 192.9826 - val_loss: 193.7484 - val_mae: 6.0489 - val_mse: 193.7484
Epoch 747/2000
148/148 [=====] - 0s 3ms/step - loss: 192.8369 - mae: 5.8189 - mse: 192.8369 - val_loss: 193.6225 - val_mae: 6.0525 - val_mse: 193.6225
Epoch 748/2000
148/148 [=====] - 0s 2ms/step - loss: 192.8341 - mae: 5.8142 - mse: 192.8341 - val_loss: 194.1450 - val_mae: 6.0530 - val_mse: 194.1450
Epoch 749/2000
148/148 [=====] - 0s 2ms/step - loss: 192.8440 - mae: 5.8187 - mse: 192.8440 - val_loss: 193.7286 - val_mae: 6.0342 - val_mse: 193.7286
Epoch 750/2000
148/148 [=====] - 0s 2ms/step - loss: 192.6001 - mae: 5.8140 - mse: 192.6001 - val_loss: 193.6225 - val_mae: 6.0525 - val_mse: 193.6225


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148/148 [=====] - 0s 2ms/step - loss: 192.6891 - mae: 5.8149 - m
se: 192.6891 - val_loss: 193.0198 - val_mae: 6.0476 - val_mse: 193.0198
Epoch 751/2000
148/148 [=====] - 0s 2ms/step - loss: 192.6537 - mae: 5.8301 - m
se: 192.6537 - val_loss: 193.0355 - val_mae: 6.0430 - val_mse: 193.0355
Epoch 752/2000
148/148 [=====] - 0s 2ms/step - loss: 192.6068 - mae: 5.8160 - m
se: 192.6068 - val_loss: 194.0460 - val_mae: 6.0666 - val_mse: 194.0460
Epoch 753/2000
148/148 [=====] - 0s 2ms/step - loss: 192.6182 - mae: 5.8186 - m
se: 192.6182 - val_loss: 193.0434 - val_mae: 6.0628 - val_mse: 193.0434
Epoch 754/2000
148/148 [=====] - 0s 2ms/step - loss: 192.4799 - mae: 5.8146 - m
se: 192.4799 - val_loss: 193.5885 - val_mae: 6.0454 - val_mse: 193.5885
Epoch 755/2000
148/148 [=====] - 0s 2ms/step - loss: 192.4729 - mae: 5.8076 - m
se: 192.4729 - val_loss: 193.2118 - val_mae: 6.0649 - val_mse: 193.2118
Epoch 756/2000
148/148 [=====] - 0s 2ms/step - loss: 192.3779 - mae: 5.8120 - m
se: 192.3779 - val_loss: 193.7987 - val_mae: 6.0650 - val_mse: 193.7987
Epoch 757/2000
148/148 [=====] - 0s 2ms/step - loss: 192.2706 - mae: 5.8189 - m
se: 192.2706 - val_loss: 195.4856 - val_mae: 6.1039 - val_mse: 195.4856
Epoch 758/2000
148/148 [=====] - 0s 2ms/step - loss: 192.4351 - mae: 5.8106 - m
se: 192.4351 - val_loss: 193.1463 - val_mae: 6.0966 - val_mse: 193.1463
Epoch 759/2000
148/148 [=====] - 0s 2ms/step - loss: 192.2199 - mae: 5.8120 - m
se: 192.2199 - val_loss: 194.3875 - val_mae: 6.0770 - val_mse: 194.3875
Epoch 760/2000
148/148 [=====] - 0s 2ms/step - loss: 192.2684 - mae: 5.8068 - m
se: 192.2684 - val_loss: 193.2138 - val_mae: 6.0431 - val_mse: 193.2138
Epoch 761/2000
148/148 [=====] - 0s 2ms/step - loss: 192.0334 - mae: 5.8089 - m
se: 192.0334 - val_loss: 194.0631 - val_mae: 6.0524 - val_mse: 194.0631
Epoch 762/2000
148/148 [=====] - 0s 2ms/step - loss: 192.0850 - mae: 5.8138 - m
se: 192.0850 - val_loss: 192.9371 - val_mae: 6.0167 - val_mse: 192.9371
Epoch 763/2000
148/148 [=====] - 0s 2ms/step - loss: 191.9256 - mae: 5.7825 - m
se: 191.9256 - val_loss: 194.3645 - val_mae: 6.0799 - val_mse: 194.3645
Epoch 764/2000
148/148 [=====] - 0s 2ms/step - loss: 192.0758 - mae: 5.8128 - m
se: 192.0758 - val_loss: 192.7434 - val_mae: 6.0338 - val_mse: 192.7434
Epoch 765/2000
148/148 [=====] - 0s 2ms/step - loss: 191.6733 - mae: 5.8214 - m
se: 191.6733 - val_loss: 192.1206 - val_mae: 6.0190 - val_mse: 192.1206
Epoch 766/2000
148/148 [=====] - 0s 2ms/step - loss: 191.7985 - mae: 5.8019 - m
se: 191.7985 - val_loss: 191.8787 - val_mae: 6.0206 - val_mse: 191.8787
Epoch 767/2000
148/148 [=====] - 0s 2ms/step - loss: 191.8031 - mae: 5.7959 - m
se: 191.8031 - val_loss: 192.4334 - val_mae: 6.0435 - val_mse: 192.4334
Epoch 768/2000
148/148 [=====] - 0s 2ms/step - loss: 191.7363 - mae: 5.8044 - m
se: 191.7363 - val_loss: 192.4720 - val_mae: 6.0501 - val_mse: 192.4720
Epoch 769/2000
148/148 [=====] - 0s 2ms/step - loss: 191.6877 - mae: 5.7910 - m
se: 191.6877 - val_loss: 192.5999 - val_mae: 6.0447 - val_mse: 192.5999
Epoch 770/2000
148/148 [=====] - 0s 2ms/step - loss: 191.6506 - mae: 5.7967 - m
se: 191.6506 - val_loss: 192.7875 - val_mae: 6.0227 - val_mse: 192.7875
Epoch 771/2000
148/148 [=====] - 0s 2ms/step - loss: 191.5997 - mae: 5.8022 - m
se: 191.5997 - val_loss: 192.2374 - val_mae: 6.0107 - val_mse: 192.2374
Epoch 772/2000
148/148 [=====] - 0s 2ms/step - loss: 191.4566 - mae: 5.7981 - m
se: 191.4566 - val_loss: 192.1578 - val_mae: 6.0037 - val_mse: 192.1578
Epoch 773/2000
148/148 [=====] - 0s 2ms/step - loss: 191.4046 - mae: 5.7801 - m
se: 191.4046 - val_loss: 191.5750 - val_mae: 6.0488 - val_mse: 191.5750
Epoch 774/2000
148/148 [=====] - 0s 2ms/step - loss: 191.4745 - mae: 5.7878 - m
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148/148 [=====] - 0s 2ms/step - loss: 191.4745 - mae: 5.7878 - m
se: 191.4745 - val_loss: 191.8948 - val_mae: 6.0370 - val_mse: 191.8948
Epoch 775/2000
148/148 [=====] - 0s 2ms/step - loss: 191.3720 - mae: 5.7813 - m
se: 191.3720 - val_loss: 192.4219 - val_mae: 6.0203 - val_mse: 192.4219
Epoch 776/2000
148/148 [=====] - 0s 2ms/step - loss: 191.2779 - mae: 5.7787 - m
se: 191.2779 - val_loss: 192.4198 - val_mae: 6.0274 - val_mse: 192.4198
Epoch 777/2000
148/148 [=====] - 0s 2ms/step - loss: 191.2537 - mae: 5.7776 - m
se: 191.2537 - val_loss: 193.6403 - val_mae: 6.0508 - val_mse: 193.6403
Epoch 778/2000
148/148 [=====] - 0s 2ms/step - loss: 191.1124 - mae: 5.7669 - m
se: 191.1124 - val_loss: 191.8479 - val_mae: 6.0256 - val_mse: 191.8479
Epoch 779/2000
148/148 [=====] - 0s 2ms/step - loss: 191.2650 - mae: 5.7669 - m
se: 191.2650 - val_loss: 192.2600 - val_mae: 6.0248 - val_mse: 192.2600
Epoch 780/2000
148/148 [=====] - 0s 2ms/step - loss: 191.0826 - mae: 5.7878 - m
se: 191.0826 - val_loss: 192.4077 - val_mae: 6.0143 - val_mse: 192.4077
Epoch 781/2000
148/148 [=====] - 0s 2ms/step - loss: 191.0582 - mae: 5.7783 - m
se: 191.0582 - val_loss: 192.4049 - val_mae: 6.0209 - val_mse: 192.4049
Epoch 782/2000
148/148 [=====] - 0s 3ms/step - loss: 191.0560 - mae: 5.7905 - m
se: 191.0560 - val_loss: 192.3756 - val_mae: 6.0064 - val_mse: 192.3756
Epoch 783/2000
148/148 [=====] - 0s 3ms/step - loss: 190.8760 - mae: 5.7666 - m
se: 190.8760 - val_loss: 192.0358 - val_mae: 6.0322 - val_mse: 192.0358
Epoch 784/2000
148/148 [=====] - 0s 3ms/step - loss: 190.7589 - mae: 5.7689 - m
se: 190.7589 - val_loss: 191.8187 - val_mae: 5.9991 - val_mse: 191.8187
Epoch 785/2000
148/148 [=====] - 0s 2ms/step - loss: 190.6980 - mae: 5.7789 - m
se: 190.6980 - val_loss: 191.5594 - val_mae: 6.0225 - val_mse: 191.5594
Epoch 786/2000
148/148 [=====] - 0s 2ms/step - loss: 190.7341 - mae: 5.7740 - m
se: 190.7341 - val_loss: 191.6316 - val_mae: 5.9973 - val_mse: 191.6316
Epoch 787/2000
148/148 [=====] - 0s 2ms/step - loss: 190.3880 - mae: 5.7837 - m
se: 190.3880 - val_loss: 190.7576 - val_mae: 6.0289 - val_mse: 190.7576
Epoch 788/2000
148/148 [=====] - 0s 3ms/step - loss: 190.7233 - mae: 5.7628 - m
se: 190.7233 - val_loss: 191.3811 - val_mae: 5.9695 - val_mse: 191.3811
Epoch 789/2000
148/148 [=====] - 0s 3ms/step - loss: 190.6984 - mae: 5.7560 - m
se: 190.6984 - val_loss: 192.0278 - val_mae: 5.9882 - val_mse: 192.0278
Epoch 790/2000
148/148 [=====] - 0s 3ms/step - loss: 190.5846 - mae: 5.7466 - m
se: 190.5846 - val_loss: 191.9780 - val_mae: 5.9986 - val_mse: 191.9780
Epoch 791/2000
148/148 [=====] - 0s 3ms/step - loss: 190.6086 - mae: 5.7542 - m
se: 190.6086 - val_loss: 192.1325 - val_mae: 6.0076 - val_mse: 192.1325
Epoch 792/2000
148/148 [=====] - 0s 2ms/step - loss: 190.3037 - mae: 5.7559 - m
se: 190.3037 - val_loss: 193.2513 - val_mae: 6.0477 - val_mse: 193.2513
Epoch 793/2000
148/148 [=====] - 0s 3ms/step - loss: 190.3610 - mae: 5.7784 - m
se: 190.3610 - val_loss: 191.6099 - val_mae: 5.9732 - val_mse: 191.6099
Epoch 794/2000
148/148 [=====] - 0s 2ms/step - loss: 190.3503 - mae: 5.7569 - m
se: 190.3503 - val_loss: 190.8922 - val_mae: 5.9995 - val_mse: 190.8922
Epoch 795/2000
148/148 [=====] - 0s 2ms/step - loss: 190.3447 - mae: 5.7533 - m
se: 190.3447 - val_loss: 191.0071 - val_mae: 5.9782 - val_mse: 191.0071
Epoch 796/2000
148/148 [=====] - 0s 2ms/step - loss: 190.2250 - mae: 5.7442 - m
se: 190.2250 - val_loss: 192.3462 - val_mae: 6.0127 - val_mse: 192.3462
Epoch 797/2000
148/148 [=====] - 0s 3ms/step - loss: 190.2266 - mae: 5.7572 - m
se: 190.2266 - val_loss: 190.5203 - val_mae: 6.0391 - val_mse: 190.5203
Epoch 798/2000
148/148 [=====] - 0s 2ms/step - loss: 190.1440 - mae: 5.7540 - m
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148/148 [=====] - 0s 2ms/step - loss: 190.1449 - mae: 5.7348 - m
se: 190.1449 - val_loss: 191.4679 - val_mae: 5.9827 - val_mse: 191.4679
Epoch 799/2000
148/148 [=====] - 0s 2ms/step - loss: 190.0839 - mae: 5.7446 - m
se: 190.0839 - val_loss: 191.9813 - val_mae: 6.0187 - val_mse: 191.9813
Epoch 800/2000
148/148 [=====] - 0s 2ms/step - loss: 190.1466 - mae: 5.7455 - m
se: 190.1466 - val_loss: 191.1168 - val_mae: 5.9931 - val_mse: 191.1168
Epoch 801/2000
128/148 [=====>.....] - ETA: 0s - loss: 186.2687 - mae: 5.6969 - mse:
186.2687
148/148 [=====] - 0s 2ms/step - loss: 190.0381 - mae: 5.7489 - m
se: 190.0381 - val_loss: 190.9298 - val_mae: 5.9708 - val_mse: 190.9298
Epoch 802/2000
148/148 [=====] - 0s 3ms/step - loss: 189.8579 - mae: 5.7498 - m
se: 189.8579 - val_loss: 191.4374 - val_mae: 5.9847 - val_mse: 191.4374
Epoch 803/2000
148/148 [=====] - 0s 2ms/step - loss: 190.0185 - mae: 5.7444 - m
se: 190.0185 - val_loss: 190.7568 - val_mae: 5.9977 - val_mse: 190.7568
Epoch 804/2000
148/148 [=====] - 0s 2ms/step - loss: 189.7610 - mae: 5.7509 - m
se: 189.7610 - val_loss: 191.5116 - val_mae: 6.0053 - val_mse: 191.5116
Epoch 805/2000
148/148 [=====] - 0s 2ms/step - loss: 189.8487 - mae: 5.7450 - m
se: 189.8487 - val_loss: 190.6002 - val_mae: 5.9815 - val_mse: 190.6002
Epoch 806/2000
148/148 [=====] - 0s 2ms/step - loss: 189.7593 - mae: 5.7421 - m
se: 189.7593 - val_loss: 191.0840 - val_mae: 5.9741 - val_mse: 191.0840
Epoch 807/2000
148/148 [=====] - 0s 2ms/step - loss: 189.6797 - mae: 5.7457 - m
se: 189.6797 - val_loss: 190.3080 - val_mae: 5.9597 - val_mse: 190.3080
Epoch 808/2000
148/148 [=====] - 0s 2ms/step - loss: 189.6130 - mae: 5.7370 - m
se: 189.6130 - val_loss: 190.5670 - val_mae: 5.9831 - val_mse: 190.5670
Epoch 809/2000
148/148 [=====] - 0s 2ms/step - loss: 189.5285 - mae: 5.7446 - m
se: 189.5285 - val_loss: 190.7077 - val_mae: 5.9833 - val_mse: 190.7077
Epoch 810/2000
148/148 [=====] - 0s 2ms/step - loss: 189.4914 - mae: 5.7423 - m
se: 189.4914 - val_loss: 190.4200 - val_mae: 5.9549 - val_mse: 190.4200
Epoch 811/2000
148/148 [=====] - 0s 2ms/step - loss: 189.3971 - mae: 5.7463 - m
se: 189.3971 - val_loss: 190.5832 - val_mae: 5.9702 - val_mse: 190.5832
Epoch 812/2000
148/148 [=====] - 0s 2ms/step - loss: 189.4897 - mae: 5.7379 - m
se: 189.4897 - val_loss: 190.0341 - val_mae: 5.9690 - val_mse: 190.0341
Epoch 813/2000
148/148 [=====] - 0s 2ms/step - loss: 189.4484 - mae: 5.7314 - m
se: 189.4484 - val_loss: 190.4069 - val_mae: 5.9900 - val_mse: 190.4069
Epoch 814/2000
148/148 [=====] - 0s 2ms/step - loss: 189.3033 - mae: 5.7501 - m
se: 189.3033 - val_loss: 189.4059 - val_mae: 5.9979 - val_mse: 189.4059
Epoch 815/2000
148/148 [=====] - 0s 2ms/step - loss: 189.3717 - mae: 5.7290 - m
se: 189.3717 - val_loss: 190.3876 - val_mae: 5.9578 - val_mse: 190.3876
Epoch 816/2000
148/148 [=====] - 0s 2ms/step - loss: 189.0932 - mae: 5.7362 - m
se: 189.0932 - val_loss: 190.4577 - val_mae: 5.9593 - val_mse: 190.4577
Epoch 817/2000
148/148 [=====] - 0s 2ms/step - loss: 189.0933 - mae: 5.7275 - m
se: 189.0933 - val_loss: 189.5427 - val_mae: 5.9687 - val_mse: 189.5427
Epoch 818/2000
148/148 [=====] - 0s 2ms/step - loss: 188.9336 - mae: 5.7309 - m
se: 188.9336 - val_loss: 190.2344 - val_mae: 5.9760 - val_mse: 190.2344
Epoch 819/2000
148/148 [=====] - 0s 2ms/step - loss: 188.9815 - mae: 5.7298 - m
se: 188.9815 - val_loss: 190.4865 - val_mae: 6.0057 - val_mse: 190.4865
Epoch 820/2000
148/148 [=====] - 0s 2ms/step - loss: 189.0763 - mae: 5.7362 - m
se: 189.0763 - val_loss: 190.6461 - val_mae: 5.9764 - val_mse: 190.6461
Epoch 821/2000
148/148 [=====] - 0s 2ms/step - loss: 188.8897 - mae: 5.7302 - m
se: 188.8897 - val_loss: 190.2807 - val_mae: 5.9800 - val_mse: 190.2807
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se: 188.8897 - val_loss: 190.3807 - val_mae: 5.9809 - val_mse: 190.3807
Epoch 822/2000
148/148 [=====] - 0s 2ms/step - loss: 188.9906 - mae: 5.7437 - m
se: 188.9906 - val_loss: 190.7400 - val_mae: 5.9750 - val_mse: 190.7400
Epoch 823/2000
148/148 [=====] - 0s 2ms/step - loss: 188.8626 - mae: 5.7435 - m
se: 188.8626 - val_loss: 190.1737 - val_mae: 5.9548 - val_mse: 190.1737
Epoch 824/2000
148/148 [=====] - 0s 2ms/step - loss: 188.8634 - mae: 5.7211 - m
se: 188.8634 - val_loss: 189.5539 - val_mae: 5.9660 - val_mse: 189.5539
Epoch 825/2000
148/148 [=====] - 0s 2ms/step - loss: 188.7419 - mae: 5.7410 - m
se: 188.7419 - val_loss: 189.1992 - val_mae: 5.9495 - val_mse: 189.1992
Epoch 826/2000
148/148 [=====] - 0s 3ms/step - loss: 188.6986 - mae: 5.7348 - m
se: 188.6986 - val_loss: 190.1300 - val_mae: 5.9533 - val_mse: 190.1300
Epoch 827/2000
148/148 [=====] - 0s 2ms/step - loss: 188.7440 - mae: 5.7184 - m
se: 188.7440 - val_loss: 189.2555 - val_mae: 5.9885 - val_mse: 189.2555
Epoch 828/2000
148/148 [=====] - 0s 2ms/step - loss: 188.5130 - mae: 5.7372 - m
se: 188.5130 - val_loss: 189.0271 - val_mae: 5.9372 - val_mse: 189.0271
Epoch 829/2000
148/148 [=====] - 0s 2ms/step - loss: 188.6597 - mae: 5.7063 - m
se: 188.6597 - val_loss: 190.3508 - val_mae: 5.9679 - val_mse: 190.3508
Epoch 830/2000
148/148 [=====] - 0s 2ms/step - loss: 188.4667 - mae: 5.7338 - m
se: 188.4667 - val_loss: 189.3557 - val_mae: 5.9457 - val_mse: 189.3557
Epoch 831/2000
148/148 [=====] - 0s 2ms/step - loss: 188.4256 - mae: 5.7290 - m
se: 188.4256 - val_loss: 189.1858 - val_mae: 5.9452 - val_mse: 189.1858
Epoch 832/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1529 - mae: 5.7132 - m
se: 188.1529 - val_loss: 191.5431 - val_mae: 6.0237 - val_mse: 191.5431
Epoch 833/2000
148/148 [=====] - 0s 2ms/step - loss: 188.4424 - mae: 5.7489 - m
se: 188.4424 - val_loss: 190.2155 - val_mae: 5.9529 - val_mse: 190.2155
Epoch 834/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1146 - mae: 5.7132 - m
se: 188.1146 - val_loss: 190.7469 - val_mae: 5.9862 - val_mse: 190.7469
Epoch 835/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1787 - mae: 5.7191 - m
se: 188.1787 - val_loss: 190.5295 - val_mae: 5.9901 - val_mse: 190.5295
Epoch 836/2000
148/148 [=====] - 0s 2ms/step - loss: 188.2688 - mae: 5.7234 - m
se: 188.2688 - val_loss: 190.1455 - val_mae: 5.9703 - val_mse: 190.1455
Epoch 837/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1863 - mae: 5.6973 - m
se: 188.1863 - val_loss: 190.3552 - val_mae: 5.9854 - val_mse: 190.3552
Epoch 838/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1487 - mae: 5.7293 - m
se: 188.1487 - val_loss: 189.6397 - val_mae: 5.9473 - val_mse: 189.6397
Epoch 839/2000
148/148 [=====] - 0s 2ms/step - loss: 187.9433 - mae: 5.7157 - m
se: 187.9433 - val_loss: 189.9302 - val_mae: 5.9721 - val_mse: 189.9302
Epoch 840/2000
148/148 [=====] - 0s 2ms/step - loss: 188.1527 - mae: 5.7091 - m
se: 188.1527 - val_loss: 188.7807 - val_mae: 5.9576 - val_mse: 188.7807
Epoch 841/2000
148/148 [=====] - 0s 2ms/step - loss: 188.0742 - mae: 5.7108 - m
se: 188.0742 - val_loss: 189.5432 - val_mae: 5.9396 - val_mse: 189.5432
Epoch 842/2000
148/148 [=====] - 0s 2ms/step - loss: 187.9684 - mae: 5.7146 - m
se: 187.9684 - val_loss: 188.6413 - val_mae: 5.9217 - val_mse: 188.6413
Epoch 843/2000
148/148 [=====] - 0s 2ms/step - loss: 187.9314 - mae: 5.6993 - m
se: 187.9314 - val_loss: 189.1665 - val_mae: 5.9387 - val_mse: 189.1665
Epoch 844/2000
148/148 [=====] - 0s 2ms/step - loss: 187.8344 - mae: 5.7011 - m
se: 187.8344 - val_loss: 188.8954 - val_mae: 5.9530 - val_mse: 188.8954
Epoch 845/2000
148/148 [=====] - 0s 2ms/step - loss: 187.7640 - mae: 5.7103 - m
se: 187.7640 - val_loss: 188.7464 - val_mae: 5.9182 - val_mse: 188.7464
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se: 187.7640 - val_loss: 188.7464 - val_mae: 5.9183 - val_mse: 188.7464
Epoch 846/2000
148/148 [=====] - 0s 2ms/step - loss: 187.7785 - mae: 5.6927 - m
se: 187.7785 - val_loss: 188.5959 - val_mae: 5.9596 - val_mse: 188.5959
Epoch 847/2000
148/148 [=====] - 0s 2ms/step - loss: 187.6546 - mae: 5.6956 - m
se: 187.6546 - val_loss: 189.9713 - val_mae: 5.9632 - val_mse: 189.9713
Epoch 848/2000
148/148 [=====] - 0s 2ms/step - loss: 187.7315 - mae: 5.7041 - m
se: 187.7315 - val_loss: 189.1023 - val_mae: 5.9254 - val_mse: 189.1023
Epoch 849/2000
148/148 [=====] - 0s 2ms/step - loss: 187.6404 - mae: 5.7042 - m
se: 187.6404 - val_loss: 188.5480 - val_mae: 5.9162 - val_mse: 188.5480
Epoch 850/2000
148/148 [=====] - 0s 2ms/step - loss: 187.4830 - mae: 5.7131 - m
se: 187.4830 - val_loss: 187.7215 - val_mae: 5.9389 - val_mse: 187.7215
Epoch 851/2000
148/148 [=====] - 0s 2ms/step - loss: 187.6032 - mae: 5.7024 - m
se: 187.6032 - val_loss: 188.2294 - val_mae: 5.9171 - val_mse: 188.2294
Epoch 852/2000
148/148 [=====] - 0s 3ms/step - loss: 187.4303 - mae: 5.6802 - m
se: 187.4303 - val_loss: 189.1746 - val_mae: 5.9497 - val_mse: 189.1746
Epoch 853/2000
148/148 [=====] - 0s 2ms/step - loss: 187.5149 - mae: 5.7067 - m
se: 187.5149 - val_loss: 188.0976 - val_mae: 5.9382 - val_mse: 188.0976
Epoch 854/2000
148/148 [=====] - 0s 2ms/step - loss: 187.0401 - mae: 5.7184 - m
se: 187.0401 - val_loss: 187.8644 - val_mae: 5.9029 - val_mse: 187.8644
Epoch 855/2000
148/148 [=====] - 0s 2ms/step - loss: 187.3905 - mae: 5.6835 - m
se: 187.3905 - val_loss: 187.9454 - val_mae: 5.9026 - val_mse: 187.9454
Epoch 856/2000
148/148 [=====] - 0s 3ms/step - loss: 187.0697 - mae: 5.6709 - m
se: 187.0697 - val_loss: 189.8007 - val_mae: 5.9744 - val_mse: 189.8007
Epoch 857/2000
148/148 [=====] - 0s 3ms/step - loss: 187.1451 - mae: 5.6969 - m
se: 187.1451 - val_loss: 190.0744 - val_mae: 5.9816 - val_mse: 190.0744
Epoch 858/2000
148/148 [=====] - 0s 2ms/step - loss: 187.1681 - mae: 5.6977 - m
se: 187.1681 - val_loss: 188.0994 - val_mae: 5.9158 - val_mse: 188.0994
Epoch 859/2000
148/148 [=====] - 0s 2ms/step - loss: 186.9897 - mae: 5.6771 - m
se: 186.9897 - val_loss: 188.6243 - val_mae: 5.9422 - val_mse: 188.6243
Epoch 860/2000
148/148 [=====] - 0s 2ms/step - loss: 187.0444 - mae: 5.6899 - m
se: 187.0444 - val_loss: 187.5263 - val_mae: 5.9443 - val_mse: 187.5263
Epoch 861/2000
148/148 [=====] - 0s 3ms/step - loss: 186.9668 - mae: 5.7130 - m
se: 186.9668 - val_loss: 188.6271 - val_mae: 5.9238 - val_mse: 188.6271
Epoch 862/2000
148/148 [=====] - 0s 2ms/step - loss: 186.9204 - mae: 5.6950 - m
se: 186.9204 - val_loss: 187.4452 - val_mae: 5.9050 - val_mse: 187.4452
Epoch 863/2000
148/148 [=====] - 0s 2ms/step - loss: 186.7968 - mae: 5.6829 - m
se: 186.7968 - val_loss: 188.1610 - val_mae: 5.9120 - val_mse: 188.1610
Epoch 864/2000
148/148 [=====] - 0s 3ms/step - loss: 186.8397 - mae: 5.6694 - m
se: 186.8397 - val_loss: 188.8310 - val_mae: 5.9432 - val_mse: 188.8310
Epoch 865/2000
148/148 [=====] - 0s 3ms/step - loss: 186.7749 - mae: 5.6823 - m
se: 186.7749 - val_loss: 189.1156 - val_mae: 5.9617 - val_mse: 189.1156
Epoch 866/2000
148/148 [=====] - 0s 2ms/step - loss: 186.7457 - mae: 5.7014 - m
se: 186.7457 - val_loss: 189.4708 - val_mae: 5.9647 - val_mse: 189.4708
Epoch 867/2000
148/148 [=====] - 0s 2ms/step - loss: 186.6237 - mae: 5.6958 - m
se: 186.6237 - val_loss: 188.8099 - val_mae: 5.9261 - val_mse: 188.8099
Epoch 868/2000
148/148 [=====] - 0s 2ms/step - loss: 186.7541 - mae: 5.6795 - m
se: 186.7541 - val_loss: 187.6062 - val_mae: 5.9022 - val_mse: 187.6062
Epoch 869/2000
148/148 [=====] - 0s 2ms/step - loss: 186.5802 - mae: 5.6803 - m
se: 186.5802 - val_loss: 187.4001 - val_mae: 5.8860 - val_mse: 187.4001
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se: 186.5802 - val_loss: 187.4001 - val_mae: 5.9069 - val_mse: 187.4001
Epoch 870/2000
148/148 [=====] - 0s 2ms/step - loss: 186.4910 - mae: 5.6898 - m
se: 186.4910 - val_loss: 186.6559 - val_mae: 5.9380 - val_mse: 186.6559
Epoch 871/2000
148/148 [=====] - 0s 2ms/step - loss: 186.5959 - mae: 5.6646 - m
se: 186.5959 - val_loss: 186.6933 - val_mae: 5.9160 - val_mse: 186.6933
Epoch 872/2000
148/148 [=====] - 0s 2ms/step - loss: 186.4753 - mae: 5.6806 - m
se: 186.4753 - val_loss: 188.2788 - val_mae: 5.9305 - val_mse: 188.2788
Epoch 873/2000
148/148 [=====] - 0s 2ms/step - loss: 186.3500 - mae: 5.6706 - m
se: 186.3500 - val_loss: 188.1394 - val_mae: 5.9398 - val_mse: 188.1394
Epoch 874/2000
148/148 [=====] - 0s 2ms/step - loss: 186.4348 - mae: 5.6872 - m
se: 186.4348 - val_loss: 187.9763 - val_mae: 5.9073 - val_mse: 187.9763
Epoch 875/2000
148/148 [=====] - 0s 2ms/step - loss: 186.3250 - mae: 5.6662 - m
se: 186.3250 - val_loss: 187.6981 - val_mae: 5.9154 - val_mse: 187.6981
Epoch 876/2000
148/148 [=====] - 0s 2ms/step - loss: 186.3143 - mae: 5.6752 - m
se: 186.3143 - val_loss: 186.9844 - val_mae: 5.9057 - val_mse: 186.9844
Epoch 877/2000
148/148 [=====] - 0s 2ms/step - loss: 186.3305 - mae: 5.6704 - m
se: 186.3305 - val_loss: 186.9969 - val_mae: 5.9076 - val_mse: 186.9969
Epoch 878/2000
148/148 [=====] - 0s 2ms/step - loss: 186.2239 - mae: 5.6704 - m
se: 186.2239 - val_loss: 187.0319 - val_mae: 5.9046 - val_mse: 187.0319
Epoch 879/2000
148/148 [=====] - 0s 2ms/step - loss: 186.0626 - mae: 5.6676 - m
se: 186.0626 - val_loss: 186.4818 - val_mae: 5.8995 - val_mse: 186.4818
Epoch 880/2000
148/148 [=====] - 0s 2ms/step - loss: 186.1908 - mae: 5.6676 - m
se: 186.1908 - val_loss: 187.3016 - val_mae: 5.8969 - val_mse: 187.3016
Epoch 881/2000
148/148 [=====] - 0s 2ms/step - loss: 186.0261 - mae: 5.6643 - m
se: 186.0261 - val_loss: 186.6409 - val_mae: 5.9106 - val_mse: 186.6409
Epoch 882/2000
148/148 [=====] - 0s 2ms/step - loss: 186.0829 - mae: 5.6605 - m
se: 186.0829 - val_loss: 187.4756 - val_mae: 5.9010 - val_mse: 187.4756
Epoch 883/2000
148/148 [=====] - 0s 2ms/step - loss: 186.0901 - mae: 5.6556 - m
se: 186.0901 - val_loss: 186.8716 - val_mae: 5.8880 - val_mse: 186.8716
Epoch 884/2000
148/148 [=====] - 0s 2ms/step - loss: 185.8822 - mae: 5.6503 - m
se: 185.8822 - val_loss: 186.5873 - val_mae: 5.9028 - val_mse: 186.5873
Epoch 885/2000
148/148 [=====] - 0s 2ms/step - loss: 185.9062 - mae: 5.6736 - m
se: 185.9062 - val_loss: 186.7851 - val_mae: 5.8589 - val_mse: 186.7851
Epoch 886/2000
148/148 [=====] - 0s 2ms/step - loss: 185.8672 - mae: 5.6566 - m
se: 185.8672 - val_loss: 187.2933 - val_mae: 5.8874 - val_mse: 187.2933
Epoch 887/2000
148/148 [=====] - 0s 2ms/step - loss: 185.8338 - mae: 5.6599 - m
se: 185.8338 - val_loss: 186.7173 - val_mae: 5.8758 - val_mse: 186.7173
Epoch 888/2000
148/148 [=====] - 0s 2ms/step - loss: 185.8519 - mae: 5.6525 - m
se: 185.8519 - val_loss: 186.5771 - val_mae: 5.8863 - val_mse: 186.5771
Epoch 889/2000
148/148 [=====] - 0s 2ms/step - loss: 185.6347 - mae: 5.6640 - m
se: 185.6347 - val_loss: 187.7946 - val_mae: 5.8986 - val_mse: 187.7946
Epoch 890/2000
148/148 [=====] - 0s 2ms/step - loss: 185.5967 - mae: 5.6541 - m
se: 185.5967 - val_loss: 186.6744 - val_mae: 5.8760 - val_mse: 186.6744
Epoch 891/2000
148/148 [=====] - 0s 2ms/step - loss: 185.5709 - mae: 5.6456 - m
se: 185.5709 - val_loss: 186.8757 - val_mae: 5.9007 - val_mse: 186.8757
Epoch 892/2000
148/148 [=====] - 0s 2ms/step - loss: 185.5805 - mae: 5.6597 - m
se: 185.5805 - val_loss: 186.1047 - val_mae: 5.8600 - val_mse: 186.1047
Epoch 893/2000
148/148 [=====] - 0s 2ms/step - loss: 185.3383 - mae: 5.6593 - m
se: 185.3383 - val_loss: 186.4750 - val_mae: 5.8602 - val_mse: 186.4750
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se: 185.3583 - val_loss: 186.4750 - val_mae: 5.8683 - val_mse: 186.4750
Epoch 894/2000
148/148 [=====] - 0s 2ms/step - loss: 185.4647 - mae: 5.6470 - m
se: 185.4647 - val_loss: 186.7633 - val_mae: 5.8734 - val_mse: 186.7633
Epoch 895/2000
148/148 [=====] - 0s 2ms/step - loss: 185.6042 - mae: 5.6502 - m
se: 185.6042 - val_loss: 186.1486 - val_mae: 5.8592 - val_mse: 186.1486
Epoch 896/2000
148/148 [=====] - 0s 2ms/step - loss: 185.4751 - mae: 5.6404 - m
se: 185.4751 - val_loss: 186.3304 - val_mae: 5.8738 - val_mse: 186.3304
Epoch 897/2000
148/148 [=====] - 0s 2ms/step - loss: 185.2569 - mae: 5.6332 - m
se: 185.2569 - val_loss: 187.1174 - val_mae: 5.9345 - val_mse: 187.1174
Epoch 898/2000
148/148 [=====] - 0s 2ms/step - loss: 185.5899 - mae: 5.6816 - m
se: 185.5899 - val_loss: 186.2341 - val_mae: 5.8499 - val_mse: 186.2341
Epoch 899/2000
148/148 [=====] - 0s 2ms/step - loss: 185.2006 - mae: 5.6242 - m
se: 185.2006 - val_loss: 187.6863 - val_mae: 5.9296 - val_mse: 187.6863
Epoch 900/2000
148/148 [=====] - 0s 2ms/step - loss: 185.3664 - mae: 5.6456 - m
se: 185.3664 - val_loss: 186.8324 - val_mae: 5.8757 - val_mse: 186.8324
Epoch 901/2000
130/148 [=====>....] - ETA: 0s - loss: 184.7883 - mae: 5.6646 - mse:
184.7883
148/148 [=====] - 0s 2ms/step - loss: 185.2164 - mae: 5.6376 - m
se: 185.2164 - val_loss: 186.1200 - val_mae: 5.8749 - val_mse: 186.1200
Epoch 902/2000
148/148 [=====] - 0s 2ms/step - loss: 185.2560 - mae: 5.6419 - m
se: 185.2560 - val_loss: 186.4772 - val_mae: 5.8923 - val_mse: 186.4772
Epoch 903/2000
148/148 [=====] - 0s 2ms/step - loss: 185.0779 - mae: 5.6332 - m
se: 185.0779 - val_loss: 187.3928 - val_mae: 5.9018 - val_mse: 187.3928
Epoch 904/2000
148/148 [=====] - 0s 2ms/step - loss: 185.1901 - mae: 5.6327 - m
se: 185.1901 - val_loss: 185.6663 - val_mae: 5.8617 - val_mse: 185.6663
Epoch 905/2000
148/148 [=====] - 0s 2ms/step - loss: 185.0182 - mae: 5.6298 - m
se: 185.0182 - val_loss: 186.0349 - val_mae: 5.8820 - val_mse: 186.0349
Epoch 906/2000
148/148 [=====] - 0s 2ms/step - loss: 184.8808 - mae: 5.6508 - m
se: 184.8808 - val_loss: 186.4270 - val_mae: 5.8539 - val_mse: 186.4270
Epoch 907/2000
148/148 [=====] - 0s 2ms/step - loss: 184.9195 - mae: 5.6292 - m
se: 184.9195 - val_loss: 185.9693 - val_mae: 5.8442 - val_mse: 185.9693
Epoch 908/2000
148/148 [=====] - 0s 2ms/step - loss: 184.9354 - mae: 5.6262 - m
se: 184.9354 - val_loss: 186.1883 - val_mae: 5.8568 - val_mse: 186.1883
Epoch 909/2000
148/148 [=====] - 0s 2ms/step - loss: 184.8943 - mae: 5.6363 - m
se: 184.8943 - val_loss: 185.6103 - val_mae: 5.8501 - val_mse: 185.6103
Epoch 910/2000
148/148 [=====] - 0s 2ms/step - loss: 184.8890 - mae: 5.6337 - m
se: 184.8890 - val_loss: 186.4568 - val_mae: 5.8665 - val_mse: 186.4568
Epoch 911/2000
148/148 [=====] - 0s 2ms/step - loss: 184.9104 - mae: 5.6332 - m
se: 184.9104 - val_loss: 185.6057 - val_mae: 5.8544 - val_mse: 185.6057
Epoch 912/2000
148/148 [=====] - 0s 2ms/step - loss: 184.8126 - mae: 5.6370 - m
se: 184.8126 - val_loss: 185.9857 - val_mae: 5.8592 - val_mse: 185.9857
Epoch 913/2000
148/148 [=====] - 0s 2ms/step - loss: 184.7412 - mae: 5.6373 - m
se: 184.7412 - val_loss: 185.1403 - val_mae: 5.8596 - val_mse: 185.1403
Epoch 914/2000
148/148 [=====] - 0s 2ms/step - loss: 184.6409 - mae: 5.6264 - m
se: 184.6409 - val_loss: 185.1327 - val_mae: 5.8325 - val_mse: 185.1327
Epoch 915/2000
148/148 [=====] - 0s 2ms/step - loss: 184.5880 - mae: 5.6232 - m
se: 184.5880 - val_loss: 185.6026 - val_mae: 5.8524 - val_mse: 185.6026
Epoch 916/2000
148/148 [=====] - 0s 2ms/step - loss: 184.6008 - mae: 5.6242 - m
se: 184.6008 - val_loss: 185.2325 - val_mae: 5.8595 - val_mse: 185.2325
Epoch 917/2000
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Epoch 917/2000
148/148 [=====] - 0s 2ms/step - loss: 184.5148 - mae: 5.6323 - mse: 184.5148 - val_loss: 185.6124 - val_mae: 5.8507 - val_mse: 185.6124
Epoch 918/2000
148/148 [=====] - 0s 2ms/step - loss: 184.3718 - mae: 5.6211 - mse: 184.3718 - val_loss: 185.7123 - val_mae: 5.8778 - val_mse: 185.7123
Epoch 919/2000
148/148 [=====] - 0s 2ms/step - loss: 184.1471 - mae: 5.6459 - mse: 184.1471 - val_loss: 184.3191 - val_mae: 5.8443 - val_mse: 184.3191
Epoch 920/2000
148/148 [=====] - 0s 2ms/step - loss: 184.3027 - mae: 5.6281 - mse: 184.3027 - val_loss: 184.4899 - val_mae: 5.8399 - val_mse: 184.4899
Epoch 921/2000
148/148 [=====] - 0s 2ms/step - loss: 184.3342 - mae: 5.6022 - mse: 184.3342 - val_loss: 185.5071 - val_mae: 5.9007 - val_mse: 185.5071
Epoch 922/2000
148/148 [=====] - 0s 2ms/step - loss: 184.2918 - mae: 5.6328 - mse: 184.2918 - val_loss: 185.4186 - val_mae: 5.8915 - val_mse: 185.4186
Epoch 923/2000
148/148 [=====] - 0s 2ms/step - loss: 184.3773 - mae: 5.6299 - mse: 184.3773 - val_loss: 184.9711 - val_mae: 5.8502 - val_mse: 184.9711
Epoch 924/2000
148/148 [=====] - 0s 2ms/step - loss: 184.2122 - mae: 5.6348 - mse: 184.2122 - val_loss: 184.4672 - val_mae: 5.8503 - val_mse: 184.4672
Epoch 925/2000
148/148 [=====] - 0s 2ms/step - loss: 184.2933 - mae: 5.6235 - mse: 184.2933 - val_loss: 184.6227 - val_mae: 5.8357 - val_mse: 184.6227
Epoch 926/2000
148/148 [=====] - 0s 3ms/step - loss: 184.1407 - mae: 5.6213 - mse: 184.1407 - val_loss: 184.3609 - val_mae: 5.8518 - val_mse: 184.3609
Epoch 927/2000
148/148 [=====] - 0s 2ms/step - loss: 184.0696 - mae: 5.6163 - mse: 184.0696 - val_loss: 184.3263 - val_mae: 5.8413 - val_mse: 184.3263
Epoch 928/2000
148/148 [=====] - 0s 2ms/step - loss: 184.1301 - mae: 5.6075 - mse: 184.1301 - val_loss: 184.9398 - val_mae: 5.8391 - val_mse: 184.9398
Epoch 929/2000
148/148 [=====] - 0s 2ms/step - loss: 183.8637 - mae: 5.6111 - mse: 183.8637 - val_loss: 185.5777 - val_mae: 5.8597 - val_mse: 185.5777
Epoch 930/2000
148/148 [=====] - 0s 2ms/step - loss: 184.0732 - mae: 5.6253 - mse: 184.0732 - val_loss: 184.3095 - val_mae: 5.8296 - val_mse: 184.3095
Epoch 931/2000
148/148 [=====] - 0s 2ms/step - loss: 183.9988 - mae: 5.6130 - mse: 183.9988 - val_loss: 184.6089 - val_mae: 5.8262 - val_mse: 184.6089
Epoch 932/2000
148/148 [=====] - 0s 2ms/step - loss: 183.6277 - mae: 5.6052 - mse: 183.6277 - val_loss: 186.2202 - val_mae: 5.8995 - val_mse: 186.2202
Epoch 933/2000
148/148 [=====] - 0s 2ms/step - loss: 183.9242 - mae: 5.6187 - mse: 183.9242 - val_loss: 185.9656 - val_mae: 5.8804 - val_mse: 185.9656
Epoch 934/2000
148/148 [=====] - 0s 2ms/step - loss: 183.9021 - mae: 5.6216 - mse: 183.9021 - val_loss: 184.7152 - val_mae: 5.8242 - val_mse: 184.7152
Epoch 935/2000
148/148 [=====] - 0s 2ms/step - loss: 183.5238 - mae: 5.6178 - mse: 183.5238 - val_loss: 183.9400 - val_mae: 5.8132 - val_mse: 183.9400
Epoch 936/2000
148/148 [=====] - 0s 2ms/step - loss: 183.8724 - mae: 5.6099 - mse: 183.8724 - val_loss: 184.7341 - val_mae: 5.8157 - val_mse: 184.7341
Epoch 937/2000
148/148 [=====] - 0s 2ms/step - loss: 183.6111 - mae: 5.5971 - mse: 183.6111 - val_loss: 185.8287 - val_mae: 5.8725 - val_mse: 185.8287
Epoch 938/2000
148/148 [=====] - 0s 2ms/step - loss: 183.7081 - mae: 5.6236 - mse: 183.7081 - val_loss: 184.1885 - val_mae: 5.8215 - val_mse: 184.1885
Epoch 939/2000
148/148 [=====] - 0s 2ms/step - loss: 183.4196 - mae: 5.5947 - mse: 183.4196 - val_loss: 185.2325 - val_mae: 5.8363 - val_mse: 185.2325
Epoch 940/2000
148/148 [=====] - 0s 2ms/step - loss: 183.6174 - mae: 5.6014 - mse: 183.6174 - val_loss: 184.9685 - val_mae: 5.8603 - val_mse: 184.9685
Epoch 941/2000

Epoch 941/2000
148/148 [=====] - 0s 2ms/step - loss: 183.5528 - mae: 5.6218 - mse: 183.5528 - val_loss: 185.6509 - val_mae: 5.8720 - val_mse: 185.6509
Epoch 942/2000
148/148 [=====] - 0s 2ms/step - loss: 183.4307 - mae: 5.6049 - mse: 183.4307 - val_loss: 185.3663 - val_mae: 5.8844 - val_mse: 185.3663
Epoch 943/2000
148/148 [=====] - 0s 2ms/step - loss: 183.6937 - mae: 5.6137 - mse: 183.6937 - val_loss: 184.1388 - val_mae: 5.8472 - val_mse: 184.1388
Epoch 944/2000
148/148 [=====] - 0s 2ms/step - loss: 183.4952 - mae: 5.6085 - mse: 183.4952 - val_loss: 183.7192 - val_mae: 5.8147 - val_mse: 183.7192
Epoch 945/2000
148/148 [=====] - 0s 2ms/step - loss: 183.4627 - mae: 5.6065 - mse: 183.4627 - val_loss: 183.7589 - val_mae: 5.8393 - val_mse: 183.7589
Epoch 946/2000
148/148 [=====] - 0s 2ms/step - loss: 183.1415 - mae: 5.6045 - mse: 183.1415 - val_loss: 183.4094 - val_mae: 5.8042 - val_mse: 183.4094
Epoch 947/2000
148/148 [=====] - 0s 2ms/step - loss: 182.9723 - mae: 5.5926 - mse: 182.9723 - val_loss: 187.2458 - val_mae: 5.9526 - val_mse: 187.2458
Epoch 948/2000
148/148 [=====] - 0s 2ms/step - loss: 183.1753 - mae: 5.6293 - mse: 183.1753 - val_loss: 187.2294 - val_mae: 5.9480 - val_mse: 187.2294
Epoch 949/2000
148/148 [=====] - 0s 2ms/step - loss: 183.1891 - mae: 5.6234 - mse: 183.1891 - val_loss: 184.1109 - val_mae: 5.8130 - val_mse: 184.1109
Epoch 950/2000
148/148 [=====] - 0s 2ms/step - loss: 183.2666 - mae: 5.5938 - mse: 183.2666 - val_loss: 183.7677 - val_mae: 5.8314 - val_mse: 183.7677
Epoch 951/2000
148/148 [=====] - 0s 2ms/step - loss: 183.0713 - mae: 5.5920 - mse: 183.0713 - val_loss: 185.2989 - val_mae: 5.8642 - val_mse: 185.2989
Epoch 952/2000
148/148 [=====] - 0s 2ms/step - loss: 183.0919 - mae: 5.6173 - mse: 183.0919 - val_loss: 183.1661 - val_mae: 5.8117 - val_mse: 183.1661
Epoch 953/2000
148/148 [=====] - 0s 2ms/step - loss: 183.1497 - mae: 5.5945 - mse: 183.1497 - val_loss: 183.7373 - val_mae: 5.7928 - val_mse: 183.7373
Epoch 954/2000
148/148 [=====] - 0s 2ms/step - loss: 182.9351 - mae: 5.5882 - mse: 182.9351 - val_loss: 184.1667 - val_mae: 5.8364 - val_mse: 184.1667
Epoch 955/2000
148/148 [=====] - 0s 2ms/step - loss: 183.0372 - mae: 5.5921 - mse: 183.0372 - val_loss: 183.4473 - val_mae: 5.8103 - val_mse: 183.4473
Epoch 956/2000
148/148 [=====] - 0s 2ms/step - loss: 182.7628 - mae: 5.5956 - mse: 182.7628 - val_loss: 185.0391 - val_mae: 5.8603 - val_mse: 185.0391
Epoch 957/2000
148/148 [=====] - 0s 2ms/step - loss: 182.8965 - mae: 5.6036 - mse: 182.8965 - val_loss: 182.9671 - val_mae: 5.8315 - val_mse: 182.9671
Epoch 958/2000
148/148 [=====] - 0s 3ms/step - loss: 182.8896 - mae: 5.5936 - mse: 182.8896 - val_loss: 183.5181 - val_mae: 5.8022 - val_mse: 183.5181
Epoch 959/2000
148/148 [=====] - 0s 2ms/step - loss: 182.5057 - mae: 5.5958 - mse: 182.5057 - val_loss: 184.4319 - val_mae: 5.8531 - val_mse: 184.4319
Epoch 960/2000
148/148 [=====] - 0s 2ms/step - loss: 182.7859 - mae: 5.5964 - mse: 182.7859 - val_loss: 183.5232 - val_mae: 5.8527 - val_mse: 183.5232
Epoch 961/2000
148/148 [=====] - 0s 2ms/step - loss: 182.7901 - mae: 5.5967 - mse: 182.7901 - val_loss: 183.9414 - val_mae: 5.8276 - val_mse: 183.9414
Epoch 962/2000
148/148 [=====] - 0s 2ms/step - loss: 182.7774 - mae: 5.6050 - mse: 182.7774 - val_loss: 183.4061 - val_mae: 5.7853 - val_mse: 183.4061
Epoch 963/2000
148/148 [=====] - 0s 2ms/step - loss: 182.6071 - mae: 5.5980 - mse: 182.6071 - val_loss: 182.9977 - val_mae: 5.7754 - val_mse: 182.9977
Epoch 964/2000
148/148 [=====] - 0s 2ms/step - loss: 182.6832 - mae: 5.5755 - mse: 182.6832 - val_loss: 183.7116 - val_mae: 5.8152 - val_mse: 183.7116
Epoch 965/2000

Epoch 965/2000
148/148 [=====] - 0s 2ms/step - loss: 182.6169 - mae: 5.5961 - mse: 182.6169 - val_loss: 183.0709 - val_mae: 5.7904 - val_mse: 183.0709
Epoch 966/2000
148/148 [=====] - 0s 2ms/step - loss: 182.6120 - mae: 5.5796 - mse: 182.6120 - val_loss: 183.0749 - val_mae: 5.8208 - val_mse: 183.0749
Epoch 967/2000
148/148 [=====] - 0s 2ms/step - loss: 182.5879 - mae: 5.5932 - mse: 182.5879 - val_loss: 183.3279 - val_mae: 5.7916 - val_mse: 183.3279
Epoch 968/2000
148/148 [=====] - 0s 2ms/step - loss: 182.4413 - mae: 5.5663 - mse: 182.4413 - val_loss: 183.5812 - val_mae: 5.8328 - val_mse: 183.5812
Epoch 969/2000
148/148 [=====] - 0s 2ms/step - loss: 182.5520 - mae: 5.5940 - mse: 182.5520 - val_loss: 183.1470 - val_mae: 5.8070 - val_mse: 183.1470
Epoch 970/2000
148/148 [=====] - 0s 2ms/step - loss: 182.3674 - mae: 5.5745 - mse: 182.3674 - val_loss: 183.8479 - val_mae: 5.8167 - val_mse: 183.8479
Epoch 971/2000
148/148 [=====] - 0s 2ms/step - loss: 182.4619 - mae: 5.5919 - mse: 182.4619 - val_loss: 182.5735 - val_mae: 5.8236 - val_mse: 182.5735
Epoch 972/2000
148/148 [=====] - 0s 2ms/step - loss: 182.4502 - mae: 5.5886 - mse: 182.4502 - val_loss: 182.3041 - val_mae: 5.8121 - val_mse: 182.3041
Epoch 973/2000
148/148 [=====] - 0s 3ms/step - loss: 182.1897 - mae: 5.5842 - mse: 182.1897 - val_loss: 182.2035 - val_mae: 5.7847 - val_mse: 182.2035
Epoch 974/2000
148/148 [=====] - 0s 3ms/step - loss: 181.9778 - mae: 5.5854 - mse: 181.9778 - val_loss: 183.9030 - val_mae: 5.8378 - val_mse: 183.9030
Epoch 975/2000
148/148 [=====] - 0s 2ms/step - loss: 182.4177 - mae: 5.5826 - mse: 182.4177 - val_loss: 183.1762 - val_mae: 5.8109 - val_mse: 183.1762
Epoch 976/2000
148/148 [=====] - 0s 2ms/step - loss: 182.1693 - mae: 5.5865 - mse: 182.1693 - val_loss: 182.1953 - val_mae: 5.8393 - val_mse: 182.1953
Epoch 977/2000
148/148 [=====] - 0s 3ms/step - loss: 182.1895 - mae: 5.5771 - mse: 182.1895 - val_loss: 183.0394 - val_mae: 5.8129 - val_mse: 183.0394
Epoch 978/2000
148/148 [=====] - 0s 2ms/step - loss: 182.2290 - mae: 5.5791 - mse: 182.2290 - val_loss: 182.5630 - val_mae: 5.8211 - val_mse: 182.5630
Epoch 979/2000
148/148 [=====] - 0s 3ms/step - loss: 182.2239 - mae: 5.5768 - mse: 182.2239 - val_loss: 182.2058 - val_mae: 5.7883 - val_mse: 182.2058
Epoch 980/2000
148/148 [=====] - 0s 2ms/step - loss: 182.1183 - mae: 5.5797 - mse: 182.1183 - val_loss: 182.2180 - val_mae: 5.7784 - val_mse: 182.2180
Epoch 981/2000
148/148 [=====] - 0s 3ms/step - loss: 182.0465 - mae: 5.5653 - mse: 182.0465 - val_loss: 182.9692 - val_mae: 5.8089 - val_mse: 182.9692
Epoch 982/2000
148/148 [=====] - 0s 3ms/step - loss: 182.0147 - mae: 5.5810 - mse: 182.0147 - val_loss: 182.2290 - val_mae: 5.7795 - val_mse: 182.2290
Epoch 983/2000
148/148 [=====] - 0s 2ms/step - loss: 182.1135 - mae: 5.5702 - mse: 182.1135 - val_loss: 182.1569 - val_mae: 5.7797 - val_mse: 182.1569
Epoch 984/2000
148/148 [=====] - 0s 3ms/step - loss: 181.9982 - mae: 5.5743 - mse: 181.9982 - val_loss: 181.8377 - val_mae: 5.7606 - val_mse: 181.8377
Epoch 985/2000
148/148 [=====] - 0s 2ms/step - loss: 181.9991 - mae: 5.5651 - mse: 181.9991 - val_loss: 182.4544 - val_mae: 5.7877 - val_mse: 182.4544
Epoch 986/2000
148/148 [=====] - 0s 2ms/step - loss: 181.9381 - mae: 5.5775 - mse: 181.9381 - val_loss: 183.0750 - val_mae: 5.7949 - val_mse: 183.0750
Epoch 987/2000
148/148 [=====] - 0s 3ms/step - loss: 181.8121 - mae: 5.5610 - mse: 181.8121 - val_loss: 182.6105 - val_mae: 5.8179 - val_mse: 182.6105
Epoch 988/2000
148/148 [=====] - 0s 2ms/step - loss: 181.7980 - mae: 5.5774 - mse: 181.7980 - val_loss: 182.7191 - val_mae: 5.8100 - val_mse: 182.7191
Epoch 989/2000

Epoch 989/2000
148/148 [=====] - 0s 2ms/step - loss: 181.8111 - mae: 5.5824 - mse: 181.8111 - val_loss: 181.8044 - val_mae: 5.7799 - val_mse: 181.8044
Epoch 990/2000
148/148 [=====] - 0s 3ms/step - loss: 181.8629 - mae: 5.5609 - mse: 181.8629 - val_loss: 181.9926 - val_mae: 5.7802 - val_mse: 181.9926
Epoch 991/2000
148/148 [=====] - 0s 2ms/step - loss: 181.8522 - mae: 5.5636 - mse: 181.8522 - val_loss: 182.5005 - val_mae: 5.7824 - val_mse: 182.5005
Epoch 992/2000
148/148 [=====] - 0s 2ms/step - loss: 181.6183 - mae: 5.5539 - mse: 181.6183 - val_loss: 183.2015 - val_mae: 5.8232 - val_mse: 183.2015
Epoch 993/2000
148/148 [=====] - 0s 3ms/step - loss: 181.5107 - mae: 5.5770 - mse: 181.5107 - val_loss: 181.9404 - val_mae: 5.7624 - val_mse: 181.9404
Epoch 994/2000
148/148 [=====] - 0s 2ms/step - loss: 181.6424 - mae: 5.5601 - mse: 181.6424 - val_loss: 182.1507 - val_mae: 5.7735 - val_mse: 182.1507
Epoch 995/2000
148/148 [=====] - 0s 2ms/step - loss: 181.5494 - mae: 5.5480 - mse: 181.5494 - val_loss: 183.2770 - val_mae: 5.8371 - val_mse: 183.2770
Epoch 996/2000
148/148 [=====] - 0s 2ms/step - loss: 181.6523 - mae: 5.5924 - mse: 181.6523 - val_loss: 181.8994 - val_mae: 5.7581 - val_mse: 181.8994
Epoch 997/2000
148/148 [=====] - 0s 2ms/step - loss: 181.5939 - mae: 5.5486 - mse: 181.5939 - val_loss: 181.8731 - val_mae: 5.7774 - val_mse: 181.8731
Epoch 998/2000
148/148 [=====] - 0s 2ms/step - loss: 181.5820 - mae: 5.5529 - mse: 181.5820 - val_loss: 182.1617 - val_mae: 5.8063 - val_mse: 182.1617
Epoch 999/2000
148/148 [=====] - 0s 2ms/step - loss: 181.3638 - mae: 5.5611 - mse: 181.3638 - val_loss: 183.4538 - val_mae: 5.8386 - val_mse: 183.4538
Epoch 1000/2000
148/148 [=====] - 0s 2ms/step - loss: 181.5798 - mae: 5.5702 - mse: 181.5798 - val_loss: 181.7398 - val_mae: 5.7770 - val_mse: 181.7398
Epoch 1001/2000
122/148 [=====>.....] - ETA: 0s - loss: 178.3920 - mae: 5.5040 - mse: 178.3920
148/148 [=====] - 0s 2ms/step - loss: 181.6212 - mae: 5.5584 - mse: 181.6212 - val_loss: 181.7683 - val_mae: 5.7799 - val_mse: 181.7683
Epoch 1002/2000
148/148 [=====] - 0s 2ms/step - loss: 181.0864 - mae: 5.5581 - mse: 181.0864 - val_loss: 182.9778 - val_mae: 5.8403 - val_mse: 182.9778
Epoch 1003/2000
148/148 [=====] - 0s 2ms/step - loss: 181.3734 - mae: 5.5885 - mse: 181.3734 - val_loss: 181.5679 - val_mae: 5.7529 - val_mse: 181.5679
Epoch 1004/2000
148/148 [=====] - 0s 2ms/step - loss: 181.3360 - mae: 5.5701 - mse: 181.3360 - val_loss: 181.5380 - val_mae: 5.7898 - val_mse: 181.5380
Epoch 1005/2000
148/148 [=====] - 0s 2ms/step - loss: 181.4947 - mae: 5.5468 - mse: 181.4947 - val_loss: 181.5894 - val_mae: 5.7579 - val_mse: 181.5894
Epoch 1006/2000
148/148 [=====] - 0s 2ms/step - loss: 181.1423 - mae: 5.5478 - mse: 181.1423 - val_loss: 182.8051 - val_mae: 5.8167 - val_mse: 182.8051
Epoch 1007/2000
148/148 [=====] - 0s 2ms/step - loss: 181.2785 - mae: 5.5538 - mse: 181.2785 - val_loss: 182.2744 - val_mae: 5.8090 - val_mse: 182.2744
Epoch 1008/2000
148/148 [=====] - 0s 2ms/step - loss: 181.3323 - mae: 5.5585 - mse: 181.3323 - val_loss: 182.0585 - val_mae: 5.7845 - val_mse: 182.0585
Epoch 1009/2000
148/148 [=====] - 0s 2ms/step - loss: 181.2094 - mae: 5.5397 - mse: 181.2094 - val_loss: 181.8934 - val_mae: 5.8201 - val_mse: 181.8934
Epoch 1010/2000
148/148 [=====] - 0s 2ms/step - loss: 181.1218 - mae: 5.5753 - mse: 181.1218 - val_loss: 181.5852 - val_mae: 5.7606 - val_mse: 181.5852
Epoch 1011/2000
148/148 [=====] - 0s 2ms/step - loss: 181.1592 - mae: 5.5445 - mse: 181.1592 - val_loss: 181.3570 - val_mae: 5.7728 - val_mse: 181.3570
Epoch 1012/2000
148/148 [=====] - 0s 2ms/step - loss: 181.1024 - mae: 5.5514 - mse: 181.1024 - val_loss: 181.3570 - val_mae: 5.7728 - val_mse: 181.3570

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148/148 [=====] - 0s 2ms/step - loss: 181.1024 - mae: 5.5314 - m
se: 181.1024 - val_loss: 181.5520 - val_mae: 5.7690 - val_mse: 181.5520
Epoch 1013/2000
148/148 [=====] - 0s 2ms/step - loss: 181.0753 - mae: 5.5533 - m
se: 181.0753 - val_loss: 181.3425 - val_mae: 5.7561 - val_mse: 181.3425
Epoch 1014/2000
148/148 [=====] - 0s 2ms/step - loss: 180.9993 - mae: 5.5463 - m
se: 180.9993 - val_loss: 182.5816 - val_mae: 5.8069 - val_mse: 182.5816
Epoch 1015/2000
148/148 [=====] - 0s 2ms/step - loss: 181.0414 - mae: 5.5529 - m
se: 181.0414 - val_loss: 182.1889 - val_mae: 5.7908 - val_mse: 182.1889
Epoch 1016/2000
148/148 [=====] - 0s 2ms/step - loss: 181.0161 - mae: 5.5454 - m
se: 181.0161 - val_loss: 181.5532 - val_mae: 5.7935 - val_mse: 181.5532
Epoch 1017/2000
148/148 [=====] - 0s 2ms/step - loss: 180.9054 - mae: 5.5603 - m
se: 180.9054 - val_loss: 181.3461 - val_mae: 5.7819 - val_mse: 181.3461
Epoch 1018/2000
148/148 [=====] - 0s 2ms/step - loss: 180.8031 - mae: 5.5575 - m
se: 180.8031 - val_loss: 181.7236 - val_mae: 5.7769 - val_mse: 181.7236
Epoch 1019/2000
148/148 [=====] - 0s 2ms/step - loss: 180.8217 - mae: 5.5525 - m
se: 180.8217 - val_loss: 180.5939 - val_mae: 5.7362 - val_mse: 180.5939
Epoch 1020/2000
148/148 [=====] - 0s 2ms/step - loss: 180.9008 - mae: 5.5417 - m
se: 180.9008 - val_loss: 181.5583 - val_mae: 5.7881 - val_mse: 181.5583
Epoch 1021/2000
148/148 [=====] - 0s 2ms/step - loss: 180.7950 - mae: 5.5574 - m
se: 180.7950 - val_loss: 181.7125 - val_mae: 5.7924 - val_mse: 181.7125
Epoch 1022/2000
148/148 [=====] - 0s 2ms/step - loss: 180.6924 - mae: 5.5624 - m
se: 180.6924 - val_loss: 181.4318 - val_mae: 5.7843 - val_mse: 181.4318
Epoch 1023/2000
148/148 [=====] - 0s 2ms/step - loss: 180.3699 - mae: 5.5441 - m
se: 180.3699 - val_loss: 183.5438 - val_mae: 5.8688 - val_mse: 183.5438
Epoch 1024/2000
148/148 [=====] - 0s 2ms/step - loss: 180.7194 - mae: 5.5560 - m
se: 180.7194 - val_loss: 182.7649 - val_mae: 5.8259 - val_mse: 182.7649
Epoch 1025/2000
148/148 [=====] - 0s 2ms/step - loss: 180.7538 - mae: 5.5512 - m
se: 180.7538 - val_loss: 182.0826 - val_mae: 5.7975 - val_mse: 182.0826
Epoch 1026/2000
148/148 [=====] - 0s 2ms/step - loss: 180.7291 - mae: 5.5590 - m
se: 180.7291 - val_loss: 181.2466 - val_mae: 5.7916 - val_mse: 181.2466
Epoch 1027/2000
148/148 [=====] - 0s 3ms/step - loss: 180.7459 - mae: 5.5473 - m
se: 180.7459 - val_loss: 181.5264 - val_mae: 5.8067 - val_mse: 181.5264
Epoch 1028/2000
148/148 [=====] - 0s 2ms/step - loss: 180.6176 - mae: 5.5617 - m
se: 180.6176 - val_loss: 181.9021 - val_mae: 5.7841 - val_mse: 181.9021
Epoch 1029/2000
148/148 [=====] - 0s 2ms/step - loss: 180.7030 - mae: 5.5446 - m
se: 180.7030 - val_loss: 181.5043 - val_mae: 5.7614 - val_mse: 181.5043
Epoch 1030/2000
148/148 [=====] - 0s 2ms/step - loss: 180.5793 - mae: 5.5359 - m
se: 180.5793 - val_loss: 180.6875 - val_mae: 5.7546 - val_mse: 180.6875
Epoch 1031/2000
148/148 [=====] - 0s 2ms/step - loss: 180.4921 - mae: 5.5286 - m
se: 180.4921 - val_loss: 180.6317 - val_mae: 5.7253 - val_mse: 180.6317
Epoch 1032/2000
148/148 [=====] - 0s 2ms/step - loss: 180.3134 - mae: 5.5259 - m
se: 180.3134 - val_loss: 181.0538 - val_mae: 5.7739 - val_mse: 181.0538
Epoch 1033/2000
148/148 [=====] - 0s 2ms/step - loss: 180.3734 - mae: 5.5471 - m
se: 180.3734 - val_loss: 180.3209 - val_mae: 5.7733 - val_mse: 180.3209
Epoch 1034/2000
148/148 [=====] - 0s 2ms/step - loss: 180.3699 - mae: 5.5531 - m
se: 180.3699 - val_loss: 181.0950 - val_mae: 5.7641 - val_mse: 181.0950
Epoch 1035/2000
148/148 [=====] - 0s 2ms/step - loss: 180.2806 - mae: 5.5479 - m
se: 180.2806 - val_loss: 180.3120 - val_mae: 5.7564 - val_mse: 180.3120
Epoch 1036/2000
148/148 [=====] - 0s 2ms/step - loss: 180.1140 - mae: 5.5403 - m
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148/148 [=====] - 0s 2ms/step - loss: 180.1148 - mae: 5.5403 - m
se: 180.1148 - val_loss: 181.0581 - val_mae: 5.7593 - val_mse: 181.0581
Epoch 1037/2000
148/148 [=====] - 0s 2ms/step - loss: 180.2636 - mae: 5.5287 - m
se: 180.2636 - val_loss: 181.3558 - val_mae: 5.7917 - val_mse: 181.3558
Epoch 1038/2000
148/148 [=====] - 0s 2ms/step - loss: 180.3344 - mae: 5.5446 - m
se: 180.3344 - val_loss: 180.8025 - val_mae: 5.7594 - val_mse: 180.8025
Epoch 1039/2000
148/148 [=====] - 0s 2ms/step - loss: 180.1853 - mae: 5.5299 - m
se: 180.1853 - val_loss: 181.6225 - val_mae: 5.7952 - val_mse: 181.6225
Epoch 1040/2000
148/148 [=====] - 0s 2ms/step - loss: 180.2992 - mae: 5.5551 - m
se: 180.2992 - val_loss: 180.2361 - val_mae: 5.7256 - val_mse: 180.2361
Epoch 1041/2000
148/148 [=====] - 0s 2ms/step - loss: 180.1183 - mae: 5.5280 - m
se: 180.1183 - val_loss: 180.4883 - val_mae: 5.7506 - val_mse: 180.4883
Epoch 1042/2000
148/148 [=====] - 0s 2ms/step - loss: 180.0708 - mae: 5.5335 - m
se: 180.0708 - val_loss: 181.4084 - val_mae: 5.7918 - val_mse: 181.4084
Epoch 1043/2000
148/148 [=====] - 0s 2ms/step - loss: 180.0003 - mae: 5.5307 - m
se: 180.0003 - val_loss: 181.0965 - val_mae: 5.7803 - val_mse: 181.0965
Epoch 1044/2000
148/148 [=====] - 0s 3ms/step - loss: 179.9638 - mae: 5.5494 - m
se: 179.9638 - val_loss: 179.8961 - val_mae: 5.7404 - val_mse: 179.8961
Epoch 1045/2000
148/148 [=====] - 0s 2ms/step - loss: 180.0088 - mae: 5.5229 - m
se: 180.0088 - val_loss: 180.3387 - val_mae: 5.7656 - val_mse: 180.3387
Epoch 1046/2000
148/148 [=====] - 0s 2ms/step - loss: 179.7918 - mae: 5.5380 - m
se: 179.7918 - val_loss: 181.8398 - val_mae: 5.8159 - val_mse: 181.8398
Epoch 1047/2000
148/148 [=====] - 0s 2ms/step - loss: 179.9439 - mae: 5.5550 - m
se: 179.9439 - val_loss: 179.9281 - val_mae: 5.7679 - val_mse: 179.9281
Epoch 1048/2000
148/148 [=====] - 0s 3ms/step - loss: 179.9142 - mae: 5.5267 - m
se: 179.9142 - val_loss: 181.0702 - val_mae: 5.8158 - val_mse: 181.0702
Epoch 1049/2000
148/148 [=====] - 0s 2ms/step - loss: 179.9730 - mae: 5.5334 - m
se: 179.9730 - val_loss: 180.4922 - val_mae: 5.8001 - val_mse: 180.4922
Epoch 1050/2000
148/148 [=====] - 0s 3ms/step - loss: 179.7849 - mae: 5.5246 - m
se: 179.7849 - val_loss: 181.3002 - val_mae: 5.8097 - val_mse: 181.3002
Epoch 1051/2000
148/148 [=====] - 0s 2ms/step - loss: 179.6848 - mae: 5.5452 - m
se: 179.6848 - val_loss: 179.7101 - val_mae: 5.7664 - val_mse: 179.7101
Epoch 1052/2000
148/148 [=====] - 0s 3ms/step - loss: 179.7509 - mae: 5.5405 - m
se: 179.7509 - val_loss: 180.1639 - val_mae: 5.7212 - val_mse: 180.1639
Epoch 1053/2000
148/148 [=====] - 0s 2ms/step - loss: 179.6096 - mae: 5.4997 - m
se: 179.6096 - val_loss: 181.9980 - val_mae: 5.8263 - val_mse: 181.9980
Epoch 1054/2000
148/148 [=====] - 0s 2ms/step - loss: 179.6585 - mae: 5.5434 - m
se: 179.6585 - val_loss: 179.6120 - val_mae: 5.7381 - val_mse: 179.6120
Epoch 1055/2000
148/148 [=====] - 0s 2ms/step - loss: 179.8028 - mae: 5.5138 - m
se: 179.8028 - val_loss: 180.7904 - val_mae: 5.7585 - val_mse: 180.7904
Epoch 1056/2000
148/148 [=====] - 0s 3ms/step - loss: 179.7991 - mae: 5.5315 - m
se: 179.7991 - val_loss: 181.0614 - val_mae: 5.7703 - val_mse: 181.0614
Epoch 1057/2000
148/148 [=====] - 0s 2ms/step - loss: 179.4116 - mae: 5.5511 - m
se: 179.4116 - val_loss: 179.7202 - val_mae: 5.7110 - val_mse: 179.7202
Epoch 1058/2000
148/148 [=====] - 0s 2ms/step - loss: 179.6350 - mae: 5.5250 - m
se: 179.6350 - val_loss: 179.5407 - val_mae: 5.7204 - val_mse: 179.5407
Epoch 1059/2000
148/148 [=====] - 0s 2ms/step - loss: 179.6118 - mae: 5.5143 - m
se: 179.6118 - val_loss: 179.6492 - val_mae: 5.7511 - val_mse: 179.6492
Epoch 1060/2000
148/148 [=====] - 0s 2ms/step - loss: 179.5075 - mae: 5.5320 - m
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148/148 [=====] - 0s 2ms/step - loss: 179.5975 - mae: 5.5330 - m
se: 179.5975 - val_loss: 180.0240 - val_mae: 5.7608 - val_mse: 180.0240
Epoch 1061/2000
148/148 [=====] - 0s 2ms/step - loss: 179.5248 - mae: 5.5252 - m
se: 179.5248 - val_loss: 180.1282 - val_mae: 5.7436 - val_mse: 180.1282
Epoch 1062/2000
148/148 [=====] - 0s 2ms/step - loss: 179.3680 - mae: 5.5184 - m
se: 179.3680 - val_loss: 180.9203 - val_mae: 5.7874 - val_mse: 180.9203
Epoch 1063/2000
148/148 [=====] - 0s 2ms/step - loss: 179.4940 - mae: 5.5249 - m
se: 179.4940 - val_loss: 180.9091 - val_mae: 5.7719 - val_mse: 180.9091
Epoch 1064/2000
148/148 [=====] - 0s 2ms/step - loss: 179.4234 - mae: 5.5260 - m
se: 179.4234 - val_loss: 180.3767 - val_mae: 5.7597 - val_mse: 180.3767
Epoch 1065/2000
148/148 [=====] - 0s 2ms/step - loss: 179.3348 - mae: 5.5153 - m
se: 179.3348 - val_loss: 180.6489 - val_mae: 5.7605 - val_mse: 180.6489
Epoch 1066/2000
148/148 [=====] - 0s 2ms/step - loss: 179.1576 - mae: 5.5132 - m
se: 179.1576 - val_loss: 182.0851 - val_mae: 5.8266 - val_mse: 182.0851
Epoch 1067/2000
148/148 [=====] - 0s 2ms/step - loss: 179.2395 - mae: 5.5220 - m
se: 179.2395 - val_loss: 181.5627 - val_mae: 5.7994 - val_mse: 181.5627
Epoch 1068/2000
148/148 [=====] - 0s 2ms/step - loss: 179.1761 - mae: 5.5327 - m
se: 179.1761 - val_loss: 179.5853 - val_mae: 5.7719 - val_mse: 179.5853
Epoch 1069/2000
148/148 [=====] - 0s 2ms/step - loss: 179.3118 - mae: 5.5216 - m
se: 179.3118 - val_loss: 179.8052 - val_mae: 5.7349 - val_mse: 179.8052
Epoch 1070/2000
148/148 [=====] - 0s 2ms/step - loss: 179.1094 - mae: 5.5084 - m
se: 179.1094 - val_loss: 179.8825 - val_mae: 5.7594 - val_mse: 179.8825
Epoch 1071/2000
148/148 [=====] - 0s 2ms/step - loss: 178.7993 - mae: 5.5236 - m
se: 178.7993 - val_loss: 180.2455 - val_mae: 5.7635 - val_mse: 180.2455
Epoch 1072/2000
148/148 [=====] - 0s 2ms/step - loss: 178.7730 - mae: 5.5102 - m
se: 178.7730 - val_loss: 182.8357 - val_mae: 5.8596 - val_mse: 182.8357
Epoch 1073/2000
148/148 [=====] - 0s 2ms/step - loss: 179.0185 - mae: 5.5476 - m
se: 179.0185 - val_loss: 179.7099 - val_mae: 5.7505 - val_mse: 179.7099
Epoch 1074/2000
148/148 [=====] - 0s 2ms/step - loss: 178.8854 - mae: 5.5061 - m
se: 178.8854 - val_loss: 180.7353 - val_mae: 5.7921 - val_mse: 180.7353
Epoch 1075/2000
148/148 [=====] - 0s 2ms/step - loss: 178.8799 - mae: 5.5269 - m
se: 178.8799 - val_loss: 179.5117 - val_mae: 5.7598 - val_mse: 179.5117
Epoch 1076/2000
148/148 [=====] - 0s 2ms/step - loss: 178.6517 - mae: 5.5106 - m
se: 178.6517 - val_loss: 180.2088 - val_mae: 5.7616 - val_mse: 180.2088
Epoch 1077/2000
148/148 [=====] - 0s 3ms/step - loss: 178.6204 - mae: 5.5135 - m
se: 178.6204 - val_loss: 179.6958 - val_mae: 5.7525 - val_mse: 179.6958
Epoch 1078/2000
148/148 [=====] - 0s 2ms/step - loss: 178.7209 - mae: 5.5147 - m
se: 178.7209 - val_loss: 179.8819 - val_mae: 5.7707 - val_mse: 179.8819
Epoch 1079/2000
148/148 [=====] - 0s 2ms/step - loss: 178.4866 - mae: 5.5173 - m
se: 178.4866 - val_loss: 180.6781 - val_mae: 5.8071 - val_mse: 180.6781
Epoch 1080/2000
148/148 [=====] - 0s 2ms/step - loss: 178.3857 - mae: 5.5226 - m
se: 178.3857 - val_loss: 180.4127 - val_mae: 5.7661 - val_mse: 180.4127
Epoch 1081/2000
148/148 [=====] - 0s 2ms/step - loss: 178.3502 - mae: 5.5178 - m
se: 178.3502 - val_loss: 180.3672 - val_mae: 5.7876 - val_mse: 180.3672
Epoch 1082/2000
148/148 [=====] - 0s 2ms/step - loss: 178.3588 - mae: 5.5151 - m
se: 178.3588 - val_loss: 179.4928 - val_mae: 5.7534 - val_mse: 179.4928
Epoch 1083/2000
148/148 [=====] - 0s 3ms/step - loss: 178.2081 - mae: 5.5039 - m
se: 178.2081 - val_loss: 179.1371 - val_mae: 5.8265 - val_mse: 179.1371
Epoch 1084/2000
148/148 [=====] - 0s 2ms/step - loss: 178.0220 - mae: 5.5120 - m
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148/148 [=====] - 0s 2ms/step - loss: 178.0226 - mae: 5.5130 - m
se: 178.0226 - val_loss: 180.3953 - val_mae: 5.7932 - val_mse: 180.3953
Epoch 1085/2000
148/148 [=====] - 0s 2ms/step - loss: 178.0887 - mae: 5.5323 - m
se: 178.0887 - val_loss: 179.2861 - val_mae: 5.7591 - val_mse: 179.2861
Epoch 1086/2000
148/148 [=====] - 0s 2ms/step - loss: 178.1464 - mae: 5.5116 - m
se: 178.1464 - val_loss: 179.7105 - val_mae: 5.7836 - val_mse: 179.7105
Epoch 1087/2000
148/148 [=====] - 0s 2ms/step - loss: 178.0302 - mae: 5.5060 - m
se: 178.0302 - val_loss: 179.7693 - val_mae: 5.7585 - val_mse: 179.7693
Epoch 1088/2000
148/148 [=====] - 0s 2ms/step - loss: 177.9591 - mae: 5.5070 - m
se: 177.9591 - val_loss: 179.8263 - val_mae: 5.7654 - val_mse: 179.8263
Epoch 1089/2000
148/148 [=====] - 0s 2ms/step - loss: 177.6993 - mae: 5.5268 - m
se: 177.6993 - val_loss: 178.8230 - val_mae: 5.7720 - val_mse: 178.8230
Epoch 1090/2000
148/148 [=====] - 0s 2ms/step - loss: 177.7808 - mae: 5.4949 - m
se: 177.7808 - val_loss: 179.7531 - val_mae: 5.7659 - val_mse: 179.7531
Epoch 1091/2000
148/148 [=====] - 0s 2ms/step - loss: 177.5358 - mae: 5.5381 - m
se: 177.5358 - val_loss: 178.7558 - val_mae: 5.7388 - val_mse: 178.7558
Epoch 1092/2000
148/148 [=====] - 0s 2ms/step - loss: 177.6422 - mae: 5.4911 - m
se: 177.6422 - val_loss: 178.6891 - val_mae: 5.8334 - val_mse: 178.6891
Epoch 1093/2000
148/148 [=====] - 0s 2ms/step - loss: 177.6736 - mae: 5.5232 - m
se: 177.6736 - val_loss: 179.0280 - val_mae: 5.7714 - val_mse: 179.0280
Epoch 1094/2000
148/148 [=====] - 0s 2ms/step - loss: 177.3658 - mae: 5.5188 - m
se: 177.3658 - val_loss: 178.9962 - val_mae: 5.7906 - val_mse: 178.9962
Epoch 1095/2000
148/148 [=====] - 0s 2ms/step - loss: 177.4391 - mae: 5.5282 - m
se: 177.4391 - val_loss: 178.7711 - val_mae: 5.7640 - val_mse: 178.7711
Epoch 1096/2000
148/148 [=====] - 0s 2ms/step - loss: 177.3206 - mae: 5.5168 - m
se: 177.3206 - val_loss: 178.2474 - val_mae: 5.7753 - val_mse: 178.2474
Epoch 1097/2000
148/148 [=====] - 0s 2ms/step - loss: 177.3876 - mae: 5.5142 - m
se: 177.3876 - val_loss: 178.5758 - val_mae: 5.7473 - val_mse: 178.5758
Epoch 1098/2000
148/148 [=====] - 0s 2ms/step - loss: 177.3346 - mae: 5.5066 - m
se: 177.3346 - val_loss: 178.9305 - val_mae: 5.7593 - val_mse: 178.9305
Epoch 1099/2000
148/148 [=====] - 0s 2ms/step - loss: 177.3106 - mae: 5.5169 - m
se: 177.3106 - val_loss: 178.6390 - val_mae: 5.7482 - val_mse: 178.6390
Epoch 1100/2000
148/148 [=====] - 0s 2ms/step - loss: 177.1768 - mae: 5.5144 - m
se: 177.1768 - val_loss: 179.3145 - val_mae: 5.7777 - val_mse: 179.3145
Epoch 1101/2000
141/148 [=====>..] - ETA: 0s - loss: 173.1532 - mae: 5.4696 - mse:
173.1532
148/148 [=====] - 0s 2ms/step - loss: 176.9599 - mae: 5.5143 - m
se: 176.9599 - val_loss: 180.6212 - val_mae: 5.8502 - val_mse: 180.6212
Epoch 1102/2000
148/148 [=====] - 0s 2ms/step - loss: 177.1411 - mae: 5.5222 - m
se: 177.1411 - val_loss: 178.7881 - val_mae: 5.7716 - val_mse: 178.7881
Epoch 1103/2000
148/148 [=====] - 0s 2ms/step - loss: 177.0316 - mae: 5.5052 - m
se: 177.0316 - val_loss: 178.9665 - val_mae: 5.7886 - val_mse: 178.9665
Epoch 1104/2000
148/148 [=====] - 0s 2ms/step - loss: 176.8996 - mae: 5.5386 - m
se: 176.8996 - val_loss: 178.1168 - val_mae: 5.7555 - val_mse: 178.1168
Epoch 1105/2000
148/148 [=====] - 0s 2ms/step - loss: 176.9557 - mae: 5.5013 - m
se: 176.9557 - val_loss: 178.4656 - val_mae: 5.7601 - val_mse: 178.4656
Epoch 1106/2000
148/148 [=====] - 0s 2ms/step - loss: 176.7999 - mae: 5.5106 - m
se: 176.7999 - val_loss: 180.0938 - val_mae: 5.8160 - val_mse: 180.0938
Epoch 1107/2000
148/148 [=====] - 0s 2ms/step - loss: 176.9128 - mae: 5.5152 - m
se: 176.9128 - val_loss: 179.5420 - val_mae: 5.8021 - val_mse: 179.5420
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se: 176.9128 - val_loss: 179.5429 - val_mae: 5.8031 - val_mse: 179.5429
Epoch 1108/2000
148/148 [=====] - 0s 2ms/step - loss: 176.9320 - mae: 5.5228 - m
se: 176.9320 - val_loss: 178.5214 - val_mae: 5.7895 - val_mse: 178.5214
Epoch 1109/2000
148/148 [=====] - 0s 2ms/step - loss: 176.6568 - mae: 5.5174 - m
se: 176.6568 - val_loss: 177.8188 - val_mae: 5.7664 - val_mse: 177.8188
Epoch 1110/2000
148/148 [=====] - 0s 2ms/step - loss: 176.6772 - mae: 5.5120 - m
se: 176.6772 - val_loss: 178.2242 - val_mae: 5.7381 - val_mse: 178.2242
Epoch 1111/2000
148/148 [=====] - 0s 2ms/step - loss: 176.5370 - mae: 5.4999 - m
se: 176.5370 - val_loss: 178.8647 - val_mae: 5.8175 - val_mse: 178.8647
Epoch 1112/2000
148/148 [=====] - 0s 2ms/step - loss: 176.5652 - mae: 5.5204 - m
se: 176.5652 - val_loss: 178.5256 - val_mae: 5.7785 - val_mse: 178.5256
Epoch 1113/2000
148/148 [=====] - 0s 2ms/step - loss: 176.3898 - mae: 5.5249 - m
se: 176.3898 - val_loss: 178.1117 - val_mae: 5.8039 - val_mse: 178.1117
Epoch 1114/2000
148/148 [=====] - 0s 2ms/step - loss: 176.2494 - mae: 5.5039 - m
se: 176.2494 - val_loss: 179.9177 - val_mae: 5.8145 - val_mse: 179.9177
Epoch 1115/2000
148/148 [=====] - 0s 2ms/step - loss: 176.4181 - mae: 5.5150 - m
se: 176.4181 - val_loss: 178.3369 - val_mae: 5.7764 - val_mse: 178.3369
Epoch 1116/2000
148/148 [=====] - 0s 2ms/step - loss: 176.1729 - mae: 5.5095 - m
se: 176.1729 - val_loss: 178.7363 - val_mae: 5.7665 - val_mse: 178.7363
Epoch 1117/2000
148/148 [=====] - 0s 2ms/step - loss: 176.1801 - mae: 5.5036 - m
se: 176.1801 - val_loss: 178.4159 - val_mae: 5.7812 - val_mse: 178.4159
Epoch 1118/2000
148/148 [=====] - 0s 2ms/step - loss: 176.0653 - mae: 5.5158 - m
se: 176.0653 - val_loss: 178.5173 - val_mae: 5.7591 - val_mse: 178.5173
Epoch 1119/2000
148/148 [=====] - 0s 2ms/step - loss: 175.8383 - mae: 5.5102 - m
se: 175.8383 - val_loss: 178.0403 - val_mae: 5.7744 - val_mse: 178.0403
Epoch 1120/2000
148/148 [=====] - 0s 3ms/step - loss: 175.7439 - mae: 5.4988 - m
se: 175.7439 - val_loss: 179.9933 - val_mae: 5.8234 - val_mse: 179.9933
Epoch 1121/2000
148/148 [=====] - 0s 2ms/step - loss: 175.6907 - mae: 5.5130 - m
se: 175.6907 - val_loss: 180.2041 - val_mae: 5.8376 - val_mse: 180.2041
Epoch 1122/2000
148/148 [=====] - 0s 2ms/step - loss: 175.1827 - mae: 5.5467 - m
se: 175.1827 - val_loss: 177.9462 - val_mae: 5.9228 - val_mse: 177.9462
Epoch 1123/2000
148/148 [=====] - 0s 2ms/step - loss: 175.3773 - mae: 5.5327 - m
se: 175.3773 - val_loss: 179.5791 - val_mae: 5.8113 - val_mse: 179.5791
Epoch 1124/2000
148/148 [=====] - 0s 3ms/step - loss: 175.4151 - mae: 5.5218 - m
se: 175.4151 - val_loss: 179.2818 - val_mae: 5.7979 - val_mse: 179.2818
Epoch 1125/2000
148/148 [=====] - 0s 2ms/step - loss: 175.4026 - mae: 5.5166 - m
se: 175.4026 - val_loss: 178.1195 - val_mae: 5.8116 - val_mse: 178.1195
Epoch 1126/2000
148/148 [=====] - 0s 2ms/step - loss: 175.3382 - mae: 5.5071 - m
se: 175.3382 - val_loss: 179.1373 - val_mae: 5.8172 - val_mse: 179.1373
Epoch 1127/2000
148/148 [=====] - 0s 2ms/step - loss: 175.2044 - mae: 5.5142 - m
se: 175.2044 - val_loss: 177.7495 - val_mae: 5.7900 - val_mse: 177.7495
Epoch 1128/2000
148/148 [=====] - 0s 2ms/step - loss: 175.0888 - mae: 5.5047 - m
se: 175.0888 - val_loss: 178.4071 - val_mae: 5.7906 - val_mse: 178.4071
Epoch 1129/2000
148/148 [=====] - 0s 2ms/step - loss: 174.8098 - mae: 5.5080 - m
se: 174.8098 - val_loss: 179.9552 - val_mae: 5.8734 - val_mse: 179.9552
Epoch 1130/2000
148/148 [=====] - 0s 2ms/step - loss: 175.0714 - mae: 5.5436 - m
se: 175.0714 - val_loss: 178.0562 - val_mae: 5.7888 - val_mse: 178.0562
Epoch 1131/2000
148/148 [=====] - 0s 3ms/step - loss: 174.9192 - mae: 5.5088 - m
se: 174.9192 - val_loss: 178.7225 - val_mae: 5.8012 - val_mse: 178.7225
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se: 174.9192 - val_loss: 178.7225 - val_mae: 5.8013 - val_mse: 178.7225
Epoch 1132/2000
148/148 [=====] - 0s 2ms/step - loss: 174.9181 - mae: 5.5136 - m
se: 174.9181 - val_loss: 178.0273 - val_mae: 5.8241 - val_mse: 178.0273
Epoch 1133/2000
148/148 [=====] - 0s 2ms/step - loss: 174.6853 - mae: 5.5156 - m
se: 174.6853 - val_loss: 178.4763 - val_mae: 5.8295 - val_mse: 178.4763
Epoch 1134/2000
148/148 [=====] - 0s 2ms/step - loss: 174.6773 - mae: 5.5254 - m
se: 174.6773 - val_loss: 177.9925 - val_mae: 5.7869 - val_mse: 177.9925
Epoch 1135/2000
148/148 [=====] - 0s 2ms/step - loss: 174.5414 - mae: 5.5081 - m
se: 174.5414 - val_loss: 179.4311 - val_mae: 5.8327 - val_mse: 179.4311
Epoch 1136/2000
148/148 [=====] - 0s 2ms/step - loss: 174.6174 - mae: 5.5067 - m
se: 174.6174 - val_loss: 179.2119 - val_mae: 5.8192 - val_mse: 179.2119
Epoch 1137/2000
148/148 [=====] - 0s 3ms/step - loss: 174.6403 - mae: 5.5125 - m
se: 174.6403 - val_loss: 178.1421 - val_mae: 5.8076 - val_mse: 178.1421
Epoch 1138/2000
148/148 [=====] - 0s 2ms/step - loss: 174.4725 - mae: 5.5142 - m
se: 174.4725 - val_loss: 177.5269 - val_mae: 5.7820 - val_mse: 177.5269
Epoch 1139/2000
148/148 [=====] - 0s 2ms/step - loss: 174.3604 - mae: 5.5073 - m
se: 174.3604 - val_loss: 178.3107 - val_mae: 5.8002 - val_mse: 178.3107
Epoch 1140/2000
148/148 [=====] - 0s 2ms/step - loss: 174.2823 - mae: 5.5149 - m
se: 174.2823 - val_loss: 178.2901 - val_mae: 5.7899 - val_mse: 178.2901
Epoch 1141/2000
148/148 [=====] - 0s 2ms/step - loss: 174.3185 - mae: 5.4989 - m
se: 174.3185 - val_loss: 177.6547 - val_mae: 5.8017 - val_mse: 177.6547
Epoch 1142/2000
148/148 [=====] - 0s 2ms/step - loss: 174.2343 - mae: 5.5110 - m
se: 174.2343 - val_loss: 178.2372 - val_mae: 5.7892 - val_mse: 178.2372
Epoch 1143/2000
148/148 [=====] - 0s 2ms/step - loss: 174.0563 - mae: 5.5010 - m
se: 174.0563 - val_loss: 178.5836 - val_mae: 5.8301 - val_mse: 178.5836
Epoch 1144/2000
148/148 [=====] - 0s 3ms/step - loss: 173.9648 - mae: 5.5434 - m
se: 173.9648 - val_loss: 177.4381 - val_mae: 5.8001 - val_mse: 177.4381
Epoch 1145/2000
148/148 [=====] - 0s 2ms/step - loss: 174.0259 - mae: 5.4976 - m
se: 174.0259 - val_loss: 178.5944 - val_mae: 5.7952 - val_mse: 178.5944
Epoch 1146/2000
148/148 [=====] - 0s 2ms/step - loss: 173.9363 - mae: 5.4933 - m
se: 173.9363 - val_loss: 177.2328 - val_mae: 5.7941 - val_mse: 177.2328
Epoch 1147/2000
148/148 [=====] - 0s 2ms/step - loss: 173.8787 - mae: 5.4890 - m
se: 173.8787 - val_loss: 177.8103 - val_mae: 5.7821 - val_mse: 177.8103
Epoch 1148/2000
148/148 [=====] - 0s 2ms/step - loss: 173.8591 - mae: 5.4880 - m
se: 173.8591 - val_loss: 177.7831 - val_mae: 5.7704 - val_mse: 177.7831
Epoch 1149/2000
148/148 [=====] - 0s 2ms/step - loss: 173.6344 - mae: 5.4843 - m
se: 173.6344 - val_loss: 178.9157 - val_mae: 5.8229 - val_mse: 178.9157
Epoch 1150/2000
148/148 [=====] - 0s 2ms/step - loss: 173.8084 - mae: 5.4989 - m
se: 173.8084 - val_loss: 179.3751 - val_mae: 5.8328 - val_mse: 179.3751
Epoch 1151/2000
148/148 [=====] - 0s 2ms/step - loss: 173.7671 - mae: 5.4977 - m
se: 173.7671 - val_loss: 177.6521 - val_mae: 5.8101 - val_mse: 177.6521
Epoch 1152/2000
148/148 [=====] - 0s 2ms/step - loss: 173.6223 - mae: 5.4912 - m
se: 173.6223 - val_loss: 178.1888 - val_mae: 5.7862 - val_mse: 178.1888
Epoch 1153/2000
148/148 [=====] - 0s 2ms/step - loss: 173.5141 - mae: 5.4910 - m
se: 173.5141 - val_loss: 177.6748 - val_mae: 5.7931 - val_mse: 177.6748
Epoch 1154/2000
148/148 [=====] - 0s 2ms/step - loss: 173.6624 - mae: 5.4922 - m
se: 173.6624 - val_loss: 178.4924 - val_mae: 5.8161 - val_mse: 178.4924
Epoch 1155/2000
148/148 [=====] - 0s 2ms/step - loss: 173.4266 - mae: 5.5043 - m
se: 173.4266 - val_loss: 178.0402 - val_mae: 5.8080 - val_mse: 178.0402
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se: 173.4266 - val_loss: 178.9492 - val_mae: 5.8080 - val_mse: 178.9492
Epoch 1156/2000
148/148 [=====] - 0s 2ms/step - loss: 173.4666 - mae: 5.4914 - m
se: 173.4666 - val_loss: 178.5448 - val_mae: 5.7899 - val_mse: 178.5448
Epoch 1157/2000
148/148 [=====] - 0s 2ms/step - loss: 173.3170 - mae: 5.4748 - m
se: 173.3170 - val_loss: 177.1972 - val_mae: 5.8047 - val_mse: 177.1972
Epoch 1158/2000
148/148 [=====] - 0s 2ms/step - loss: 173.1769 - mae: 5.5010 - m
se: 173.1769 - val_loss: 176.8711 - val_mae: 5.7753 - val_mse: 176.8711
Epoch 1159/2000
148/148 [=====] - 0s 2ms/step - loss: 173.1997 - mae: 5.4666 - m
se: 173.1997 - val_loss: 178.1239 - val_mae: 5.8027 - val_mse: 178.1239
Epoch 1160/2000
148/148 [=====] - 0s 2ms/step - loss: 172.9670 - mae: 5.4976 - m
se: 172.9670 - val_loss: 177.3843 - val_mae: 5.7672 - val_mse: 177.3843
Epoch 1161/2000
148/148 [=====] - 0s 2ms/step - loss: 173.1989 - mae: 5.4831 - m
se: 173.1989 - val_loss: 177.5336 - val_mae: 5.7738 - val_mse: 177.5336
Epoch 1162/2000
148/148 [=====] - 0s 2ms/step - loss: 173.1504 - mae: 5.4945 - m
se: 173.1504 - val_loss: 178.2420 - val_mae: 5.7930 - val_mse: 178.2420
Epoch 1163/2000
148/148 [=====] - 0s 3ms/step - loss: 172.9139 - mae: 5.4767 - m
se: 172.9139 - val_loss: 178.3322 - val_mae: 5.8235 - val_mse: 178.3322
Epoch 1164/2000
148/148 [=====] - 0s 2ms/step - loss: 173.0125 - mae: 5.4902 - m
se: 173.0125 - val_loss: 178.0474 - val_mae: 5.8081 - val_mse: 178.0474
Epoch 1165/2000
148/148 [=====] - 0s 3ms/step - loss: 172.7452 - mae: 5.4913 - m
se: 172.7452 - val_loss: 176.8758 - val_mae: 5.7772 - val_mse: 176.8758
Epoch 1166/2000
148/148 [=====] - 0s 2ms/step - loss: 172.8710 - mae: 5.4700 - m
se: 172.8710 - val_loss: 177.7724 - val_mae: 5.7928 - val_mse: 177.7724
Epoch 1167/2000
148/148 [=====] - 0s 2ms/step - loss: 172.8260 - mae: 5.4689 - m
se: 172.8260 - val_loss: 177.2855 - val_mae: 5.8215 - val_mse: 177.2855
Epoch 1168/2000
148/148 [=====] - 0s 3ms/step - loss: 172.6375 - mae: 5.4897 - m
se: 172.6375 - val_loss: 177.9286 - val_mae: 5.7750 - val_mse: 177.9286
Epoch 1169/2000
148/148 [=====] - 0s 3ms/step - loss: 172.4758 - mae: 5.4700 - m
se: 172.4758 - val_loss: 177.6031 - val_mae: 5.8407 - val_mse: 177.6031
Epoch 1170/2000
148/148 [=====] - 0s 2ms/step - loss: 172.5389 - mae: 5.4888 - m
se: 172.5389 - val_loss: 178.9519 - val_mae: 5.8331 - val_mse: 178.9519
Epoch 1171/2000
148/148 [=====] - 0s 3ms/step - loss: 172.4395 - mae: 5.4832 - m
se: 172.4395 - val_loss: 178.7719 - val_mae: 5.8044 - val_mse: 178.7719
Epoch 1172/2000
148/148 [=====] - 0s 2ms/step - loss: 172.4231 - mae: 5.4664 - m
se: 172.4231 - val_loss: 179.0384 - val_mae: 5.8244 - val_mse: 179.0384
Epoch 1173/2000
148/148 [=====] - 0s 3ms/step - loss: 172.4727 - mae: 5.4741 - m
se: 172.4727 - val_loss: 177.9323 - val_mae: 5.7893 - val_mse: 177.9323
Epoch 1174/2000
148/148 [=====] - 0s 3ms/step - loss: 172.1216 - mae: 5.4641 - m
se: 172.1216 - val_loss: 180.8589 - val_mae: 5.9024 - val_mse: 180.8589
Epoch 1175/2000
148/148 [=====] - 0s 3ms/step - loss: 172.2544 - mae: 5.4835 - m
se: 172.2544 - val_loss: 177.1459 - val_mae: 5.8099 - val_mse: 177.1459
Epoch 1176/2000
148/148 [=====] - 0s 3ms/step - loss: 172.3461 - mae: 5.4746 - m
se: 172.3461 - val_loss: 176.8697 - val_mae: 5.7841 - val_mse: 176.8697
Epoch 1177/2000
148/148 [=====] - 0s 2ms/step - loss: 172.1676 - mae: 5.4761 - m
se: 172.1676 - val_loss: 176.7124 - val_mae: 5.7943 - val_mse: 176.7124
Epoch 1178/2000
148/148 [=====] - 0s 2ms/step - loss: 171.9373 - mae: 5.4625 - m
se: 171.9373 - val_loss: 179.3729 - val_mae: 5.8460 - val_mse: 179.3729
Epoch 1179/2000
148/148 [=====] - 0s 2ms/step - loss: 172.2373 - mae: 5.4706 - m
se: 172.2373 - val_loss: 177.7551 - val_mae: 5.7680 - val_mse: 177.7551
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se: 172.2373 - val_loss: 177.7551 - val_mae: 5.7689 - val_mse: 177.7551
Epoch 1180/2000
148/148 [=====] - 0s 2ms/step - loss: 172.0242 - mae: 5.4680 - mse: 172.0242 - val_loss: 177.2833 - val_mae: 5.7540 - val_mse: 177.2833
Epoch 1181/2000
148/148 [=====] - 0s 3ms/step - loss: 172.0374 - mae: 5.4568 - mse: 172.0374 - val_loss: 178.1776 - val_mae: 5.7931 - val_mse: 178.1776
Epoch 1182/2000
148/148 [=====] - 0s 2ms/step - loss: 171.7759 - mae: 5.4486 - mse: 171.7759 - val_loss: 179.2666 - val_mae: 5.8538 - val_mse: 179.2666
Epoch 1183/2000
148/148 [=====] - 0s 2ms/step - loss: 172.0242 - mae: 5.4706 - mse: 172.0242 - val_loss: 177.9459 - val_mae: 5.7873 - val_mse: 177.9459
Epoch 1184/2000
148/148 [=====] - 0s 2ms/step - loss: 171.6517 - mae: 5.4699 - mse: 171.6517 - val_loss: 179.1801 - val_mae: 5.8448 - val_mse: 179.1801
Epoch 1185/2000
148/148 [=====] - 0s 3ms/step - loss: 172.0278 - mae: 5.4650 - mse: 172.0278 - val_loss: 177.3284 - val_mae: 5.8002 - val_mse: 177.3284
Epoch 1186/2000
148/148 [=====] - 0s 2ms/step - loss: 171.8343 - mae: 5.4629 - mse: 171.8343 - val_loss: 176.8319 - val_mae: 5.7693 - val_mse: 176.8319
Epoch 1187/2000
148/148 [=====] - 0s 2ms/step - loss: 171.6592 - mae: 5.4624 - mse: 171.6592 - val_loss: 177.1721 - val_mae: 5.7641 - val_mse: 177.1721
Epoch 1188/2000
148/148 [=====] - 0s 2ms/step - loss: 171.7098 - mae: 5.4649 - mse: 171.7098 - val_loss: 177.4202 - val_mae: 5.7588 - val_mse: 177.4202
Epoch 1189/2000
148/148 [=====] - 0s 2ms/step - loss: 171.5419 - mae: 5.4537 - mse: 171.5419 - val_loss: 176.5045 - val_mae: 5.7776 - val_mse: 176.5045
Epoch 1190/2000
148/148 [=====] - 0s 2ms/step - loss: 171.3832 - mae: 5.4731 - mse: 171.3832 - val_loss: 177.1063 - val_mae: 5.7778 - val_mse: 177.1063
Epoch 1191/2000
148/148 [=====] - 0s 2ms/step - loss: 171.4047 - mae: 5.4623 - mse: 171.4047 - val_loss: 177.2363 - val_mae: 5.7675 - val_mse: 177.2363
Epoch 1192/2000
148/148 [=====] - 0s 2ms/step - loss: 171.4347 - mae: 5.4675 - mse: 171.4347 - val_loss: 176.3251 - val_mae: 5.7529 - val_mse: 176.3251
Epoch 1193/2000
148/148 [=====] - 0s 2ms/step - loss: 171.3624 - mae: 5.4496 - mse: 171.3624 - val_loss: 177.0534 - val_mae: 5.7687 - val_mse: 177.0534
Epoch 1194/2000
148/148 [=====] - 0s 2ms/step - loss: 171.3846 - mae: 5.4619 - mse: 171.3846 - val_loss: 176.6987 - val_mae: 5.7396 - val_mse: 176.6987
Epoch 1195/2000
148/148 [=====] - 0s 2ms/step - loss: 171.2557 - mae: 5.4403 - mse: 171.2557 - val_loss: 177.8441 - val_mae: 5.8018 - val_mse: 177.8441
Epoch 1196/2000
148/148 [=====] - 0s 2ms/step - loss: 171.3187 - mae: 5.4551 - mse: 171.3187 - val_loss: 177.4791 - val_mae: 5.7742 - val_mse: 177.4791
Epoch 1197/2000
148/148 [=====] - 0s 2ms/step - loss: 171.3008 - mae: 5.4593 - mse: 171.3008 - val_loss: 176.1271 - val_mae: 5.7445 - val_mse: 176.1271
Epoch 1198/2000
148/148 [=====] - 0s 2ms/step - loss: 171.1678 - mae: 5.4477 - mse: 171.1678 - val_loss: 175.8414 - val_mae: 5.7380 - val_mse: 175.8414
Epoch 1199/2000
148/148 [=====] - 0s 2ms/step - loss: 171.1674 - mae: 5.4357 - mse: 171.1674 - val_loss: 176.5133 - val_mae: 5.7860 - val_mse: 176.5133
Epoch 1200/2000
148/148 [=====] - 0s 2ms/step - loss: 170.9610 - mae: 5.4463 - mse: 170.9610 - val_loss: 177.7240 - val_mae: 5.7976 - val_mse: 177.7240
Epoch 1201/2000
148/148 [=====] - ETA: 0s - loss: 171.1057 - mae: 5.4579 - mse: 171.1057
148/148 [=====] - 0s 2ms/step - loss: 171.1057 - mae: 5.4579 - mse: 171.1057 - val_loss: 176.1148 - val_mae: 5.7666 - val_mse: 176.1148
Epoch 1202/2000
148/148 [=====] - 0s 2ms/step - loss: 170.8918 - mae: 5.4532 - mse: 170.8918 - val_loss: 177.8117 - val_mae: 5.7966 - val_mse: 177.8117
Epoch 1203/2000

Epoch 1203/2000
148/148 [=====] - 0s 2ms/step - loss: 170.7833 - mae: 5.4635 - mse: 170.7833 - val_loss: 175.7466 - val_mae: 5.7765 - val_mse: 175.7466
Epoch 1204/2000
148/148 [=====] - 0s 2ms/step - loss: 170.9153 - mae: 5.4515 - mse: 170.9153 - val_loss: 176.1974 - val_mae: 5.7332 - val_mse: 176.1974
Epoch 1205/2000
148/148 [=====] - 0s 2ms/step - loss: 170.9371 - mae: 5.4487 - mse: 170.9371 - val_loss: 176.3758 - val_mae: 5.7393 - val_mse: 176.3758
Epoch 1206/2000
148/148 [=====] - 0s 2ms/step - loss: 170.8316 - mae: 5.4441 - mse: 170.8316 - val_loss: 176.8472 - val_mae: 5.7892 - val_mse: 176.8472
Epoch 1207/2000
148/148 [=====] - 0s 2ms/step - loss: 170.8628 - mae: 5.4471 - mse: 170.8628 - val_loss: 176.5711 - val_mae: 5.7557 - val_mse: 176.5711
Epoch 1208/2000
148/148 [=====] - 0s 2ms/step - loss: 170.7546 - mae: 5.4400 - mse: 170.7546 - val_loss: 175.6113 - val_mae: 5.7478 - val_mse: 175.6113
Epoch 1209/2000
148/148 [=====] - 0s 2ms/step - loss: 170.7963 - mae: 5.4317 - mse: 170.7963 - val_loss: 177.0567 - val_mae: 5.7594 - val_mse: 177.0567
Epoch 1210/2000
148/148 [=====] - 0s 2ms/step - loss: 170.7163 - mae: 5.4505 - mse: 170.7163 - val_loss: 175.7791 - val_mae: 5.7404 - val_mse: 175.7791
Epoch 1211/2000
148/148 [=====] - 0s 2ms/step - loss: 170.7233 - mae: 5.4324 - mse: 170.7233 - val_loss: 176.0764 - val_mae: 5.7272 - val_mse: 176.0764
Epoch 1212/2000
148/148 [=====] - 0s 2ms/step - loss: 170.6973 - mae: 5.4515 - mse: 170.6973 - val_loss: 175.6817 - val_mae: 5.7272 - val_mse: 175.6817
Epoch 1213/2000
148/148 [=====] - 0s 2ms/step - loss: 170.5143 - mae: 5.4338 - mse: 170.5143 - val_loss: 176.3851 - val_mae: 5.7518 - val_mse: 176.3851
Epoch 1214/2000
148/148 [=====] - 0s 2ms/step - loss: 170.4602 - mae: 5.4445 - mse: 170.4602 - val_loss: 175.5331 - val_mae: 5.7379 - val_mse: 175.5331
Epoch 1215/2000
148/148 [=====] - 0s 2ms/step - loss: 170.4326 - mae: 5.4419 - mse: 170.4326 - val_loss: 176.4956 - val_mae: 5.7598 - val_mse: 176.4956
Epoch 1216/2000
148/148 [=====] - 0s 2ms/step - loss: 170.5261 - mae: 5.4418 - mse: 170.5261 - val_loss: 175.8929 - val_mae: 5.7266 - val_mse: 175.8929
Epoch 1217/2000
148/148 [=====] - 0s 2ms/step - loss: 170.4186 - mae: 5.4317 - mse: 170.4186 - val_loss: 175.5832 - val_mae: 5.7655 - val_mse: 175.5832
Epoch 1218/2000
148/148 [=====] - 0s 2ms/step - loss: 170.3571 - mae: 5.4338 - mse: 170.3571 - val_loss: 176.5521 - val_mae: 5.7638 - val_mse: 176.5521
Epoch 1219/2000
148/148 [=====] - 0s 2ms/step - loss: 170.4657 - mae: 5.4386 - mse: 170.4657 - val_loss: 176.1353 - val_mae: 5.7342 - val_mse: 176.1353
Epoch 1220/2000
148/148 [=====] - 0s 2ms/step - loss: 170.2542 - mae: 5.4432 - mse: 170.2542 - val_loss: 175.7072 - val_mae: 5.7346 - val_mse: 175.7072
Epoch 1221/2000
148/148 [=====] - 0s 2ms/step - loss: 170.3690 - mae: 5.4224 - mse: 170.3690 - val_loss: 175.9542 - val_mae: 5.7425 - val_mse: 175.9542
Epoch 1222/2000
148/148 [=====] - 0s 2ms/step - loss: 169.8288 - mae: 5.4600 - mse: 169.8288 - val_loss: 174.8459 - val_mae: 5.7651 - val_mse: 174.8459
Epoch 1223/2000
148/148 [=====] - 0s 2ms/step - loss: 170.2654 - mae: 5.4368 - mse: 170.2654 - val_loss: 175.6867 - val_mae: 5.7167 - val_mse: 175.6867
Epoch 1224/2000
148/148 [=====] - 0s 2ms/step - loss: 170.2095 - mae: 5.4086 - mse: 170.2095 - val_loss: 176.8938 - val_mae: 5.7766 - val_mse: 176.8938
Epoch 1225/2000
148/148 [=====] - 0s 2ms/step - loss: 170.2353 - mae: 5.4143 - mse: 170.2353 - val_loss: 176.3241 - val_mae: 5.7433 - val_mse: 176.3241
Epoch 1226/2000
148/148 [=====] - 0s 2ms/step - loss: 170.1966 - mae: 5.4271 - mse: 170.1966 - val_loss: 175.6587 - val_mae: 5.7521 - val_mse: 175.6587
Epoch 1227/2000

Epoch 1227/2000
148/148 [=====] - 0s 2ms/step - loss: 170.1888 - mae: 5.4267 - mse: 170.1888 - val_loss: 175.7233 - val_mae: 5.7147 - val_mse: 175.7233
Epoch 1228/2000
148/148 [=====] - 0s 2ms/step - loss: 170.1533 - mae: 5.4251 - mse: 170.1533 - val_loss: 175.6641 - val_mae: 5.7075 - val_mse: 175.6641
Epoch 1229/2000
148/148 [=====] - 0s 3ms/step - loss: 170.0741 - mae: 5.4161 - mse: 170.0741 - val_loss: 175.5952 - val_mae: 5.6991 - val_mse: 175.5952
Epoch 1230/2000
148/148 [=====] - 0s 2ms/step - loss: 170.0449 - mae: 5.4193 - mse: 170.0449 - val_loss: 175.0993 - val_mae: 5.6986 - val_mse: 175.0993
Epoch 1231/2000
148/148 [=====] - 0s 2ms/step - loss: 169.9988 - mae: 5.4139 - mse: 169.9988 - val_loss: 176.0621 - val_mae: 5.7151 - val_mse: 176.0621
Epoch 1232/2000
148/148 [=====] - 0s 2ms/step - loss: 169.7762 - mae: 5.4255 - mse: 169.7762 - val_loss: 175.5538 - val_mae: 5.7064 - val_mse: 175.5538
Epoch 1233/2000
148/148 [=====] - 0s 2ms/step - loss: 169.9471 - mae: 5.4097 - mse: 169.9471 - val_loss: 175.4351 - val_mae: 5.6993 - val_mse: 175.4351
Epoch 1234/2000
148/148 [=====] - 0s 2ms/step - loss: 169.7815 - mae: 5.4050 - mse: 169.7815 - val_loss: 175.0730 - val_mae: 5.7243 - val_mse: 175.0730
Epoch 1235/2000
148/148 [=====] - 0s 2ms/step - loss: 169.8954 - mae: 5.4042 - mse: 169.8954 - val_loss: 175.5374 - val_mae: 5.7178 - val_mse: 175.5374
Epoch 1236/2000
148/148 [=====] - 0s 2ms/step - loss: 169.7763 - mae: 5.4070 - mse: 169.7763 - val_loss: 176.2854 - val_mae: 5.7431 - val_mse: 176.2854
Epoch 1237/2000
148/148 [=====] - 0s 2ms/step - loss: 169.7070 - mae: 5.4059 - mse: 169.7070 - val_loss: 176.4661 - val_mae: 5.7431 - val_mse: 176.4661
Epoch 1238/2000
148/148 [=====] - 0s 3ms/step - loss: 169.6303 - mae: 5.4347 - mse: 169.6303 - val_loss: 175.0304 - val_mae: 5.7117 - val_mse: 175.0304
Epoch 1239/2000
148/148 [=====] - 0s 2ms/step - loss: 169.7129 - mae: 5.3992 - mse: 169.7129 - val_loss: 175.7133 - val_mae: 5.7086 - val_mse: 175.7133
Epoch 1240/2000
148/148 [=====] - 0s 2ms/step - loss: 169.5199 - mae: 5.3946 - mse: 169.5199 - val_loss: 176.8681 - val_mae: 5.7736 - val_mse: 176.8681
Epoch 1241/2000
148/148 [=====] - 0s 3ms/step - loss: 169.6113 - mae: 5.4022 - mse: 169.6113 - val_loss: 175.6110 - val_mae: 5.7123 - val_mse: 175.6110
Epoch 1242/2000
148/148 [=====] - 0s 2ms/step - loss: 169.6375 - mae: 5.3999 - mse: 169.6375 - val_loss: 175.6918 - val_mae: 5.7115 - val_mse: 175.6918
Epoch 1243/2000
148/148 [=====] - 0s 3ms/step - loss: 169.3727 - mae: 5.4064 - mse: 169.3727 - val_loss: 174.5702 - val_mae: 5.6975 - val_mse: 174.5702
Epoch 1244/2000
148/148 [=====] - 0s 2ms/step - loss: 169.5331 - mae: 5.3923 - mse: 169.5331 - val_loss: 175.1184 - val_mae: 5.7036 - val_mse: 175.1184
Epoch 1245/2000
148/148 [=====] - 0s 3ms/step - loss: 169.4042 - mae: 5.4138 - mse: 169.4042 - val_loss: 174.4047 - val_mae: 5.7303 - val_mse: 174.4047
Epoch 1246/2000
148/148 [=====] - 0s 2ms/step - loss: 169.5222 - mae: 5.3939 - mse: 169.5222 - val_loss: 175.3370 - val_mae: 5.7091 - val_mse: 175.3370
Epoch 1247/2000
148/148 [=====] - 0s 2ms/step - loss: 169.3507 - mae: 5.4071 - mse: 169.3507 - val_loss: 174.2887 - val_mae: 5.6752 - val_mse: 174.2887
Epoch 1248/2000
148/148 [=====] - 0s 3ms/step - loss: 169.3590 - mae: 5.3757 - mse: 169.3590 - val_loss: 175.4465 - val_mae: 5.7263 - val_mse: 175.4465
Epoch 1249/2000
148/148 [=====] - 0s 2ms/step - loss: 169.2807 - mae: 5.4120 - mse: 169.2807 - val_loss: 174.1464 - val_mae: 5.6765 - val_mse: 174.1464
Epoch 1250/2000
148/148 [=====] - 0s 2ms/step - loss: 169.3373 - mae: 5.3829 - mse: 169.3373 - val_loss: 175.1084 - val_mae: 5.7141 - val_mse: 175.1084
Epoch 1251/2000

Epoch 1251/2000
148/148 [=====] - 0s 2ms/step - loss: 169.4187 - mae: 5.3985 - mse: 169.4187 - val_loss: 175.3117 - val_mae: 5.7315 - val_mse: 175.3117
Epoch 1252/2000
148/148 [=====] - 0s 2ms/step - loss: 169.0688 - mae: 5.4150 - mse: 169.0688 - val_loss: 174.9348 - val_mae: 5.6786 - val_mse: 174.9348
Epoch 1253/2000
148/148 [=====] - 0s 2ms/step - loss: 169.4223 - mae: 5.3964 - mse: 169.4223 - val_loss: 174.8633 - val_mae: 5.7034 - val_mse: 174.8633
Epoch 1254/2000
148/148 [=====] - 0s 3ms/step - loss: 169.1799 - mae: 5.3993 - mse: 169.1799 - val_loss: 174.3828 - val_mae: 5.6868 - val_mse: 174.3828
Epoch 1255/2000
148/148 [=====] - 0s 2ms/step - loss: 169.1425 - mae: 5.4089 - mse: 169.1425 - val_loss: 174.9573 - val_mae: 5.6953 - val_mse: 174.9573
Epoch 1256/2000
148/148 [=====] - 0s 2ms/step - loss: 169.2074 - mae: 5.4128 - mse: 169.2074 - val_loss: 174.3913 - val_mae: 5.7337 - val_mse: 174.3913
Epoch 1257/2000
148/148 [=====] - 0s 2ms/step - loss: 169.0536 - mae: 5.3933 - mse: 169.0536 - val_loss: 176.1680 - val_mae: 5.7575 - val_mse: 176.1680
Epoch 1258/2000
148/148 [=====] - 0s 2ms/step - loss: 169.1485 - mae: 5.4040 - mse: 169.1485 - val_loss: 175.4136 - val_mae: 5.7058 - val_mse: 175.4136
Epoch 1259/2000
148/148 [=====] - 0s 2ms/step - loss: 169.2054 - mae: 5.3969 - mse: 169.2054 - val_loss: 174.4345 - val_mae: 5.6987 - val_mse: 174.4345
Epoch 1260/2000
148/148 [=====] - 0s 2ms/step - loss: 169.0255 - mae: 5.3930 - mse: 169.0255 - val_loss: 175.9851 - val_mae: 5.7288 - val_mse: 175.9851
Epoch 1261/2000
148/148 [=====] - 0s 2ms/step - loss: 169.0618 - mae: 5.4007 - mse: 169.0618 - val_loss: 175.2582 - val_mae: 5.7162 - val_mse: 175.2582
Epoch 1262/2000
148/148 [=====] - 0s 2ms/step - loss: 169.0043 - mae: 5.3975 - mse: 169.0043 - val_loss: 174.5641 - val_mae: 5.6804 - val_mse: 174.5641
Epoch 1263/2000
148/148 [=====] - 0s 2ms/step - loss: 168.9195 - mae: 5.3939 - mse: 168.9195 - val_loss: 174.6485 - val_mae: 5.6809 - val_mse: 174.6485
Epoch 1264/2000
148/148 [=====] - 0s 2ms/step - loss: 168.9081 - mae: 5.4029 - mse: 168.9081 - val_loss: 173.9533 - val_mae: 5.6703 - val_mse: 173.9533
Epoch 1265/2000
148/148 [=====] - 0s 2ms/step - loss: 168.8836 - mae: 5.3817 - mse: 168.8836 - val_loss: 174.4743 - val_mae: 5.6855 - val_mse: 174.4743
Epoch 1266/2000
148/148 [=====] - 0s 2ms/step - loss: 168.9741 - mae: 5.3773 - mse: 168.9741 - val_loss: 175.0864 - val_mae: 5.6899 - val_mse: 175.0864
Epoch 1267/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6981 - mae: 5.3868 - mse: 168.6981 - val_loss: 175.1325 - val_mae: 5.6939 - val_mse: 175.1325
Epoch 1268/2000
148/148 [=====] - 0s 2ms/step - loss: 168.8369 - mae: 5.3863 - mse: 168.8369 - val_loss: 174.4922 - val_mae: 5.6686 - val_mse: 174.4922
Epoch 1269/2000
148/148 [=====] - 0s 2ms/step - loss: 168.7657 - mae: 5.3861 - mse: 168.7657 - val_loss: 174.4676 - val_mae: 5.6724 - val_mse: 174.4676
Epoch 1270/2000
148/148 [=====] - 0s 2ms/step - loss: 168.7755 - mae: 5.3763 - mse: 168.7755 - val_loss: 174.8143 - val_mae: 5.6803 - val_mse: 174.8143
Epoch 1271/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6609 - mae: 5.3875 - mse: 168.6609 - val_loss: 173.9335 - val_mae: 5.7041 - val_mse: 173.9335
Epoch 1272/2000
148/148 [=====] - 0s 2ms/step - loss: 168.7141 - mae: 5.3846 - mse: 168.7141 - val_loss: 174.9104 - val_mae: 5.6851 - val_mse: 174.9104
Epoch 1273/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6893 - mae: 5.3691 - mse: 168.6893 - val_loss: 176.0276 - val_mae: 5.7557 - val_mse: 176.0276
Epoch 1274/2000
148/148 [=====] - 0s 2ms/step - loss: 168.7029 - mae: 5.3800 - mse: 168.7029 - val_loss: 174.8913 - val_mae: 5.6938 - val_mse: 174.8913
Epoch 1275/2000

Epoch 1275/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6986 - mae: 5.3778 - mse: 168.6986 - val_loss: 174.5059 - val_mae: 5.6699 - val_mse: 174.5059
Epoch 1276/2000
148/148 [=====] - 0s 2ms/step - loss: 168.7429 - mae: 5.3855 - mse: 168.7429 - val_loss: 174.6129 - val_mae: 5.6792 - val_mse: 174.6129
Epoch 1277/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6245 - mae: 5.3712 - mse: 168.6245 - val_loss: 174.0604 - val_mae: 5.6626 - val_mse: 174.0604
Epoch 1278/2000
148/148 [=====] - 0s 2ms/step - loss: 168.5574 - mae: 5.3682 - mse: 168.5574 - val_loss: 174.2148 - val_mae: 5.6728 - val_mse: 174.2148
Epoch 1279/2000
148/148 [=====] - 0s 2ms/step - loss: 168.4861 - mae: 5.3841 - mse: 168.4861 - val_loss: 173.6843 - val_mae: 5.6887 - val_mse: 173.6843
Epoch 1280/2000
148/148 [=====] - 0s 2ms/step - loss: 168.6191 - mae: 5.3571 - mse: 168.6191 - val_loss: 173.9245 - val_mae: 5.6647 - val_mse: 173.9245
Epoch 1281/2000
148/148 [=====] - 0s 2ms/step - loss: 168.5429 - mae: 5.3532 - mse: 168.5429 - val_loss: 173.8360 - val_mae: 5.6553 - val_mse: 173.8360
Epoch 1282/2000
148/148 [=====] - 0s 2ms/step - loss: 168.5601 - mae: 5.3616 - mse: 168.5601 - val_loss: 174.2836 - val_mae: 5.6687 - val_mse: 174.2836
Epoch 1283/2000
148/148 [=====] - 0s 2ms/step - loss: 168.3563 - mae: 5.3590 - mse: 168.3563 - val_loss: 174.8325 - val_mae: 5.7032 - val_mse: 174.8325
Epoch 1284/2000
148/148 [=====] - 0s 2ms/step - loss: 168.4476 - mae: 5.3720 - mse: 168.4476 - val_loss: 175.1711 - val_mae: 5.6991 - val_mse: 175.1711
Epoch 1285/2000
148/148 [=====] - 0s 2ms/step - loss: 168.3297 - mae: 5.3893 - mse: 168.3297 - val_loss: 173.7962 - val_mae: 5.6389 - val_mse: 173.7962
Epoch 1286/2000
148/148 [=====] - 0s 2ms/step - loss: 168.2330 - mae: 5.3536 - mse: 168.2330 - val_loss: 175.4136 - val_mae: 5.7248 - val_mse: 175.4136
Epoch 1287/2000
148/148 [=====] - 0s 2ms/step - loss: 168.3882 - mae: 5.3744 - mse: 168.3882 - val_loss: 175.1673 - val_mae: 5.7025 - val_mse: 175.1673
Epoch 1288/2000
148/148 [=====] - 0s 2ms/step - loss: 168.3755 - mae: 5.3633 - mse: 168.3755 - val_loss: 174.4065 - val_mae: 5.6790 - val_mse: 174.4065
Epoch 1289/2000
148/148 [=====] - 0s 2ms/step - loss: 168.2601 - mae: 5.3690 - mse: 168.2601 - val_loss: 174.3377 - val_mae: 5.6616 - val_mse: 174.3377
Epoch 1290/2000
148/148 [=====] - 0s 2ms/step - loss: 168.3145 - mae: 5.3618 - mse: 168.3145 - val_loss: 174.2472 - val_mae: 5.6735 - val_mse: 174.2472
Epoch 1291/2000
148/148 [=====] - 0s 2ms/step - loss: 168.2377 - mae: 5.3533 - mse: 168.2377 - val_loss: 174.9079 - val_mae: 5.6698 - val_mse: 174.9079
Epoch 1292/2000
148/148 [=====] - 0s 2ms/step - loss: 168.2339 - mae: 5.3455 - mse: 168.2339 - val_loss: 175.4650 - val_mae: 5.7197 - val_mse: 175.4650
Epoch 1293/2000
148/148 [=====] - 0s 2ms/step - loss: 168.1561 - mae: 5.3741 - mse: 168.1561 - val_loss: 173.7028 - val_mae: 5.6769 - val_mse: 173.7028
Epoch 1294/2000
148/148 [=====] - 0s 2ms/step - loss: 168.1819 - mae: 5.3571 - mse: 168.1819 - val_loss: 174.1581 - val_mae: 5.6456 - val_mse: 174.1581
Epoch 1295/2000
148/148 [=====] - 0s 2ms/step - loss: 168.2737 - mae: 5.3497 - mse: 168.2737 - val_loss: 174.4237 - val_mae: 5.6748 - val_mse: 174.4237
Epoch 1296/2000
148/148 [=====] - 0s 2ms/step - loss: 168.1777 - mae: 5.3543 - mse: 168.1777 - val_loss: 174.6120 - val_mae: 5.7136 - val_mse: 174.6120
Epoch 1297/2000
148/148 [=====] - 0s 3ms/step - loss: 168.0659 - mae: 5.3796 - mse: 168.0659 - val_loss: 173.9794 - val_mae: 5.6574 - val_mse: 173.9794
Epoch 1298/2000
148/148 [=====] - 0s 2ms/step - loss: 167.9807 - mae: 5.3558 - mse: 167.9807 - val_loss: 173.5134 - val_mae: 5.6560 - val_mse: 173.5134
Epoch 1299/2000

Epoch 1299/2000
148/148 [=====] - 0s 2ms/step - loss: 168.0925 - mae: 5.3453 - mse: 168.0925 - val_loss: 174.0263 - val_mae: 5.6645 - val_mse: 174.0263
Epoch 1300/2000
148/148 [=====] - 0s 2ms/step - loss: 167.9281 - mae: 5.3511 - mse: 167.9281 - val_loss: 175.2337 - val_mae: 5.7288 - val_mse: 175.2337
Epoch 1301/2000
139/148 [=====>..] - ETA: 0s - loss: 170.7279 - mae: 5.3714 - mse: 170.7279
148/148 [=====] - 0s 2ms/step - loss: 168.0344 - mae: 5.3673 - mse: 168.0344 - val_loss: 173.7351 - val_mae: 5.6973 - val_mse: 173.7351
Epoch 1302/2000
148/148 [=====] - 0s 2ms/step - loss: 167.9296 - mae: 5.3634 - mse: 167.9296 - val_loss: 173.9015 - val_mae: 5.6533 - val_mse: 173.9015
Epoch 1303/2000
148/148 [=====] - 0s 2ms/step - loss: 167.8324 - mae: 5.3577 - mse: 167.8324 - val_loss: 173.2795 - val_mae: 5.6744 - val_mse: 173.2795
Epoch 1304/2000
148/148 [=====] - 0s 2ms/step - loss: 167.9577 - mae: 5.3628 - mse: 167.9577 - val_loss: 173.8780 - val_mae: 5.6760 - val_mse: 173.8780
Epoch 1305/2000
148/148 [=====] - 0s 2ms/step - loss: 167.9063 - mae: 5.3614 - mse: 167.9063 - val_loss: 174.2286 - val_mae: 5.6865 - val_mse: 174.2286
Epoch 1306/2000
148/148 [=====] - 0s 2ms/step - loss: 167.7537 - mae: 5.3584 - mse: 167.7537 - val_loss: 174.0840 - val_mae: 5.6819 - val_mse: 174.0840
Epoch 1307/2000
148/148 [=====] - 0s 2ms/step - loss: 167.7820 - mae: 5.3641 - mse: 167.7820 - val_loss: 174.3867 - val_mae: 5.6769 - val_mse: 174.3867
Epoch 1308/2000
148/148 [=====] - 0s 2ms/step - loss: 167.8103 - mae: 5.3578 - mse: 167.8103 - val_loss: 173.7502 - val_mae: 5.6975 - val_mse: 173.7502
Epoch 1309/2000
148/148 [=====] - 0s 2ms/step - loss: 167.8049 - mae: 5.3738 - mse: 167.8049 - val_loss: 173.4209 - val_mae: 5.6940 - val_mse: 173.4209
Epoch 1310/2000
148/148 [=====] - 0s 2ms/step - loss: 168.0997 - mae: 5.3745 - mse: 168.0997 - val_loss: 174.2877 - val_mae: 5.6644 - val_mse: 174.2877
Epoch 1311/2000
148/148 [=====] - 0s 2ms/step - loss: 167.7631 - mae: 5.3676 - mse: 167.7631 - val_loss: 174.2655 - val_mae: 5.6699 - val_mse: 174.2655
Epoch 1312/2000
148/148 [=====] - 0s 3ms/step - loss: 167.8252 - mae: 5.3486 - mse: 167.8252 - val_loss: 173.9663 - val_mae: 5.6515 - val_mse: 173.9663
Epoch 1313/2000
148/148 [=====] - 0s 2ms/step - loss: 167.7887 - mae: 5.3472 - mse: 167.7887 - val_loss: 173.9499 - val_mae: 5.6710 - val_mse: 173.9499
Epoch 1314/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6488 - mae: 5.3601 - mse: 167.6488 - val_loss: 173.3870 - val_mae: 5.6571 - val_mse: 173.3870
Epoch 1315/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6323 - mae: 5.3364 - mse: 167.6323 - val_loss: 174.6978 - val_mae: 5.7009 - val_mse: 174.6978
Epoch 1316/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6975 - mae: 5.3384 - mse: 167.6975 - val_loss: 174.0482 - val_mae: 5.6899 - val_mse: 174.0482
Epoch 1317/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6282 - mae: 5.3535 - mse: 167.6282 - val_loss: 173.9374 - val_mae: 5.6926 - val_mse: 173.9374
Epoch 1318/2000
148/148 [=====] - 0s 2ms/step - loss: 167.4665 - mae: 5.3401 - mse: 167.4665 - val_loss: 175.1605 - val_mae: 5.7130 - val_mse: 175.1605
Epoch 1319/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6056 - mae: 5.3480 - mse: 167.6056 - val_loss: 174.5791 - val_mae: 5.6807 - val_mse: 174.5791
Epoch 1320/2000
148/148 [=====] - 0s 3ms/step - loss: 167.4943 - mae: 5.3578 - mse: 167.4943 - val_loss: 173.2181 - val_mae: 5.6891 - val_mse: 173.2181
Epoch 1321/2000
148/148 [=====] - 0s 2ms/step - loss: 167.5193 - mae: 5.3351 - mse: 167.5193 - val_loss: 174.2270 - val_mae: 5.7077 - val_mse: 174.2270
Epoch 1322/2000
148/148 [=====] - 0s 2ms/step - loss: 167.6285 - mae: 5.3460 - mse: 167.6285 - val_loss: 173.9374 - val_mae: 5.6926 - val_mse: 173.9374


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148/148 [=====] - 0s 3ms/step - loss: 167.6385 - mae: 5.3400 - m
se: 167.6385 - val_loss: 174.4382 - val_mae: 5.7059 - val_mse: 174.4382
Epoch 1323/2000
148/148 [=====] - 0s 2ms/step - loss: 167.4597 - mae: 5.3415 - m
se: 167.4597 - val_loss: 174.7645 - val_mae: 5.7167 - val_mse: 174.7645
Epoch 1324/2000
148/148 [=====] - 0s 2ms/step - loss: 167.4067 - mae: 5.3582 - m
se: 167.4067 - val_loss: 173.0067 - val_mae: 5.6848 - val_mse: 173.0067
Epoch 1325/2000
148/148 [=====] - 0s 2ms/step - loss: 167.5460 - mae: 5.3553 - m
se: 167.5460 - val_loss: 173.4163 - val_mae: 5.6548 - val_mse: 173.4163
Epoch 1326/2000
148/148 [=====] - 0s 2ms/step - loss: 167.4156 - mae: 5.3442 - m
se: 167.4156 - val_loss: 173.9711 - val_mae: 5.6486 - val_mse: 173.9711
Epoch 1327/2000
148/148 [=====] - 0s 2ms/step - loss: 167.3912 - mae: 5.3343 - m
se: 167.3912 - val_loss: 174.3707 - val_mae: 5.6931 - val_mse: 174.3707
Epoch 1328/2000
148/148 [=====] - 0s 3ms/step - loss: 167.4902 - mae: 5.3543 - m
se: 167.4902 - val_loss: 174.3522 - val_mae: 5.6870 - val_mse: 174.3522
Epoch 1329/2000
148/148 [=====] - 0s 2ms/step - loss: 167.3495 - mae: 5.3443 - m
se: 167.3495 - val_loss: 174.8038 - val_mae: 5.7178 - val_mse: 174.8038
Epoch 1330/2000
148/148 [=====] - 0s 2ms/step - loss: 167.3922 - mae: 5.3527 - m
se: 167.3922 - val_loss: 173.2341 - val_mae: 5.6690 - val_mse: 173.2341
Epoch 1331/2000
148/148 [=====] - 0s 3ms/step - loss: 167.3766 - mae: 5.3417 - m
se: 167.3766 - val_loss: 173.9320 - val_mae: 5.6831 - val_mse: 173.9320
Epoch 1332/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2944 - mae: 5.3562 - m
se: 167.2944 - val_loss: 173.5409 - val_mae: 5.6620 - val_mse: 173.5409
Epoch 1333/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2133 - mae: 5.3352 - m
se: 167.2133 - val_loss: 174.2622 - val_mae: 5.7142 - val_mse: 174.2622
Epoch 1334/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2415 - mae: 5.3599 - m
se: 167.2415 - val_loss: 173.0210 - val_mae: 5.6395 - val_mse: 173.0210
Epoch 1335/2000
148/148 [=====] - 0s 2ms/step - loss: 167.1959 - mae: 5.3479 - m
se: 167.1959 - val_loss: 173.3543 - val_mae: 5.6767 - val_mse: 173.3543
Epoch 1336/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2608 - mae: 5.3532 - m
se: 167.2608 - val_loss: 173.4890 - val_mae: 5.6616 - val_mse: 173.4890
Epoch 1337/2000
148/148 [=====] - 0s 2ms/step - loss: 167.3242 - mae: 5.3499 - m
se: 167.3242 - val_loss: 173.0571 - val_mae: 5.6765 - val_mse: 173.0571
Epoch 1338/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2720 - mae: 5.3541 - m
se: 167.2720 - val_loss: 172.8403 - val_mae: 5.6368 - val_mse: 172.8403
Epoch 1339/2000
148/148 [=====] - 0s 2ms/step - loss: 167.1788 - mae: 5.3418 - m
se: 167.1788 - val_loss: 173.9677 - val_mae: 5.6607 - val_mse: 173.9677
Epoch 1340/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0780 - mae: 5.3311 - m
se: 167.0780 - val_loss: 174.0851 - val_mae: 5.7176 - val_mse: 174.0851
Epoch 1341/2000
148/148 [=====] - 0s 2ms/step - loss: 167.2253 - mae: 5.3542 - m
se: 167.2253 - val_loss: 173.6741 - val_mae: 5.6727 - val_mse: 173.6741
Epoch 1342/2000
148/148 [=====] - 0s 2ms/step - loss: 167.1662 - mae: 5.3456 - m
se: 167.1662 - val_loss: 173.1497 - val_mae: 5.6494 - val_mse: 173.1497
Epoch 1343/2000
148/148 [=====] - 0s 2ms/step - loss: 166.9447 - mae: 5.3443 - m
se: 166.9447 - val_loss: 172.2989 - val_mae: 5.6823 - val_mse: 172.2989
Epoch 1344/2000
148/148 [=====] - 0s 2ms/step - loss: 166.7134 - mae: 5.3560 - m
se: 166.7134 - val_loss: 173.2798 - val_mae: 5.6580 - val_mse: 173.2798
Epoch 1345/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0240 - mae: 5.3372 - m
se: 167.0240 - val_loss: 172.8927 - val_mae: 5.6738 - val_mse: 172.8927
Epoch 1346/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0095 - mae: 5.3414 - m
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148/148 [=====] - 0s 2ms/step - loss: 167.0685 - mae: 5.3414 - mse: 172.7754 - val_loss: 172.7754 - val_mae: 5.6463 - val_mse: 172.7754
Epoch 1347/2000
148/148 [=====] - 0s 2ms/step - loss: 166.9793 - mae: 5.3286 - mse: 172.6100 - val_loss: 172.6100 - val_mae: 5.6639 - val_mse: 172.6100
Epoch 1348/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0130 - mae: 5.3506 - mse: 172.8550 - val_loss: 172.8550 - val_mae: 5.6315 - val_mse: 172.8550
Epoch 1349/2000
148/148 [=====] - 0s 2ms/step - loss: 166.8982 - mae: 5.3250 - mse: 173.1197 - val_loss: 173.1197 - val_mae: 5.6484 - val_mse: 173.1197
Epoch 1350/2000
148/148 [=====] - 0s 2ms/step - loss: 166.9936 - mae: 5.3432 - mse: 172.4716 - val_loss: 172.4716 - val_mae: 5.6653 - val_mse: 172.4716
Epoch 1351/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0095 - mae: 5.3550 - mse: 172.9285 - val_loss: 172.9285 - val_mae: 5.6566 - val_mse: 172.9285
Epoch 1352/2000
148/148 [=====] - 0s 2ms/step - loss: 166.8365 - mae: 5.3266 - mse: 173.7968 - val_loss: 173.7968 - val_mae: 5.6856 - val_mse: 173.7968
Epoch 1353/2000
148/148 [=====] - 0s 3ms/step - loss: 166.7589 - mae: 5.3540 - mse: 172.9850 - val_loss: 172.9850 - val_mae: 5.6338 - val_mse: 172.9850
Epoch 1354/2000
148/148 [=====] - 0s 2ms/step - loss: 166.7325 - mae: 5.3277 - mse: 174.0092 - val_loss: 174.0092 - val_mae: 5.7011 - val_mse: 174.0092
Epoch 1355/2000
148/148 [=====] - 0s 3ms/step - loss: 166.9364 - mae: 5.3517 - mse: 173.1490 - val_loss: 173.1490 - val_mae: 5.6630 - val_mse: 173.1490
Epoch 1356/2000
148/148 [=====] - 0s 3ms/step - loss: 166.6068 - mae: 5.3355 - mse: 174.2980 - val_loss: 174.2980 - val_mae: 5.6948 - val_mse: 174.2980
Epoch 1357/2000
148/148 [=====] - 0s 2ms/step - loss: 167.0029 - mae: 5.3427 - mse: 172.9767 - val_loss: 172.9767 - val_mae: 5.6638 - val_mse: 172.9767
Epoch 1358/2000
148/148 [=====] - 0s 2ms/step - loss: 166.8023 - mae: 5.3256 - mse: 173.0852 - val_loss: 173.0852 - val_mae: 5.6366 - val_mse: 173.0852
Epoch 1359/2000
148/148 [=====] - 0s 3ms/step - loss: 166.7882 - mae: 5.3217 - mse: 173.2633 - val_loss: 173.2633 - val_mae: 5.6538 - val_mse: 173.2633
Epoch 1360/2000
148/148 [=====] - 0s 2ms/step - loss: 166.6767 - mae: 5.3305 - mse: 174.3785 - val_loss: 174.3785 - val_mae: 5.7210 - val_mse: 174.3785
Epoch 1361/2000
148/148 [=====] - 0s 3ms/step - loss: 166.7892 - mae: 5.3420 - mse: 174.0939 - val_loss: 174.0939 - val_mae: 5.6712 - val_mse: 174.0939
Epoch 1362/2000
148/148 [=====] - 0s 2ms/step - loss: 166.8075 - mae: 5.3361 - mse: 173.2992 - val_loss: 173.2992 - val_mae: 5.6544 - val_mse: 173.2992
Epoch 1363/2000
148/148 [=====] - 0s 3ms/step - loss: 166.6778 - mae: 5.3270 - mse: 174.2429 - val_loss: 174.2429 - val_mae: 5.6901 - val_mse: 174.2429
Epoch 1364/2000
148/148 [=====] - 0s 3ms/step - loss: 166.3755 - mae: 5.3273 - mse: 175.5026 - val_loss: 175.5026 - val_mae: 5.7902 - val_mse: 175.5026
Epoch 1365/2000
148/148 [=====] - 0s 3ms/step - loss: 166.7323 - mae: 5.3442 - mse: 174.1338 - val_loss: 174.1338 - val_mae: 5.6944 - val_mse: 174.1338
Epoch 1366/2000
148/148 [=====] - 0s 3ms/step - loss: 166.5870 - mae: 5.3313 - mse: 173.1840 - val_loss: 173.1840 - val_mae: 5.6576 - val_mse: 173.1840
Epoch 1367/2000
148/148 [=====] - 0s 2ms/step - loss: 166.6272 - mae: 5.3373 - mse: 173.2631 - val_loss: 173.2631 - val_mae: 5.6517 - val_mse: 173.2631
Epoch 1368/2000
148/148 [=====] - 0s 2ms/step - loss: 166.4912 - mae: 5.3340 - mse: 173.3827 - val_loss: 173.3827 - val_mae: 5.6706 - val_mse: 173.3827
Epoch 1369/2000
148/148 [=====] - 0s 2ms/step - loss: 166.4034 - mae: 5.3346 - mse: 173.8793 - val_loss: 173.8793 - val_mae: 5.6886 - val_mse: 173.8793
Epoch 1370/2000
148/148 [=====] - 0s 2ms/step - loss: 166.6016 - mae: 5.3310 - mse: 173.8793 - val_loss: 173.8793 - val_mae: 5.6886 - val_mse: 173.8793

148/148 [=====] - 0s 3ms/step - loss: 166.6916 - mae: 5.3318 - mse: 172.8140 - val_loss: 172.8140 - val_mae: 5.6518 - val_mse: 172.8140
Epoch 1371/2000
148/148 [=====] - 0s 2ms/step - loss: 166.4231 - mae: 5.3277 - mse: 166.4231 - val_loss: 172.5035 - val_mae: 5.6613 - val_mse: 172.5035
Epoch 1372/2000
148/148 [=====] - 0s 3ms/step - loss: 166.5851 - mae: 5.3346 - mse: 166.5851 - val_loss: 172.7329 - val_mae: 5.6473 - val_mse: 172.7329
Epoch 1373/2000
148/148 [=====] - 0s 2ms/step - loss: 166.2284 - mae: 5.3421 - mse: 166.2284 - val_loss: 173.1446 - val_mae: 5.6409 - val_mse: 173.1446
Epoch 1374/2000
148/148 [=====] - 0s 2ms/step - loss: 166.3907 - mae: 5.3234 - mse: 166.3907 - val_loss: 173.5127 - val_mae: 5.6721 - val_mse: 173.5127
Epoch 1375/2000
148/148 [=====] - 0s 3ms/step - loss: 166.2965 - mae: 5.3381 - mse: 166.2965 - val_loss: 171.7473 - val_mae: 5.6225 - val_mse: 171.7473
Epoch 1376/2000
148/148 [=====] - 0s 2ms/step - loss: 166.3327 - mae: 5.3199 - mse: 166.3327 - val_loss: 172.8625 - val_mae: 5.6701 - val_mse: 172.8625
Epoch 1377/2000
148/148 [=====] - 0s 2ms/step - loss: 166.4270 - mae: 5.3352 - mse: 166.4270 - val_loss: 172.9816 - val_mae: 5.6371 - val_mse: 172.9816
Epoch 1378/2000
148/148 [=====] - 0s 2ms/step - loss: 166.3129 - mae: 5.3158 - mse: 166.3129 - val_loss: 172.4892 - val_mae: 5.6428 - val_mse: 172.4892
Epoch 1379/2000
148/148 [=====] - 0s 3ms/step - loss: 166.4084 - mae: 5.3314 - mse: 166.4084 - val_loss: 172.6506 - val_mae: 5.6513 - val_mse: 172.6506
Epoch 1380/2000
148/148 [=====] - 0s 2ms/step - loss: 166.3977 - mae: 5.3314 - mse: 166.3977 - val_loss: 172.8826 - val_mae: 5.6640 - val_mse: 172.8826
Epoch 1381/2000
148/148 [=====] - 0s 2ms/step - loss: 166.2867 - mae: 5.3375 - mse: 166.2867 - val_loss: 172.0598 - val_mae: 5.6472 - val_mse: 172.0598
Epoch 1382/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1692 - mae: 5.3336 - mse: 166.1692 - val_loss: 172.7245 - val_mae: 5.6499 - val_mse: 172.7245
Epoch 1383/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1434 - mae: 5.3241 - mse: 166.1434 - val_loss: 173.5157 - val_mae: 5.6879 - val_mse: 173.5157
Epoch 1384/2000
148/148 [=====] - 0s 2ms/step - loss: 166.3972 - mae: 5.3329 - mse: 166.3972 - val_loss: 172.5194 - val_mae: 5.6548 - val_mse: 172.5194
Epoch 1385/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1872 - mae: 5.3193 - mse: 166.1872 - val_loss: 172.2830 - val_mae: 5.6598 - val_mse: 172.2830
Epoch 1386/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1911 - mae: 5.3266 - mse: 166.1911 - val_loss: 172.4929 - val_mae: 5.6262 - val_mse: 172.4929
Epoch 1387/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8704 - mae: 5.3260 - mse: 165.8704 - val_loss: 172.5127 - val_mae: 5.7182 - val_mse: 172.5127
Epoch 1388/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1265 - mae: 5.3342 - mse: 166.1265 - val_loss: 172.3147 - val_mae: 5.6219 - val_mse: 172.3147
Epoch 1389/2000
148/148 [=====] - 0s 2ms/step - loss: 166.1432 - mae: 5.3184 - mse: 166.1432 - val_loss: 171.7000 - val_mae: 5.6377 - val_mse: 171.7000
Epoch 1390/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8825 - mae: 5.3179 - mse: 165.8825 - val_loss: 173.8425 - val_mae: 5.7127 - val_mse: 173.8425
Epoch 1391/2000
148/148 [=====] - 0s 2ms/step - loss: 166.0537 - mae: 5.3351 - mse: 166.0537 - val_loss: 172.2773 - val_mae: 5.6678 - val_mse: 172.2773
Epoch 1392/2000
148/148 [=====] - 0s 2ms/step - loss: 166.0191 - mae: 5.3406 - mse: 166.0191 - val_loss: 172.9235 - val_mae: 5.6578 - val_mse: 172.9235
Epoch 1393/2000
148/148 [=====] - 0s 2ms/step - loss: 165.7050 - mae: 5.3411 - mse: 165.7050 - val_loss: 174.3985 - val_mae: 5.7429 - val_mse: 174.3985
Epoch 1394/2000
148/148 [=====] - 0s 2ms/step - loss: 166.0222 - mae: 5.3334 - mse: 166.0222 - val_loss: 173.5127 - val_mae: 5.6721 - val_mse: 173.5127

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148/148 [=====] - 0s 3ms/step - loss: 166.0323 - mae: 5.3334 - m
se: 166.0323 - val_loss: 172.5331 - val_mae: 5.6622 - val_mse: 172.5331
Epoch 1395/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8408 - mae: 5.3342 - m
se: 165.8408 - val_loss: 172.5981 - val_mae: 5.6336 - val_mse: 172.5981
Epoch 1396/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8406 - mae: 5.3281 - m
se: 165.8406 - val_loss: 171.4960 - val_mae: 5.6063 - val_mse: 171.4960
Epoch 1397/2000
148/148 [=====] - 0s 2ms/step - loss: 165.9212 - mae: 5.3100 - m
se: 165.9212 - val_loss: 172.5540 - val_mae: 5.6482 - val_mse: 172.5540
Epoch 1398/2000
148/148 [=====] - 0s 2ms/step - loss: 165.9043 - mae: 5.3053 - m
se: 165.9043 - val_loss: 173.1923 - val_mae: 5.6978 - val_mse: 173.1923
Epoch 1399/2000
148/148 [=====] - 0s 2ms/step - loss: 165.7613 - mae: 5.3529 - m
se: 165.7613 - val_loss: 171.3115 - val_mae: 5.6216 - val_mse: 171.3115
Epoch 1400/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8813 - mae: 5.3107 - m
se: 165.8813 - val_loss: 171.1859 - val_mae: 5.6286 - val_mse: 171.1859
Epoch 1401/2000
129/148 [=====>....] - ETA: 0s - loss: 167.3514 - mae: 5.3532 - mse:
167.3514
148/148 [=====] - 0s 2ms/step - loss: 165.8585 - mae: 5.3214 - m
se: 165.8585 - val_loss: 171.8381 - val_mae: 5.6371 - val_mse: 171.8381
Epoch 1402/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8731 - mae: 5.3310 - m
se: 165.8731 - val_loss: 171.8072 - val_mae: 5.6258 - val_mse: 171.8072
Epoch 1403/2000
148/148 [=====] - 0s 2ms/step - loss: 165.9206 - mae: 5.3147 - m
se: 165.9206 - val_loss: 172.6156 - val_mae: 5.6716 - val_mse: 172.6156
Epoch 1404/2000
148/148 [=====] - 0s 2ms/step - loss: 165.7859 - mae: 5.3320 - m
se: 165.7859 - val_loss: 172.3712 - val_mae: 5.6395 - val_mse: 172.3712
Epoch 1405/2000
148/148 [=====] - 0s 2ms/step - loss: 165.8076 - mae: 5.3189 - m
se: 165.8076 - val_loss: 172.4692 - val_mae: 5.6714 - val_mse: 172.4692
Epoch 1406/2000
148/148 [=====] - 0s 2ms/step - loss: 165.7336 - mae: 5.3248 - m
se: 165.7336 - val_loss: 172.7824 - val_mae: 5.6692 - val_mse: 172.7824
Epoch 1407/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5629 - mae: 5.3074 - m
se: 165.5629 - val_loss: 173.7609 - val_mae: 5.7318 - val_mse: 173.7609
Epoch 1408/2000
148/148 [=====] - 0s 3ms/step - loss: 165.7444 - mae: 5.3291 - m
se: 165.7444 - val_loss: 172.2533 - val_mae: 5.6789 - val_mse: 172.2533
Epoch 1409/2000
148/148 [=====] - 0s 2ms/step - loss: 165.6647 - mae: 5.3389 - m
se: 165.6647 - val_loss: 171.2250 - val_mae: 5.6368 - val_mse: 171.2250
Epoch 1410/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5100 - mae: 5.3194 - m
se: 165.5100 - val_loss: 170.7056 - val_mae: 5.6602 - val_mse: 170.7056
Epoch 1411/2000
148/148 [=====] - 0s 2ms/step - loss: 165.6935 - mae: 5.3134 - m
se: 165.6935 - val_loss: 171.7390 - val_mae: 5.6364 - val_mse: 171.7390
Epoch 1412/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5765 - mae: 5.3255 - m
se: 165.5765 - val_loss: 171.1689 - val_mae: 5.6483 - val_mse: 171.1689
Epoch 1413/2000
148/148 [=====] - 0s 2ms/step - loss: 165.6073 - mae: 5.3326 - m
se: 165.6073 - val_loss: 171.6266 - val_mae: 5.6217 - val_mse: 171.6266
Epoch 1414/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5082 - mae: 5.3282 - m
se: 165.5082 - val_loss: 171.1568 - val_mae: 5.6409 - val_mse: 171.1568
Epoch 1415/2000
148/148 [=====] - 0s 2ms/step - loss: 165.6153 - mae: 5.3271 - m
se: 165.6153 - val_loss: 171.5900 - val_mae: 5.6363 - val_mse: 171.5900
Epoch 1416/2000
148/148 [=====] - 0s 3ms/step - loss: 165.5432 - mae: 5.3270 - m
se: 165.5432 - val_loss: 171.8739 - val_mae: 5.6334 - val_mse: 171.8739
Epoch 1417/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5275 - mae: 5.3272 - m
se: 165.5275 - val_loss: 171.2000 - val_mae: 5.6250 - val_mse: 171.2000
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se: 165.5275 - val_loss: 171.3000 - val_mae: 5.6258 - val_mse: 171.3000
Epoch 1418/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5139 - mae: 5.3247 - m
se: 165.5139 - val_loss: 170.9352 - val_mae: 5.6233 - val_mse: 170.9352
Epoch 1419/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5405 - mae: 5.3201 - m
se: 165.5405 - val_loss: 171.7160 - val_mae: 5.6337 - val_mse: 171.7160
Epoch 1420/2000
148/148 [=====] - 0s 2ms/step - loss: 165.3946 - mae: 5.3330 - m
se: 165.3946 - val_loss: 170.7047 - val_mae: 5.6237 - val_mse: 170.7047
Epoch 1421/2000
148/148 [=====] - 0s 2ms/step - loss: 165.4656 - mae: 5.3106 - m
se: 165.4656 - val_loss: 172.5441 - val_mae: 5.6715 - val_mse: 172.5441
Epoch 1422/2000
148/148 [=====] - 0s 2ms/step - loss: 165.3719 - mae: 5.3406 - m
se: 165.3719 - val_loss: 170.8030 - val_mae: 5.6000 - val_mse: 170.8030
Epoch 1423/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5273 - mae: 5.3017 - m
se: 165.5273 - val_loss: 171.1339 - val_mae: 5.6208 - val_mse: 171.1339
Epoch 1424/2000
148/148 [=====] - 0s 2ms/step - loss: 165.2328 - mae: 5.3181 - m
se: 165.2328 - val_loss: 172.5244 - val_mae: 5.6727 - val_mse: 172.5244
Epoch 1425/2000
148/148 [=====] - 0s 2ms/step - loss: 165.5131 - mae: 5.3296 - m
se: 165.5131 - val_loss: 171.4516 - val_mae: 5.6182 - val_mse: 171.4516
Epoch 1426/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1798 - mae: 5.3066 - m
se: 165.1798 - val_loss: 172.8938 - val_mae: 5.7265 - val_mse: 172.8938
Epoch 1427/2000
148/148 [=====] - 0s 2ms/step - loss: 165.4536 - mae: 5.3233 - m
se: 165.4536 - val_loss: 172.1589 - val_mae: 5.6705 - val_mse: 172.1589
Epoch 1428/2000
148/148 [=====] - 0s 3ms/step - loss: 165.3615 - mae: 5.3264 - m
se: 165.3615 - val_loss: 171.8732 - val_mae: 5.6410 - val_mse: 171.8732
Epoch 1429/2000
148/148 [=====] - 0s 3ms/step - loss: 165.2004 - mae: 5.3296 - m
se: 165.2004 - val_loss: 170.7785 - val_mae: 5.6036 - val_mse: 170.7785
Epoch 1430/2000
148/148 [=====] - 0s 3ms/step - loss: 165.2020 - mae: 5.3134 - m
se: 165.2020 - val_loss: 171.8947 - val_mae: 5.6468 - val_mse: 171.8947
Epoch 1431/2000
148/148 [=====] - 0s 3ms/step - loss: 165.3592 - mae: 5.3256 - m
se: 165.3592 - val_loss: 170.8993 - val_mae: 5.6083 - val_mse: 170.8993
Epoch 1432/2000
148/148 [=====] - 0s 2ms/step - loss: 165.2673 - mae: 5.3112 - m
se: 165.2673 - val_loss: 171.7193 - val_mae: 5.6613 - val_mse: 171.7193
Epoch 1433/2000
148/148 [=====] - 0s 3ms/step - loss: 165.2503 - mae: 5.3270 - m
se: 165.2503 - val_loss: 170.6528 - val_mae: 5.6472 - val_mse: 170.6528
Epoch 1434/2000
148/148 [=====] - 0s 3ms/step - loss: 165.1278 - mae: 5.3040 - m
se: 165.1278 - val_loss: 170.9192 - val_mae: 5.6568 - val_mse: 170.9192
Epoch 1435/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1673 - mae: 5.3263 - m
se: 165.1673 - val_loss: 172.1363 - val_mae: 5.6607 - val_mse: 172.1363
Epoch 1436/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1772 - mae: 5.3115 - m
se: 165.1772 - val_loss: 171.9977 - val_mae: 5.6691 - val_mse: 171.9977
Epoch 1437/2000
148/148 [=====] - 0s 3ms/step - loss: 164.8597 - mae: 5.3164 - m
se: 164.8597 - val_loss: 172.7696 - val_mae: 5.7248 - val_mse: 172.7696
Epoch 1438/2000
148/148 [=====] - 0s 2ms/step - loss: 165.2269 - mae: 5.3278 - m
se: 165.2269 - val_loss: 172.1275 - val_mae: 5.6703 - val_mse: 172.1275
Epoch 1439/2000
148/148 [=====] - 0s 2ms/step - loss: 165.2521 - mae: 5.3238 - m
se: 165.2521 - val_loss: 170.8725 - val_mae: 5.6151 - val_mse: 170.8725
Epoch 1440/2000
148/148 [=====] - 0s 3ms/step - loss: 165.2062 - mae: 5.3105 - m
se: 165.2062 - val_loss: 171.2469 - val_mae: 5.6464 - val_mse: 171.2469
Epoch 1441/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1637 - mae: 5.3219 - m
se: 165.1637 - val_loss: 170.2121 - val_mae: 5.6065 - val_mse: 170.2121
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se: 165.1637 - val_loss: 170.3131 - val_mae: 5.6065 - val_mse: 170.3131
Epoch 1442/2000
148/148 [=====] - 0s 2ms/step - loss: 164.7012 - mae: 5.3191 - mse: 164.7012 - val_loss: 171.8234 - val_mae: 5.6398 - val_mse: 171.8234
Epoch 1443/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1610 - mae: 5.3206 - mse: 165.1610 - val_loss: 172.2093 - val_mae: 5.6667 - val_mse: 172.2093
Epoch 1444/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0741 - mae: 5.3222 - mse: 165.0741 - val_loss: 170.6399 - val_mae: 5.6062 - val_mse: 170.6399
Epoch 1445/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0492 - mae: 5.3082 - mse: 165.0492 - val_loss: 171.0785 - val_mae: 5.6366 - val_mse: 171.0785
Epoch 1446/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9725 - mae: 5.3138 - mse: 164.9725 - val_loss: 171.5478 - val_mae: 5.6417 - val_mse: 171.5478
Epoch 1447/2000
148/148 [=====] - 0s 2ms/step - loss: 165.1291 - mae: 5.3174 - mse: 165.1291 - val_loss: 171.1544 - val_mae: 5.6274 - val_mse: 171.1544
Epoch 1448/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0131 - mae: 5.3198 - mse: 165.0131 - val_loss: 171.0650 - val_mae: 5.6330 - val_mse: 171.0650
Epoch 1449/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0295 - mae: 5.3106 - mse: 165.0295 - val_loss: 170.4450 - val_mae: 5.6237 - val_mse: 170.4450
Epoch 1450/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9289 - mae: 5.3047 - mse: 164.9289 - val_loss: 170.6860 - val_mae: 5.6342 - val_mse: 170.6860
Epoch 1451/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9724 - mae: 5.3026 - mse: 164.9724 - val_loss: 170.8739 - val_mae: 5.6443 - val_mse: 170.8739
Epoch 1452/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9241 - mae: 5.3078 - mse: 164.9241 - val_loss: 172.0306 - val_mae: 5.6850 - val_mse: 172.0306
Epoch 1453/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9869 - mae: 5.3128 - mse: 164.9869 - val_loss: 171.0757 - val_mae: 5.6352 - val_mse: 171.0757
Epoch 1454/2000
148/148 [=====] - 0s 2ms/step - loss: 164.8968 - mae: 5.3145 - mse: 164.8968 - val_loss: 171.4224 - val_mae: 5.6634 - val_mse: 171.4224
Epoch 1455/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0445 - mae: 5.3300 - mse: 165.0445 - val_loss: 170.9657 - val_mae: 5.6270 - val_mse: 170.9657
Epoch 1456/2000
148/148 [=====] - 0s 2ms/step - loss: 164.9425 - mae: 5.3218 - mse: 164.9425 - val_loss: 170.2842 - val_mae: 5.6101 - val_mse: 170.2842
Epoch 1457/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6343 - mae: 5.2967 - mse: 164.6343 - val_loss: 172.6154 - val_mae: 5.7333 - val_mse: 172.6154
Epoch 1458/2000
148/148 [=====] - 0s 2ms/step - loss: 165.0552 - mae: 5.3261 - mse: 165.0552 - val_loss: 171.0128 - val_mae: 5.6343 - val_mse: 171.0128
Epoch 1459/2000
148/148 [=====] - 0s 2ms/step - loss: 164.8276 - mae: 5.3201 - mse: 164.8276 - val_loss: 169.6008 - val_mae: 5.6162 - val_mse: 169.6008
Epoch 1460/2000
148/148 [=====] - 0s 2ms/step - loss: 164.8710 - mae: 5.3086 - mse: 164.8710 - val_loss: 170.1364 - val_mae: 5.6082 - val_mse: 170.1364
Epoch 1461/2000
148/148 [=====] - 0s 2ms/step - loss: 164.8224 - mae: 5.2982 - mse: 164.8224 - val_loss: 170.0361 - val_mae: 5.6109 - val_mse: 170.0361
Epoch 1462/2000
148/148 [=====] - 0s 2ms/step - loss: 164.7756 - mae: 5.3136 - mse: 164.7756 - val_loss: 169.7881 - val_mae: 5.6202 - val_mse: 169.7881
Epoch 1463/2000
148/148 [=====] - 0s 2ms/step - loss: 164.8076 - mae: 5.3123 - mse: 164.8076 - val_loss: 170.1429 - val_mae: 5.6095 - val_mse: 170.1429
Epoch 1464/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6790 - mae: 5.3146 - mse: 164.6790 - val_loss: 169.9588 - val_mae: 5.6293 - val_mse: 169.9588
Epoch 1465/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6860 - mae: 5.3213 - mse: 164.6860 - val_loss: 170.1010 - val_mae: 5.6022 - val_mse: 170.1010

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se: 164.6860 - val_loss: 170.1910 - val_mae: 5.6023 - val_mse: 170.1910
Epoch 1466/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6912 - mae: 5.3072 - m
se: 164.6912 - val_loss: 171.0109 - val_mae: 5.6559 - val_mse: 171.0109
Epoch 1467/2000
148/148 [=====] - 0s 2ms/step - loss: 164.7523 - mae: 5.3158 - m
se: 164.7523 - val_loss: 169.8091 - val_mae: 5.6071 - val_mse: 169.8091
Epoch 1468/2000
148/148 [=====] - 0s 2ms/step - loss: 164.5335 - mae: 5.3153 - m
se: 164.5335 - val_loss: 171.4037 - val_mae: 5.6702 - val_mse: 171.4037
Epoch 1469/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6055 - mae: 5.3336 - m
se: 164.6055 - val_loss: 170.6871 - val_mae: 5.6324 - val_mse: 170.6871
Epoch 1470/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4437 - mae: 5.3157 - m
se: 164.4437 - val_loss: 169.3302 - val_mae: 5.6585 - val_mse: 169.3302
Epoch 1471/2000
148/148 [=====] - 0s 2ms/step - loss: 164.7906 - mae: 5.3273 - m
se: 164.7906 - val_loss: 169.9765 - val_mae: 5.5961 - val_mse: 169.9765
Epoch 1472/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4282 - mae: 5.3180 - m
se: 164.4282 - val_loss: 169.1214 - val_mae: 5.6482 - val_mse: 169.1214
Epoch 1473/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6125 - mae: 5.3084 - m
se: 164.6125 - val_loss: 170.3579 - val_mae: 5.6149 - val_mse: 170.3579
Epoch 1474/2000
148/148 [=====] - 0s 2ms/step - loss: 164.5476 - mae: 5.3091 - m
se: 164.5476 - val_loss: 170.0199 - val_mae: 5.6176 - val_mse: 170.0199
Epoch 1475/2000
148/148 [=====] - 0s 2ms/step - loss: 164.5242 - mae: 5.3221 - m
se: 164.5242 - val_loss: 169.1708 - val_mae: 5.5985 - val_mse: 169.1708
Epoch 1476/2000
148/148 [=====] - 0s 2ms/step - loss: 164.6013 - mae: 5.3099 - m
se: 164.6013 - val_loss: 170.0524 - val_mae: 5.6205 - val_mse: 170.0524
Epoch 1477/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4759 - mae: 5.3097 - m
se: 164.4759 - val_loss: 169.6726 - val_mae: 5.6289 - val_mse: 169.6726
Epoch 1478/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4796 - mae: 5.3151 - m
se: 164.4796 - val_loss: 170.6874 - val_mae: 5.6450 - val_mse: 170.6874
Epoch 1479/2000
148/148 [=====] - 0s 2ms/step - loss: 164.5477 - mae: 5.3172 - m
se: 164.5477 - val_loss: 169.3537 - val_mae: 5.6268 - val_mse: 169.3537
Epoch 1480/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4430 - mae: 5.3095 - m
se: 164.4430 - val_loss: 170.5370 - val_mae: 5.6483 - val_mse: 170.5370
Epoch 1481/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4416 - mae: 5.3175 - m
se: 164.4416 - val_loss: 169.3574 - val_mae: 5.6364 - val_mse: 169.3574
Epoch 1482/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4062 - mae: 5.3108 - m
se: 164.4062 - val_loss: 170.2520 - val_mae: 5.6442 - val_mse: 170.2520
Epoch 1483/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4149 - mae: 5.3315 - m
se: 164.4149 - val_loss: 169.2484 - val_mae: 5.6090 - val_mse: 169.2484
Epoch 1484/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2636 - mae: 5.3109 - m
se: 164.2636 - val_loss: 170.3615 - val_mae: 5.6474 - val_mse: 170.3615
Epoch 1485/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3616 - mae: 5.3199 - m
se: 164.3616 - val_loss: 170.2461 - val_mae: 5.6468 - val_mse: 170.2461
Epoch 1486/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3493 - mae: 5.3170 - m
se: 164.3493 - val_loss: 169.8229 - val_mae: 5.6311 - val_mse: 169.8229
Epoch 1487/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3546 - mae: 5.3211 - m
se: 164.3546 - val_loss: 169.7953 - val_mae: 5.6098 - val_mse: 169.7953
Epoch 1488/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3638 - mae: 5.3029 - m
se: 164.3638 - val_loss: 169.7225 - val_mae: 5.6089 - val_mse: 169.7225
Epoch 1489/2000
148/148 [=====] - 0s 2ms/step - loss: 164.4237 - mae: 5.3065 - m
se: 164.4237 - val_loss: 170.1460 - val_mae: 5.6250 - val_mse: 170.1460
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se: 164.4237 - val_loss: 170.1468 - val_mae: 5.6359 - val_mse: 170.1468
Epoch 1490/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3376 - mae: 5.3092 - m
se: 164.3376 - val_loss: 170.0839 - val_mae: 5.6318 - val_mse: 170.0839
Epoch 1491/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2510 - mae: 5.3117 - m
se: 164.2510 - val_loss: 169.2933 - val_mae: 5.6167 - val_mse: 169.2933
Epoch 1492/2000
148/148 [=====] - 0s 2ms/step - loss: 164.3766 - mae: 5.3056 - m
se: 164.3766 - val_loss: 170.0924 - val_mae: 5.6268 - val_mse: 170.0924
Epoch 1493/2000
148/148 [=====] - 0s 2ms/step - loss: 164.1343 - mae: 5.3408 - m
se: 164.1343 - val_loss: 168.9388 - val_mae: 5.5770 - val_mse: 168.9388
Epoch 1494/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2996 - mae: 5.2931 - m
se: 164.2996 - val_loss: 169.3538 - val_mae: 5.6130 - val_mse: 169.3538
Epoch 1495/2000
148/148 [=====] - 0s 3ms/step - loss: 164.2894 - mae: 5.3067 - m
se: 164.2894 - val_loss: 169.1371 - val_mae: 5.5889 - val_mse: 169.1371
Epoch 1496/2000
148/148 [=====] - 0s 2ms/step - loss: 164.1839 - mae: 5.2958 - m
se: 164.1839 - val_loss: 169.9079 - val_mae: 5.6293 - val_mse: 169.9079
Epoch 1497/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2579 - mae: 5.3046 - m
se: 164.2579 - val_loss: 169.9595 - val_mae: 5.6264 - val_mse: 169.9595
Epoch 1498/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2087 - mae: 5.3085 - m
se: 164.2087 - val_loss: 170.1835 - val_mae: 5.6187 - val_mse: 170.1835
Epoch 1499/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2421 - mae: 5.2942 - m
se: 164.2421 - val_loss: 169.7109 - val_mae: 5.6226 - val_mse: 169.7109
Epoch 1500/2000
148/148 [=====] - 0s 2ms/step - loss: 164.2385 - mae: 5.3056 - m
se: 164.2385 - val_loss: 169.9151 - val_mae: 5.6361 - val_mse: 169.9151
Epoch 1501/2000
145/148 [=====>.] - ETA: 0s - loss: 165.1294 - mae: 5.3048 - mse:
165.1294
148/148 [=====] - 0s 2ms/step - loss: 164.1814 - mae: 5.3049 - m
se: 164.1814 - val_loss: 170.1659 - val_mae: 5.6464 - val_mse: 170.1659
Epoch 1502/2000
148/148 [=====] - 0s 2ms/step - loss: 164.1003 - mae: 5.3136 - m
se: 164.1003 - val_loss: 170.1443 - val_mae: 5.6365 - val_mse: 170.1443
Epoch 1503/2000
148/148 [=====] - 0s 2ms/step - loss: 164.0562 - mae: 5.2990 - m
se: 164.0562 - val_loss: 169.9089 - val_mae: 5.6343 - val_mse: 169.9089
Epoch 1504/2000
148/148 [=====] - 0s 2ms/step - loss: 164.0840 - mae: 5.3042 - m
se: 164.0840 - val_loss: 169.5090 - val_mae: 5.6031 - val_mse: 169.5090
Epoch 1505/2000
148/148 [=====] - 0s 2ms/step - loss: 164.1577 - mae: 5.2959 - m
se: 164.1577 - val_loss: 169.4011 - val_mae: 5.6120 - val_mse: 169.4011
Epoch 1506/2000
148/148 [=====] - 0s 2ms/step - loss: 164.0565 - mae: 5.2982 - m
se: 164.0565 - val_loss: 169.8127 - val_mae: 5.6270 - val_mse: 169.8127
Epoch 1507/2000
148/148 [=====] - 0s 3ms/step - loss: 164.0014 - mae: 5.2963 - m
se: 164.0014 - val_loss: 169.4756 - val_mae: 5.5985 - val_mse: 169.4756
Epoch 1508/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7068 - mae: 5.2999 - m
se: 163.7068 - val_loss: 170.0565 - val_mae: 5.6570 - val_mse: 170.0565
Epoch 1509/2000
148/148 [=====] - 0s 2ms/step - loss: 164.0712 - mae: 5.3094 - m
se: 164.0712 - val_loss: 169.2433 - val_mae: 5.6192 - val_mse: 169.2433
Epoch 1510/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8023 - mae: 5.3261 - m
se: 163.8023 - val_loss: 169.7463 - val_mae: 5.6306 - val_mse: 169.7463
Epoch 1511/2000
148/148 [=====] - 0s 3ms/step - loss: 163.8312 - mae: 5.3090 - m
se: 163.8312 - val_loss: 169.1245 - val_mae: 5.6342 - val_mse: 169.1245
Epoch 1512/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8599 - mae: 5.3116 - m
se: 163.8599 - val_loss: 168.4355 - val_mae: 5.6016 - val_mse: 168.4355
Epoch 1513/2000
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Epoch 1513/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7290 - mae: 5.3026 - mse: 163.7290 - val_loss: 170.4019 - val_mae: 5.6762 - val_mse: 170.4019
Epoch 1514/2000
148/148 [=====] - 0s 3ms/step - loss: 163.9786 - mae: 5.3187 - mse: 163.9786 - val_loss: 169.0842 - val_mae: 5.5977 - val_mse: 169.0842
Epoch 1515/2000
148/148 [=====] - 0s 2ms/step - loss: 163.2616 - mae: 5.3038 - mse: 163.2616 - val_loss: 172.3795 - val_mae: 5.7672 - val_mse: 172.3795
Epoch 1516/2000
148/148 [=====] - 0s 2ms/step - loss: 163.9907 - mae: 5.3130 - mse: 163.9907 - val_loss: 168.7442 - val_mae: 5.6212 - val_mse: 168.7442
Epoch 1517/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7462 - mae: 5.3045 - mse: 163.7462 - val_loss: 169.7965 - val_mae: 5.6332 - val_mse: 169.7965
Epoch 1518/2000
148/148 [=====] - 0s 2ms/step - loss: 163.9667 - mae: 5.3119 - mse: 163.9667 - val_loss: 168.6999 - val_mae: 5.6078 - val_mse: 168.6999
Epoch 1519/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8180 - mae: 5.2974 - mse: 163.8180 - val_loss: 170.2332 - val_mae: 5.6585 - val_mse: 170.2332
Epoch 1520/2000
148/148 [=====] - 0s 3ms/step - loss: 163.9520 - mae: 5.3123 - mse: 163.9520 - val_loss: 168.6806 - val_mae: 5.6170 - val_mse: 168.6806
Epoch 1521/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8714 - mae: 5.3175 - mse: 163.8714 - val_loss: 168.8622 - val_mae: 5.6078 - val_mse: 168.8622
Epoch 1522/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8444 - mae: 5.2990 - mse: 163.8444 - val_loss: 168.6758 - val_mae: 5.5798 - val_mse: 168.6758
Epoch 1523/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7519 - mae: 5.3005 - mse: 163.7519 - val_loss: 168.2884 - val_mae: 5.5963 - val_mse: 168.2884
Epoch 1524/2000
148/148 [=====] - 0s 2ms/step - loss: 163.6443 - mae: 5.2859 - mse: 163.6443 - val_loss: 170.5242 - val_mae: 5.6683 - val_mse: 170.5242
Epoch 1525/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7974 - mae: 5.3057 - mse: 163.7974 - val_loss: 168.4366 - val_mae: 5.5871 - val_mse: 168.4366
Epoch 1526/2000
148/148 [=====] - 0s 2ms/step - loss: 163.6686 - mae: 5.2915 - mse: 163.6686 - val_loss: 168.6141 - val_mae: 5.5859 - val_mse: 168.6141
Epoch 1527/2000
148/148 [=====] - 0s 2ms/step - loss: 163.7860 - mae: 5.2985 - mse: 163.7860 - val_loss: 169.8686 - val_mae: 5.6386 - val_mse: 169.8686
Epoch 1528/2000
148/148 [=====] - 0s 2ms/step - loss: 163.8097 - mae: 5.2980 - mse: 163.8097 - val_loss: 168.5681 - val_mae: 5.6108 - val_mse: 168.5681
Epoch 1529/2000
148/148 [=====] - 0s 2ms/step - loss: 163.6062 - mae: 5.2908 - mse: 163.6062 - val_loss: 169.4819 - val_mae: 5.6329 - val_mse: 169.4819
Epoch 1530/2000
148/148 [=====] - 0s 2ms/step - loss: 163.5626 - mae: 5.3119 - mse: 163.5626 - val_loss: 169.0101 - val_mae: 5.6045 - val_mse: 169.0101
Epoch 1531/2000
148/148 [=====] - 0s 2ms/step - loss: 163.5963 - mae: 5.2909 - mse: 163.5963 - val_loss: 169.6234 - val_mae: 5.6321 - val_mse: 169.6234
Epoch 1532/2000
148/148 [=====] - 0s 2ms/step - loss: 163.5646 - mae: 5.2999 - mse: 163.5646 - val_loss: 168.6691 - val_mae: 5.6002 - val_mse: 168.6691
Epoch 1533/2000
148/148 [=====] - 0s 2ms/step - loss: 163.6087 - mae: 5.2940 - mse: 163.6087 - val_loss: 168.2688 - val_mae: 5.6273 - val_mse: 168.2688
Epoch 1534/2000
148/148 [=====] - 0s 2ms/step - loss: 163.5681 - mae: 5.3013 - mse: 163.5681 - val_loss: 168.7882 - val_mae: 5.6286 - val_mse: 168.7882
Epoch 1535/2000
148/148 [=====] - 0s 2ms/step - loss: 163.5413 - mae: 5.3139 - mse: 163.5413 - val_loss: 168.0653 - val_mae: 5.5957 - val_mse: 168.0653
Epoch 1536/2000
148/148 [=====] - 0s 2ms/step - loss: 163.6130 - mae: 5.2946 - mse: 163.6130 - val_loss: 168.2270 - val_mae: 5.6021 - val_mse: 168.2270
Epoch 1537/2000

Epoch 1537/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4831 - mae: 5.2970 - mse: 163.4831 - val_loss: 168.1127 - val_mae: 5.5919 - val_mse: 168.1127
Epoch 1538/2000
148/148 [=====] - 0s 2ms/step - loss: 163.1647 - mae: 5.2943 - mse: 163.1647 - val_loss: 169.9776 - val_mae: 5.7115 - val_mse: 169.9776
Epoch 1539/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4416 - mae: 5.3351 - mse: 163.4416 - val_loss: 168.8861 - val_mae: 5.6244 - val_mse: 168.8861
Epoch 1540/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4969 - mae: 5.3136 - mse: 163.4969 - val_loss: 167.4135 - val_mae: 5.6158 - val_mse: 167.4135
Epoch 1541/2000
148/148 [=====] - 0s 2ms/step - loss: 163.3181 - mae: 5.3078 - mse: 163.3181 - val_loss: 168.1835 - val_mae: 5.5863 - val_mse: 168.1835
Epoch 1542/2000
148/148 [=====] - 0s 2ms/step - loss: 163.3927 - mae: 5.3022 - mse: 163.3927 - val_loss: 169.1007 - val_mae: 5.6412 - val_mse: 169.1007
Epoch 1543/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4035 - mae: 5.3034 - mse: 163.4035 - val_loss: 168.1288 - val_mae: 5.6170 - val_mse: 168.1288
Epoch 1544/2000
148/148 [=====] - 0s 3ms/step - loss: 163.2853 - mae: 5.3178 - mse: 163.2853 - val_loss: 167.4666 - val_mae: 5.5880 - val_mse: 167.4666
Epoch 1545/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4678 - mae: 5.3125 - mse: 163.4678 - val_loss: 168.5573 - val_mae: 5.6063 - val_mse: 168.5573
Epoch 1546/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4579 - mae: 5.3035 - mse: 163.4579 - val_loss: 168.7054 - val_mae: 5.6185 - val_mse: 168.7054
Epoch 1547/2000
148/148 [=====] - 0s 3ms/step - loss: 163.3891 - mae: 5.2941 - mse: 163.3891 - val_loss: 169.1360 - val_mae: 5.6380 - val_mse: 169.1360
Epoch 1548/2000
148/148 [=====] - 0s 2ms/step - loss: 163.2972 - mae: 5.3060 - mse: 163.2972 - val_loss: 169.5101 - val_mae: 5.6601 - val_mse: 169.5101
Epoch 1549/2000
148/148 [=====] - 0s 2ms/step - loss: 163.3633 - mae: 5.3102 - mse: 163.3633 - val_loss: 168.1786 - val_mae: 5.5956 - val_mse: 168.1786
Epoch 1550/2000
148/148 [=====] - 0s 3ms/step - loss: 163.2724 - mae: 5.3012 - mse: 163.2724 - val_loss: 168.2290 - val_mae: 5.6178 - val_mse: 168.2290
Epoch 1551/2000
148/148 [=====] - 0s 2ms/step - loss: 163.0351 - mae: 5.3180 - mse: 163.0351 - val_loss: 168.7350 - val_mae: 5.6258 - val_mse: 168.7350
Epoch 1552/2000
148/148 [=====] - 0s 2ms/step - loss: 163.4012 - mae: 5.3158 - mse: 163.4012 - val_loss: 168.4978 - val_mae: 5.5966 - val_mse: 168.4978
Epoch 1553/2000
148/148 [=====] - 0s 3ms/step - loss: 163.2485 - mae: 5.3110 - mse: 163.2485 - val_loss: 167.6324 - val_mae: 5.5692 - val_mse: 167.6324
Epoch 1554/2000
148/148 [=====] - 0s 3ms/step - loss: 163.0782 - mae: 5.2934 - mse: 163.0782 - val_loss: 168.6830 - val_mae: 5.6242 - val_mse: 168.6830
Epoch 1555/2000
148/148 [=====] - 0s 3ms/step - loss: 163.2009 - mae: 5.2930 - mse: 163.2009 - val_loss: 168.4487 - val_mae: 5.6137 - val_mse: 168.4487
Epoch 1556/2000
148/148 [=====] - 0s 3ms/step - loss: 163.2173 - mae: 5.3054 - mse: 163.2173 - val_loss: 168.0958 - val_mae: 5.6040 - val_mse: 168.0958
Epoch 1557/2000
148/148 [=====] - 0s 2ms/step - loss: 163.1067 - mae: 5.2926 - mse: 163.1067 - val_loss: 168.9126 - val_mae: 5.6399 - val_mse: 168.9126
Epoch 1558/2000
148/148 [=====] - 0s 2ms/step - loss: 163.1869 - mae: 5.3194 - mse: 163.1869 - val_loss: 167.7215 - val_mae: 5.6329 - val_mse: 167.7215
Epoch 1559/2000
148/148 [=====] - 0s 3ms/step - loss: 163.1788 - mae: 5.3079 - mse: 163.1788 - val_loss: 167.2322 - val_mae: 5.6028 - val_mse: 167.2322
Epoch 1560/2000
148/148 [=====] - 0s 2ms/step - loss: 163.1910 - mae: 5.3037 - mse: 163.1910 - val_loss: 167.3212 - val_mae: 5.5765 - val_mse: 167.3212
Epoch 1561/2000

Epoch 1561/2000
148/148 [=====] - 0s 2ms/step - loss: 163.1051 - mae: 5.3084 - mse: 163.1051 - val_loss: 167.3164 - val_mae: 5.5812 - val_mse: 167.3164
Epoch 1562/2000
148/148 [=====] - 0s 2ms/step - loss: 163.0492 - mae: 5.2926 - mse: 163.0492 - val_loss: 168.2056 - val_mae: 5.6206 - val_mse: 168.2056
Epoch 1563/2000
148/148 [=====] - 0s 3ms/step - loss: 163.0770 - mae: 5.3053 - mse: 163.0770 - val_loss: 167.1927 - val_mae: 5.5859 - val_mse: 167.1927
Epoch 1564/2000
148/148 [=====] - 0s 2ms/step - loss: 162.9353 - mae: 5.3002 - mse: 162.9353 - val_loss: 167.3730 - val_mae: 5.5968 - val_mse: 167.3730
Epoch 1565/2000
148/148 [=====] - 0s 2ms/step - loss: 163.0278 - mae: 5.3061 - mse: 163.0278 - val_loss: 167.5517 - val_mae: 5.6486 - val_mse: 167.5517
Epoch 1566/2000
148/148 [=====] - 0s 3ms/step - loss: 163.0008 - mae: 5.3132 - mse: 163.0008 - val_loss: 166.9474 - val_mae: 5.5956 - val_mse: 166.9474
Epoch 1567/2000
148/148 [=====] - 0s 2ms/step - loss: 163.0366 - mae: 5.3130 - mse: 163.0366 - val_loss: 167.1171 - val_mae: 5.5986 - val_mse: 167.1171
Epoch 1568/2000
148/148 [=====] - 0s 2ms/step - loss: 163.0069 - mae: 5.3097 - mse: 163.0069 - val_loss: 166.9655 - val_mae: 5.5798 - val_mse: 166.9655
Epoch 1569/2000
148/148 [=====] - 0s 2ms/step - loss: 162.9022 - mae: 5.3010 - mse: 162.9022 - val_loss: 167.4380 - val_mae: 5.6101 - val_mse: 167.4380
Epoch 1570/2000
148/148 [=====] - 0s 2ms/step - loss: 162.6704 - mae: 5.3174 - mse: 162.6704 - val_loss: 166.9327 - val_mae: 5.5950 - val_mse: 166.9327
Epoch 1571/2000
148/148 [=====] - 0s 2ms/step - loss: 162.5476 - mae: 5.2946 - mse: 162.5476 - val_loss: 167.6853 - val_mae: 5.6410 - val_mse: 167.6853
Epoch 1572/2000
148/148 [=====] - 0s 2ms/step - loss: 162.5946 - mae: 5.3267 - mse: 162.5946 - val_loss: 166.7194 - val_mae: 5.6097 - val_mse: 166.7194
Epoch 1573/2000
148/148 [=====] - 0s 2ms/step - loss: 162.4527 - mae: 5.3180 - mse: 162.4527 - val_loss: 166.8136 - val_mae: 5.5997 - val_mse: 166.8136
Epoch 1574/2000
148/148 [=====] - 0s 2ms/step - loss: 162.4073 - mae: 5.3107 - mse: 162.4073 - val_loss: 166.5223 - val_mae: 5.5956 - val_mse: 166.5223
Epoch 1575/2000
148/148 [=====] - 0s 2ms/step - loss: 162.2147 - mae: 5.3130 - mse: 162.2147 - val_loss: 166.5966 - val_mae: 5.6064 - val_mse: 166.5966
Epoch 1576/2000
148/148 [=====] - 0s 2ms/step - loss: 162.0480 - mae: 5.3073 - mse: 162.0480 - val_loss: 166.6253 - val_mae: 5.6264 - val_mse: 166.6253
Epoch 1577/2000
148/148 [=====] - 0s 2ms/step - loss: 162.0123 - mae: 5.3124 - mse: 162.0123 - val_loss: 165.7477 - val_mae: 5.6286 - val_mse: 165.7477
Epoch 1578/2000
148/148 [=====] - 0s 2ms/step - loss: 162.0132 - mae: 5.3214 - mse: 162.0132 - val_loss: 166.4200 - val_mae: 5.6171 - val_mse: 166.4200
Epoch 1579/2000
148/148 [=====] - 0s 2ms/step - loss: 161.7924 - mae: 5.3223 - mse: 161.7924 - val_loss: 166.0558 - val_mae: 5.6178 - val_mse: 166.0558
Epoch 1580/2000
148/148 [=====] - 0s 2ms/step - loss: 161.7520 - mae: 5.3304 - mse: 161.7520 - val_loss: 166.4138 - val_mae: 5.6497 - val_mse: 166.4138
Epoch 1581/2000
148/148 [=====] - 0s 2ms/step - loss: 161.6185 - mae: 5.3382 - mse: 161.6185 - val_loss: 166.4772 - val_mae: 5.6314 - val_mse: 166.4772
Epoch 1582/2000
148/148 [=====] - 0s 2ms/step - loss: 161.5573 - mae: 5.3318 - mse: 161.5573 - val_loss: 165.8548 - val_mae: 5.6283 - val_mse: 165.8548
Epoch 1583/2000
148/148 [=====] - 0s 2ms/step - loss: 161.6273 - mae: 5.3316 - mse: 161.6273 - val_loss: 166.0981 - val_mae: 5.6304 - val_mse: 166.0981
Epoch 1584/2000
148/148 [=====] - 0s 2ms/step - loss: 161.5160 - mae: 5.3275 - mse: 161.5160 - val_loss: 166.1457 - val_mae: 5.6367 - val_mse: 166.1457
Epoch 1585/2000

Epoch 1585/2000
148/148 [=====] - 0s 2ms/step - loss: 161.4371 - mae: 5.3338 - mse: 161.4371 - val_loss: 166.6200 - val_mae: 5.6591 - val_mse: 166.6200
Epoch 1586/2000
148/148 [=====] - 0s 2ms/step - loss: 161.3584 - mae: 5.3430 - mse: 161.3584 - val_loss: 166.9882 - val_mae: 5.6740 - val_mse: 166.9882
Epoch 1587/2000
148/148 [=====] - 0s 2ms/step - loss: 161.3405 - mae: 5.3480 - mse: 161.3405 - val_loss: 166.2888 - val_mae: 5.6219 - val_mse: 166.2888
Epoch 1588/2000
148/148 [=====] - 0s 2ms/step - loss: 161.2353 - mae: 5.3264 - mse: 161.2353 - val_loss: 165.7625 - val_mae: 5.6256 - val_mse: 165.7625
Epoch 1589/2000
148/148 [=====] - 0s 2ms/step - loss: 161.0927 - mae: 5.3416 - mse: 161.0927 - val_loss: 165.0272 - val_mae: 5.6446 - val_mse: 165.0272
Epoch 1590/2000
148/148 [=====] - 0s 2ms/step - loss: 161.2882 - mae: 5.3320 - mse: 161.2882 - val_loss: 165.3778 - val_mae: 5.6224 - val_mse: 165.3778
Epoch 1591/2000
148/148 [=====] - 0s 2ms/step - loss: 161.1505 - mae: 5.3293 - mse: 161.1505 - val_loss: 165.3888 - val_mae: 5.6073 - val_mse: 165.3888
Epoch 1592/2000
148/148 [=====] - 0s 2ms/step - loss: 161.0713 - mae: 5.3286 - mse: 161.0713 - val_loss: 165.5542 - val_mae: 5.6296 - val_mse: 165.5542
Epoch 1593/2000
148/148 [=====] - 0s 2ms/step - loss: 161.0648 - mae: 5.3220 - mse: 161.0648 - val_loss: 165.0233 - val_mae: 5.6134 - val_mse: 165.0233
Epoch 1594/2000
148/148 [=====] - 0s 2ms/step - loss: 160.9788 - mae: 5.3332 - mse: 160.9788 - val_loss: 165.8690 - val_mae: 5.6351 - val_mse: 165.8690
Epoch 1595/2000
148/148 [=====] - 0s 2ms/step - loss: 160.9581 - mae: 5.3447 - mse: 160.9581 - val_loss: 164.5851 - val_mae: 5.6123 - val_mse: 164.5851
Epoch 1596/2000
148/148 [=====] - 0s 2ms/step - loss: 160.5880 - mae: 5.3288 - mse: 160.5880 - val_loss: 167.9722 - val_mae: 5.7234 - val_mse: 167.9722
Epoch 1597/2000
148/148 [=====] - 0s 2ms/step - loss: 160.9953 - mae: 5.3435 - mse: 160.9953 - val_loss: 165.0647 - val_mae: 5.6015 - val_mse: 165.0647
Epoch 1598/2000
148/148 [=====] - 0s 2ms/step - loss: 160.7876 - mae: 5.3312 - mse: 160.7876 - val_loss: 165.1303 - val_mae: 5.6092 - val_mse: 165.1303
Epoch 1599/2000
148/148 [=====] - 0s 2ms/step - loss: 160.8281 - mae: 5.3368 - mse: 160.8281 - val_loss: 165.0907 - val_mae: 5.6159 - val_mse: 165.0907
Epoch 1600/2000
148/148 [=====] - 0s 2ms/step - loss: 160.8112 - mae: 5.3327 - mse: 160.8112 - val_loss: 164.8332 - val_mae: 5.6220 - val_mse: 164.8332
Epoch 1601/2000
123/148 [=====>.....] - ETA: 0s - loss: 164.2505 - mae: 5.3353 - mse: 164.2505
148/148 [=====] - 0s 2ms/step - loss: 160.7559 - mae: 5.3265 - mse: 160.7559 - val_loss: 165.2569 - val_mae: 5.6283 - val_mse: 165.2569
Epoch 1602/2000
148/148 [=====] - 0s 2ms/step - loss: 160.6405 - mae: 5.3269 - mse: 160.6405 - val_loss: 164.2673 - val_mae: 5.6056 - val_mse: 164.2673
Epoch 1603/2000
148/148 [=====] - 0s 2ms/step - loss: 160.4544 - mae: 5.3223 - mse: 160.4544 - val_loss: 165.5557 - val_mae: 5.6201 - val_mse: 165.5557
Epoch 1604/2000
148/148 [=====] - 0s 2ms/step - loss: 160.5430 - mae: 5.3251 - mse: 160.5430 - val_loss: 166.1316 - val_mae: 5.6588 - val_mse: 166.1316
Epoch 1605/2000
148/148 [=====] - 0s 2ms/step - loss: 160.4728 - mae: 5.3256 - mse: 160.4728 - val_loss: 166.4714 - val_mae: 5.6792 - val_mse: 166.4714
Epoch 1606/2000
148/148 [=====] - 0s 2ms/step - loss: 160.5708 - mae: 5.3288 - mse: 160.5708 - val_loss: 165.7536 - val_mae: 5.6560 - val_mse: 165.7536
Epoch 1607/2000
148/148 [=====] - 0s 2ms/step - loss: 160.5109 - mae: 5.3406 - mse: 160.5109 - val_loss: 164.4278 - val_mae: 5.5871 - val_mse: 164.4278
Epoch 1608/2000
148/148 [=====] - 0s 2ms/step - loss: 160.2845 - mae: 5.3103 - mse: 160.2845 - val_loss: 165.7536 - val_mae: 5.6560 - val_mse: 165.7536

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148/148 [=====] - 0s 2ms/step - loss: 160.3845 - mae: 5.3193 - m
se: 160.3845 - val_loss: 164.8137 - val_mae: 5.5957 - val_mse: 164.8137
Epoch 1609/2000
148/148 [=====] - 0s 2ms/step - loss: 160.3181 - mae: 5.3384 - m
se: 160.3181 - val_loss: 164.6105 - val_mae: 5.5827 - val_mse: 164.6105
Epoch 1610/2000
148/148 [=====] - 0s 2ms/step - loss: 160.3221 - mae: 5.3204 - m
se: 160.3221 - val_loss: 164.3257 - val_mae: 5.5906 - val_mse: 164.3257
Epoch 1611/2000
148/148 [=====] - 0s 2ms/step - loss: 160.3572 - mae: 5.3178 - m
se: 160.3572 - val_loss: 164.9551 - val_mae: 5.6211 - val_mse: 164.9551
Epoch 1612/2000
148/148 [=====] - 0s 2ms/step - loss: 160.2250 - mae: 5.3201 - m
se: 160.2250 - val_loss: 165.4314 - val_mae: 5.6339 - val_mse: 165.4314
Epoch 1613/2000
148/148 [=====] - 0s 2ms/step - loss: 160.3407 - mae: 5.3316 - m
se: 160.3407 - val_loss: 164.6747 - val_mae: 5.6191 - val_mse: 164.6747
Epoch 1614/2000
148/148 [=====] - 0s 2ms/step - loss: 160.2710 - mae: 5.3258 - m
se: 160.2710 - val_loss: 164.0853 - val_mae: 5.6308 - val_mse: 164.0853
Epoch 1615/2000
148/148 [=====] - 0s 2ms/step - loss: 160.1107 - mae: 5.3170 - m
se: 160.1107 - val_loss: 165.8869 - val_mae: 5.6503 - val_mse: 165.8869
Epoch 1616/2000
148/148 [=====] - 0s 3ms/step - loss: 160.2937 - mae: 5.3308 - m
se: 160.2937 - val_loss: 164.3586 - val_mae: 5.6147 - val_mse: 164.3586
Epoch 1617/2000
148/148 [=====] - 0s 2ms/step - loss: 160.1799 - mae: 5.3259 - m
se: 160.1799 - val_loss: 164.6901 - val_mae: 5.5955 - val_mse: 164.6901
Epoch 1618/2000
148/148 [=====] - 0s 2ms/step - loss: 160.0952 - mae: 5.3256 - m
se: 160.0952 - val_loss: 163.9956 - val_mae: 5.5885 - val_mse: 163.9956
Epoch 1619/2000
148/148 [=====] - 0s 3ms/step - loss: 160.1071 - mae: 5.3169 - m
se: 160.1071 - val_loss: 164.2960 - val_mae: 5.5995 - val_mse: 164.2960
Epoch 1620/2000
148/148 [=====] - 0s 2ms/step - loss: 160.1345 - mae: 5.3074 - m
se: 160.1345 - val_loss: 164.3155 - val_mae: 5.6094 - val_mse: 164.3155
Epoch 1621/2000
148/148 [=====] - 0s 2ms/step - loss: 159.9732 - mae: 5.3084 - m
se: 159.9732 - val_loss: 163.7594 - val_mae: 5.5599 - val_mse: 163.7594
Epoch 1622/2000
148/148 [=====] - 0s 3ms/step - loss: 160.1223 - mae: 5.3122 - m
se: 160.1223 - val_loss: 163.8045 - val_mae: 5.5887 - val_mse: 163.8045
Epoch 1623/2000
148/148 [=====] - 0s 2ms/step - loss: 159.9905 - mae: 5.3106 - m
se: 159.9905 - val_loss: 164.0205 - val_mae: 5.5909 - val_mse: 164.0205
Epoch 1624/2000
148/148 [=====] - 0s 2ms/step - loss: 159.8711 - mae: 5.3162 - m
se: 159.8711 - val_loss: 163.3465 - val_mae: 5.6005 - val_mse: 163.3465
Epoch 1625/2000
148/148 [=====] - 0s 2ms/step - loss: 160.0466 - mae: 5.3152 - m
se: 160.0466 - val_loss: 163.6651 - val_mae: 5.5758 - val_mse: 163.6651
Epoch 1626/2000
148/148 [=====] - 0s 3ms/step - loss: 159.7170 - mae: 5.3145 - m
se: 159.7170 - val_loss: 163.7628 - val_mae: 5.5762 - val_mse: 163.7628
Epoch 1627/2000
148/148 [=====] - 0s 2ms/step - loss: 159.8018 - mae: 5.3066 - m
se: 159.8018 - val_loss: 163.4504 - val_mae: 5.5652 - val_mse: 163.4504
Epoch 1628/2000
148/148 [=====] - 0s 2ms/step - loss: 159.8663 - mae: 5.3127 - m
se: 159.8663 - val_loss: 164.3287 - val_mae: 5.5864 - val_mse: 164.3287
Epoch 1629/2000
148/148 [=====] - 0s 3ms/step - loss: 159.6931 - mae: 5.3189 - m
se: 159.6931 - val_loss: 163.0692 - val_mae: 5.5485 - val_mse: 163.0692
Epoch 1630/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4386 - mae: 5.2978 - m
se: 159.4386 - val_loss: 164.1703 - val_mae: 5.5883 - val_mse: 164.1703
Epoch 1631/2000
148/148 [=====] - 0s 2ms/step - loss: 159.7852 - mae: 5.3116 - m
se: 159.7852 - val_loss: 163.5585 - val_mae: 5.5719 - val_mse: 163.5585
Epoch 1632/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4228 - mae: 5.3105 - m
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148/148 [=====] - 0s 2ms/step - loss: 159.4338 - mae: 5.3103 - m
se: 159.4338 - val_loss: 163.7306 - val_mae: 5.5694 - val_mse: 163.7306
Epoch 1633/2000
148/148 [=====] - 0s 2ms/step - loss: 159.6971 - mae: 5.2988 - m
se: 159.6971 - val_loss: 163.3702 - val_mae: 5.6023 - val_mse: 163.3702
Epoch 1634/2000
148/148 [=====] - 0s 2ms/step - loss: 159.6920 - mae: 5.3051 - m
se: 159.6920 - val_loss: 163.2438 - val_mae: 5.5615 - val_mse: 163.2438
Epoch 1635/2000
148/148 [=====] - 0s 2ms/step - loss: 159.6531 - mae: 5.2999 - m
se: 159.6531 - val_loss: 163.8844 - val_mae: 5.5892 - val_mse: 163.8844
Epoch 1636/2000
148/148 [=====] - 0s 2ms/step - loss: 159.5544 - mae: 5.3069 - m
se: 159.5544 - val_loss: 162.9292 - val_mae: 5.5605 - val_mse: 162.9292
Epoch 1637/2000
148/148 [=====] - 0s 2ms/step - loss: 159.5312 - mae: 5.2931 - m
se: 159.5312 - val_loss: 164.2843 - val_mae: 5.5945 - val_mse: 164.2843
Epoch 1638/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4573 - mae: 5.3042 - m
se: 159.4573 - val_loss: 164.7918 - val_mae: 5.6280 - val_mse: 164.7918
Epoch 1639/2000
148/148 [=====] - 0s 2ms/step - loss: 159.5535 - mae: 5.3126 - m
se: 159.5535 - val_loss: 163.6780 - val_mae: 5.5725 - val_mse: 163.6780
Epoch 1640/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4094 - mae: 5.3067 - m
se: 159.4094 - val_loss: 162.8752 - val_mae: 5.5756 - val_mse: 162.8752
Epoch 1641/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4794 - mae: 5.2960 - m
se: 159.4794 - val_loss: 163.3387 - val_mae: 5.5584 - val_mse: 163.3387
Epoch 1642/2000
148/148 [=====] - 0s 2ms/step - loss: 159.5627 - mae: 5.2873 - m
se: 159.5627 - val_loss: 163.6799 - val_mae: 5.5811 - val_mse: 163.6799
Epoch 1643/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4357 - mae: 5.2983 - m
se: 159.4357 - val_loss: 163.1803 - val_mae: 5.5493 - val_mse: 163.1803
Epoch 1644/2000
148/148 [=====] - 0s 2ms/step - loss: 159.3701 - mae: 5.2878 - m
se: 159.3701 - val_loss: 163.4191 - val_mae: 5.5776 - val_mse: 163.4191
Epoch 1645/2000
148/148 [=====] - 0s 2ms/step - loss: 159.0824 - mae: 5.3023 - m
se: 159.0824 - val_loss: 164.9791 - val_mae: 5.6242 - val_mse: 164.9791
Epoch 1646/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4185 - mae: 5.3048 - m
se: 159.4185 - val_loss: 163.1217 - val_mae: 5.5572 - val_mse: 163.1217
Epoch 1647/2000
148/148 [=====] - 0s 2ms/step - loss: 159.2974 - mae: 5.2872 - m
se: 159.2974 - val_loss: 163.9616 - val_mae: 5.5789 - val_mse: 163.9616
Epoch 1648/2000
148/148 [=====] - 0s 2ms/step - loss: 159.1875 - mae: 5.2895 - m
se: 159.1875 - val_loss: 163.4123 - val_mae: 5.5409 - val_mse: 163.4123
Epoch 1649/2000
148/148 [=====] - 0s 2ms/step - loss: 159.4129 - mae: 5.2864 - m
se: 159.4129 - val_loss: 163.4489 - val_mae: 5.5645 - val_mse: 163.4489
Epoch 1650/2000
148/148 [=====] - 0s 2ms/step - loss: 159.2445 - mae: 5.2898 - m
se: 159.2445 - val_loss: 163.0777 - val_mae: 5.5756 - val_mse: 163.0777
Epoch 1651/2000
148/148 [=====] - 0s 2ms/step - loss: 159.1688 - mae: 5.3131 - m
se: 159.1688 - val_loss: 162.9371 - val_mae: 5.5529 - val_mse: 162.9371
Epoch 1652/2000
148/148 [=====] - 0s 2ms/step - loss: 159.2281 - mae: 5.2953 - m
se: 159.2281 - val_loss: 163.4964 - val_mae: 5.5888 - val_mse: 163.4964
Epoch 1653/2000
148/148 [=====] - 0s 2ms/step - loss: 159.1883 - mae: 5.2928 - m
se: 159.1883 - val_loss: 162.7306 - val_mae: 5.5482 - val_mse: 162.7306
Epoch 1654/2000
148/148 [=====] - 0s 2ms/step - loss: 159.1036 - mae: 5.2837 - m
se: 159.1036 - val_loss: 162.3732 - val_mae: 5.5414 - val_mse: 162.3732
Epoch 1655/2000
148/148 [=====] - 0s 2ms/step - loss: 159.0767 - mae: 5.2912 - m
se: 159.0767 - val_loss: 162.6572 - val_mae: 5.5274 - val_mse: 162.6572
Epoch 1656/2000
148/148 [=====] - 0s 2ms/step - loss: 159.0042 - mae: 5.2810 - m
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148/148 [=====] - 0s 3ms/step - loss: 159.0043 - mae: 5.2819 - mse: 159.0043 - val_loss: 162.5414 - val_mae: 5.5451 - val_mse: 162.5414
Epoch 1657/2000
148/148 [=====] - 0s 2ms/step - loss: 159.0828 - mae: 5.2908 - mse: 159.0828 - val_loss: 162.3486 - val_mae: 5.5194 - val_mse: 162.3486
Epoch 1658/2000
148/148 [=====] - 0s 2ms/step - loss: 159.0087 - mae: 5.2798 - mse: 159.0087 - val_loss: 162.4234 - val_mae: 5.5564 - val_mse: 162.4234
Epoch 1659/2000
148/148 [=====] - 0s 2ms/step - loss: 158.9638 - mae: 5.2831 - mse: 158.9638 - val_loss: 162.8135 - val_mae: 5.5480 - val_mse: 162.8135
Epoch 1660/2000
148/148 [=====] - 0s 3ms/step - loss: 158.9127 - mae: 5.2881 - mse: 158.9127 - val_loss: 162.6474 - val_mae: 5.5630 - val_mse: 162.6474
Epoch 1661/2000
148/148 [=====] - 0s 2ms/step - loss: 158.8987 - mae: 5.2911 - mse: 158.8987 - val_loss: 163.1398 - val_mae: 5.5691 - val_mse: 163.1398
Epoch 1662/2000
148/148 [=====] - 0s 2ms/step - loss: 158.7971 - mae: 5.2865 - mse: 158.7971 - val_loss: 164.6383 - val_mae: 5.6376 - val_mse: 164.6383
Epoch 1663/2000
148/148 [=====] - 0s 2ms/step - loss: 158.8804 - mae: 5.2885 - mse: 158.8804 - val_loss: 164.1883 - val_mae: 5.5991 - val_mse: 164.1883
Epoch 1664/2000
148/148 [=====] - 0s 2ms/step - loss: 158.7975 - mae: 5.2872 - mse: 158.7975 - val_loss: 164.5835 - val_mae: 5.6120 - val_mse: 164.5835
Epoch 1665/2000
148/148 [=====] - 0s 2ms/step - loss: 158.9619 - mae: 5.2953 - mse: 158.9619 - val_loss: 163.2111 - val_mae: 5.5458 - val_mse: 163.2111
Epoch 1666/2000
148/148 [=====] - 0s 2ms/step - loss: 158.8242 - mae: 5.2801 - mse: 158.8242 - val_loss: 162.9372 - val_mae: 5.5259 - val_mse: 162.9372
Epoch 1667/2000
148/148 [=====] - 0s 2ms/step - loss: 158.7572 - mae: 5.2835 - mse: 158.7572 - val_loss: 161.8750 - val_mae: 5.5294 - val_mse: 161.8750
Epoch 1668/2000
148/148 [=====] - 0s 2ms/step - loss: 158.8456 - mae: 5.2653 - mse: 158.8456 - val_loss: 162.8228 - val_mae: 5.5496 - val_mse: 162.8228
Epoch 1669/2000
148/148 [=====] - 0s 2ms/step - loss: 158.7705 - mae: 5.2774 - mse: 158.7705 - val_loss: 162.9680 - val_mae: 5.5372 - val_mse: 162.9680
Epoch 1670/2000
148/148 [=====] - 0s 2ms/step - loss: 158.7527 - mae: 5.2764 - mse: 158.7527 - val_loss: 161.9465 - val_mae: 5.5224 - val_mse: 161.9465
Epoch 1671/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5718 - mae: 5.2751 - mse: 158.5718 - val_loss: 161.7056 - val_mae: 5.5260 - val_mse: 161.7056
Epoch 1672/2000
148/148 [=====] - 0s 2ms/step - loss: 158.6650 - mae: 5.2652 - mse: 158.6650 - val_loss: 162.0957 - val_mae: 5.5361 - val_mse: 162.0957
Epoch 1673/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5661 - mae: 5.2804 - mse: 158.5661 - val_loss: 163.1621 - val_mae: 5.5460 - val_mse: 163.1621
Epoch 1674/2000
148/148 [=====] - 0s 2ms/step - loss: 158.6987 - mae: 5.2888 - mse: 158.6987 - val_loss: 161.7756 - val_mae: 5.5013 - val_mse: 161.7756
Epoch 1675/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5876 - mae: 5.2706 - mse: 158.5876 - val_loss: 161.6727 - val_mae: 5.5144 - val_mse: 161.6727
Epoch 1676/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5268 - mae: 5.2710 - mse: 158.5268 - val_loss: 162.8824 - val_mae: 5.5669 - val_mse: 162.8824
Epoch 1677/2000
148/148 [=====] - 0s 2ms/step - loss: 158.6267 - mae: 5.2957 - mse: 158.6267 - val_loss: 161.6628 - val_mae: 5.5035 - val_mse: 161.6628
Epoch 1678/2000
148/148 [=====] - 0s 2ms/step - loss: 158.6282 - mae: 5.2627 - mse: 158.6282 - val_loss: 162.5464 - val_mae: 5.5389 - val_mse: 162.5464
Epoch 1679/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5991 - mae: 5.2803 - mse: 158.5991 - val_loss: 162.0105 - val_mae: 5.5164 - val_mse: 162.0105
Epoch 1680/2000
148/148 [=====] - 0s 2ms/step - loss: 158.5047 - mae: 5.2772 - mse: 158.5047 - val_loss: 162.0105 - val_mae: 5.5164 - val_mse: 162.0105

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148/148 [=====] - 0s 2ms/step - loss: 158.5047 - mae: 5.2772 - m
se: 158.5047 - val_loss: 161.4387 - val_mae: 5.4951 - val_mse: 161.4387
Epoch 1681/2000
148/148 [=====] - 0s 2ms/step - loss: 158.4167 - mae: 5.2624 - m
se: 158.4167 - val_loss: 161.4508 - val_mae: 5.5229 - val_mse: 161.4508
Epoch 1682/2000
148/148 [=====] - 0s 2ms/step - loss: 158.4638 - mae: 5.2722 - m
se: 158.4638 - val_loss: 161.4730 - val_mae: 5.5078 - val_mse: 161.4730
Epoch 1683/2000
148/148 [=====] - 0s 2ms/step - loss: 158.4367 - mae: 5.2635 - m
se: 158.4367 - val_loss: 162.0916 - val_mae: 5.5310 - val_mse: 162.0916
Epoch 1684/2000
148/148 [=====] - 0s 2ms/step - loss: 158.4402 - mae: 5.2757 - m
se: 158.4402 - val_loss: 161.6895 - val_mae: 5.5330 - val_mse: 161.6895
Epoch 1685/2000
148/148 [=====] - 0s 2ms/step - loss: 158.4096 - mae: 5.2894 - m
se: 158.4096 - val_loss: 161.6785 - val_mae: 5.5151 - val_mse: 161.6785
Epoch 1686/2000
148/148 [=====] - 0s 2ms/step - loss: 158.3237 - mae: 5.2746 - m
se: 158.3237 - val_loss: 161.7437 - val_mae: 5.5076 - val_mse: 161.7437
Epoch 1687/2000
148/148 [=====] - 0s 2ms/step - loss: 158.1996 - mae: 5.2815 - m
se: 158.1996 - val_loss: 161.4514 - val_mae: 5.4919 - val_mse: 161.4514
Epoch 1688/2000
148/148 [=====] - 0s 2ms/step - loss: 158.1182 - mae: 5.2579 - m
se: 158.1182 - val_loss: 161.9207 - val_mae: 5.5238 - val_mse: 161.9207
Epoch 1689/2000
148/148 [=====] - 0s 2ms/step - loss: 158.2970 - mae: 5.2729 - m
se: 158.2970 - val_loss: 161.7685 - val_mae: 5.5114 - val_mse: 161.7685
Epoch 1690/2000
148/148 [=====] - 0s 2ms/step - loss: 158.2054 - mae: 5.2638 - m
se: 158.2054 - val_loss: 162.6363 - val_mae: 5.5411 - val_mse: 162.6363
Epoch 1691/2000
148/148 [=====] - 0s 2ms/step - loss: 158.3115 - mae: 5.2785 - m
se: 158.3115 - val_loss: 161.3409 - val_mae: 5.5048 - val_mse: 161.3409
Epoch 1692/2000
148/148 [=====] - 0s 2ms/step - loss: 158.2471 - mae: 5.2670 - m
se: 158.2471 - val_loss: 161.4080 - val_mae: 5.5006 - val_mse: 161.4080
Epoch 1693/2000
148/148 [=====] - 0s 3ms/step - loss: 158.1546 - mae: 5.2633 - m
se: 158.1546 - val_loss: 161.1502 - val_mae: 5.5084 - val_mse: 161.1502
Epoch 1694/2000
148/148 [=====] - 0s 2ms/step - loss: 158.2155 - mae: 5.2673 - m
se: 158.2155 - val_loss: 162.0733 - val_mae: 5.5261 - val_mse: 162.0733
Epoch 1695/2000
148/148 [=====] - 0s 2ms/step - loss: 158.0992 - mae: 5.2735 - m
se: 158.0992 - val_loss: 161.4765 - val_mae: 5.5229 - val_mse: 161.4765
Epoch 1696/2000
148/148 [=====] - 0s 2ms/step - loss: 158.0494 - mae: 5.2606 - m
se: 158.0494 - val_loss: 162.5225 - val_mae: 5.5737 - val_mse: 162.5225
Epoch 1697/2000
148/148 [=====] - 0s 2ms/step - loss: 157.9344 - mae: 5.2697 - m
se: 157.9344 - val_loss: 163.2389 - val_mae: 5.5919 - val_mse: 163.2389
Epoch 1698/2000
148/148 [=====] - 0s 2ms/step - loss: 158.0056 - mae: 5.2760 - m
se: 158.0056 - val_loss: 162.5582 - val_mae: 5.5681 - val_mse: 162.5582
Epoch 1699/2000
148/148 [=====] - 0s 3ms/step - loss: 157.9375 - mae: 5.2639 - m
se: 157.9375 - val_loss: 162.2228 - val_mae: 5.5397 - val_mse: 162.2228
Epoch 1700/2000
148/148 [=====] - 0s 2ms/step - loss: 157.9952 - mae: 5.2743 - m
se: 157.9952 - val_loss: 161.0602 - val_mae: 5.4934 - val_mse: 161.0602
Epoch 1701/2000
124/148 [=====>.....] - ETA: 0s - loss: 155.9331 - mae: 5.2676 - mse:
155.9331
148/148 [=====] - 0s 2ms/step - loss: 157.9951 - mae: 5.2638 - m
se: 157.9951 - val_loss: 160.8457 - val_mae: 5.5112 - val_mse: 160.8457
Epoch 1702/2000
148/148 [=====] - 0s 2ms/step - loss: 157.8900 - mae: 5.2787 - m
se: 157.8900 - val_loss: 160.5813 - val_mae: 5.4944 - val_mse: 160.5813
Epoch 1703/2000
148/148 [=====] - 0s 2ms/step - loss: 157.8500 - mae: 5.2646 - m
se: 157.8500 - val_loss: 161.7007 - val_mae: 5.5470 - val_mse: 161.7007
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se: 157.8500 - val_loss: 161.7087 - val_mae: 5.5479 - val_mse: 161.7087
Epoch 1704/2000
148/148 [=====] - 0s 2ms/step - loss: 157.8813 - mae: 5.2691 - m
se: 157.8813 - val_loss: 161.3581 - val_mae: 5.5321 - val_mse: 161.3581
Epoch 1705/2000
148/148 [=====] - 0s 3ms/step - loss: 157.8847 - mae: 5.2738 - m
se: 157.8847 - val_loss: 161.2841 - val_mae: 5.5140 - val_mse: 161.2841
Epoch 1706/2000
148/148 [=====] - 0s 2ms/step - loss: 157.9121 - mae: 5.2639 - m
se: 157.9121 - val_loss: 161.3401 - val_mae: 5.5211 - val_mse: 161.3401
Epoch 1707/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7504 - mae: 5.2681 - m
se: 157.7504 - val_loss: 162.1646 - val_mae: 5.5690 - val_mse: 162.1646
Epoch 1708/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6090 - mae: 5.2963 - m
se: 157.6090 - val_loss: 162.3829 - val_mae: 5.5665 - val_mse: 162.3829
Epoch 1709/2000
148/148 [=====] - 0s 2ms/step - loss: 157.9558 - mae: 5.2746 - m
se: 157.9558 - val_loss: 161.7509 - val_mae: 5.5269 - val_mse: 161.7509
Epoch 1710/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7762 - mae: 5.2705 - m
se: 157.7762 - val_loss: 161.2668 - val_mae: 5.4899 - val_mse: 161.2668
Epoch 1711/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7966 - mae: 5.2642 - m
se: 157.7966 - val_loss: 161.2099 - val_mae: 5.4821 - val_mse: 161.2099
Epoch 1712/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6889 - mae: 5.2516 - m
se: 157.6889 - val_loss: 162.0632 - val_mae: 5.5511 - val_mse: 162.0632
Epoch 1713/2000
148/148 [=====] - 0s 2ms/step - loss: 157.8974 - mae: 5.2768 - m
se: 157.8974 - val_loss: 161.1942 - val_mae: 5.5046 - val_mse: 161.1942
Epoch 1714/2000
148/148 [=====] - 0s 2ms/step - loss: 157.8513 - mae: 5.2616 - m
se: 157.8513 - val_loss: 161.0898 - val_mae: 5.4975 - val_mse: 161.0898
Epoch 1715/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7465 - mae: 5.2510 - m
se: 157.7465 - val_loss: 161.7967 - val_mae: 5.5388 - val_mse: 161.7967
Epoch 1716/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7450 - mae: 5.2509 - m
se: 157.7450 - val_loss: 161.8345 - val_mae: 5.5343 - val_mse: 161.8345
Epoch 1717/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7262 - mae: 5.2700 - m
se: 157.7262 - val_loss: 160.7679 - val_mae: 5.4676 - val_mse: 160.7679
Epoch 1718/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6163 - mae: 5.2609 - m
se: 157.6163 - val_loss: 159.8308 - val_mae: 5.4605 - val_mse: 159.8308
Epoch 1719/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7557 - mae: 5.2578 - m
se: 157.7557 - val_loss: 159.9937 - val_mae: 5.4620 - val_mse: 159.9937
Epoch 1720/2000
148/148 [=====] - 0s 2ms/step - loss: 157.7342 - mae: 5.2607 - m
se: 157.7342 - val_loss: 160.3954 - val_mae: 5.4871 - val_mse: 160.3954
Epoch 1721/2000
148/148 [=====] - 0s 2ms/step - loss: 157.5220 - mae: 5.2611 - m
se: 157.5220 - val_loss: 161.7313 - val_mae: 5.5328 - val_mse: 161.7313
Epoch 1722/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6158 - mae: 5.2614 - m
se: 157.6158 - val_loss: 161.0027 - val_mae: 5.5222 - val_mse: 161.0027
Epoch 1723/2000
148/148 [=====] - 0s 2ms/step - loss: 157.5619 - mae: 5.2616 - m
se: 157.5619 - val_loss: 160.2447 - val_mae: 5.4710 - val_mse: 160.2447
Epoch 1724/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6303 - mae: 5.2586 - m
se: 157.6303 - val_loss: 160.5585 - val_mae: 5.4977 - val_mse: 160.5585
Epoch 1725/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6574 - mae: 5.2589 - m
se: 157.6574 - val_loss: 160.1545 - val_mae: 5.4931 - val_mse: 160.1545
Epoch 1726/2000
148/148 [=====] - 0s 2ms/step - loss: 157.3490 - mae: 5.2494 - m
se: 157.3490 - val_loss: 162.0324 - val_mae: 5.5634 - val_mse: 162.0324
Epoch 1727/2000
148/148 [=====] - 0s 2ms/step - loss: 157.6059 - mae: 5.2772 - m
se: 157.6059 - val_loss: 160.0512 - val_mae: 5.4727 - val_mse: 160.0512
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se: 157.6059 - val_loss: 160.0515 - val_mae: 5.4727 - val_mse: 160.0515
Epoch 1728/2000
148/148 [=====] - 0s 2ms/step - loss: 157.5022 - mae: 5.2522 - m
se: 157.5022 - val_loss: 160.6057 - val_mae: 5.4801 - val_mse: 160.6057
Epoch 1729/2000
148/148 [=====] - 0s 2ms/step - loss: 157.4289 - mae: 5.2539 - m
se: 157.4289 - val_loss: 160.1284 - val_mae: 5.4826 - val_mse: 160.1284
Epoch 1730/2000
148/148 [=====] - 0s 2ms/step - loss: 157.4122 - mae: 5.2562 - m
se: 157.4122 - val_loss: 160.2135 - val_mae: 5.4732 - val_mse: 160.2135
Epoch 1731/2000
148/148 [=====] - 0s 2ms/step - loss: 157.5003 - mae: 5.2593 - m
se: 157.5003 - val_loss: 160.1072 - val_mae: 5.4773 - val_mse: 160.1072
Epoch 1732/2000
148/148 [=====] - 0s 2ms/step - loss: 157.4120 - mae: 5.2459 - m
se: 157.4120 - val_loss: 160.9873 - val_mae: 5.5359 - val_mse: 160.9873
Epoch 1733/2000
148/148 [=====] - 0s 2ms/step - loss: 157.3057 - mae: 5.2643 - m
se: 157.3057 - val_loss: 161.7878 - val_mae: 5.5434 - val_mse: 161.7878
Epoch 1734/2000
148/148 [=====] - 0s 2ms/step - loss: 157.4359 - mae: 5.2554 - m
se: 157.4359 - val_loss: 161.0115 - val_mae: 5.5393 - val_mse: 161.0115
Epoch 1735/2000
148/148 [=====] - 0s 3ms/step - loss: 157.3743 - mae: 5.2650 - m
se: 157.3743 - val_loss: 160.3811 - val_mae: 5.4934 - val_mse: 160.3811
Epoch 1736/2000
148/148 [=====] - 0s 2ms/step - loss: 157.2505 - mae: 5.2606 - m
se: 157.2505 - val_loss: 159.6801 - val_mae: 5.4866 - val_mse: 159.6801
Epoch 1737/2000
148/148 [=====] - 0s 3ms/step - loss: 157.2926 - mae: 5.2699 - m
se: 157.2926 - val_loss: 159.8484 - val_mae: 5.4728 - val_mse: 159.8484
Epoch 1738/2000
148/148 [=====] - 0s 2ms/step - loss: 157.3332 - mae: 5.2458 - m
se: 157.3332 - val_loss: 160.8220 - val_mae: 5.5207 - val_mse: 160.8220
Epoch 1739/2000
148/148 [=====] - 0s 2ms/step - loss: 157.2189 - mae: 5.2588 - m
se: 157.2189 - val_loss: 160.5523 - val_mae: 5.5058 - val_mse: 160.5523
Epoch 1740/2000
148/148 [=====] - 0s 2ms/step - loss: 157.0338 - mae: 5.2545 - m
se: 157.0338 - val_loss: 162.0908 - val_mae: 5.5854 - val_mse: 162.0908
Epoch 1741/2000
148/148 [=====] - 0s 3ms/step - loss: 157.1437 - mae: 5.2844 - m
se: 157.1437 - val_loss: 159.3672 - val_mae: 5.4652 - val_mse: 159.3672
Epoch 1742/2000
148/148 [=====] - 0s 2ms/step - loss: 157.2479 - mae: 5.2556 - m
se: 157.2479 - val_loss: 159.8450 - val_mae: 5.4899 - val_mse: 159.8450
Epoch 1743/2000
148/148 [=====] - 0s 2ms/step - loss: 157.1521 - mae: 5.2773 - m
se: 157.1521 - val_loss: 159.4980 - val_mae: 5.4487 - val_mse: 159.4980
Epoch 1744/2000
148/148 [=====] - 0s 3ms/step - loss: 157.0874 - mae: 5.2427 - m
se: 157.0874 - val_loss: 160.3746 - val_mae: 5.4902 - val_mse: 160.3746
Epoch 1745/2000
148/148 [=====] - 0s 3ms/step - loss: 157.0022 - mae: 5.2562 - m
se: 157.0022 - val_loss: 160.2517 - val_mae: 5.5086 - val_mse: 160.2517
Epoch 1746/2000
148/148 [=====] - 0s 3ms/step - loss: 156.9277 - mae: 5.2600 - m
se: 156.9277 - val_loss: 160.4326 - val_mae: 5.5100 - val_mse: 160.4326
Epoch 1747/2000
148/148 [=====] - 0s 3ms/step - loss: 157.1841 - mae: 5.2552 - m
se: 157.1841 - val_loss: 160.2965 - val_mae: 5.4965 - val_mse: 160.2965
Epoch 1748/2000
148/148 [=====] - 0s 2ms/step - loss: 156.8578 - mae: 5.2618 - m
se: 156.8578 - val_loss: 159.6949 - val_mae: 5.4546 - val_mse: 159.6949
Epoch 1749/2000
148/148 [=====] - 0s 3ms/step - loss: 156.9875 - mae: 5.2433 - m
se: 156.9875 - val_loss: 160.2665 - val_mae: 5.5094 - val_mse: 160.2665
Epoch 1750/2000
148/148 [=====] - 0s 2ms/step - loss: 156.9475 - mae: 5.2558 - m
se: 156.9475 - val_loss: 159.4372 - val_mae: 5.4980 - val_mse: 159.4372
Epoch 1751/2000
148/148 [=====] - 0s 2ms/step - loss: 156.9756 - mae: 5.2647 - m
se: 156.9756 - val_loss: 160.0642 - val_mae: 5.4864 - val_mse: 160.0642
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se: 156.9756 - val_loss: 160.0643 - val_mae: 5.4964 - val_mse: 160.0643
Epoch 1752/2000
148/148 [=====] - 0s 3ms/step - loss: 156.9800 - mae: 5.2677 - mse: 156.9800 - val_loss: 159.7357 - val_mae: 5.4670 - val_mse: 159.7357
Epoch 1753/2000
148/148 [=====] - 0s 2ms/step - loss: 156.8973 - mae: 5.2621 - mse: 156.8973 - val_loss: 160.0666 - val_mae: 5.4910 - val_mse: 160.0666
Epoch 1754/2000
148/148 [=====] - 0s 3ms/step - loss: 156.9105 - mae: 5.2634 - mse: 156.9105 - val_loss: 159.5952 - val_mae: 5.4731 - val_mse: 159.5952
Epoch 1755/2000
148/148 [=====] - 0s 2ms/step - loss: 156.7991 - mae: 5.2577 - mse: 156.7991 - val_loss: 159.9536 - val_mae: 5.4865 - val_mse: 159.9536
Epoch 1756/2000
148/148 [=====] - 0s 2ms/step - loss: 156.5399 - mae: 5.2561 - mse: 156.5399 - val_loss: 162.2623 - val_mae: 5.6005 - val_mse: 162.2623
Epoch 1757/2000
148/148 [=====] - 0s 2ms/step - loss: 157.0475 - mae: 5.2704 - mse: 157.0475 - val_loss: 160.5841 - val_mae: 5.5044 - val_mse: 160.5841
Epoch 1758/2000
148/148 [=====] - 0s 2ms/step - loss: 156.7800 - mae: 5.2409 - mse: 156.7800 - val_loss: 160.9535 - val_mae: 5.5508 - val_mse: 160.9535
Epoch 1759/2000
148/148 [=====] - 0s 2ms/step - loss: 156.9963 - mae: 5.2570 - mse: 156.9963 - val_loss: 160.7952 - val_mae: 5.5195 - val_mse: 160.7952
Epoch 1760/2000
148/148 [=====] - 0s 2ms/step - loss: 156.8862 - mae: 5.2598 - mse: 156.8862 - val_loss: 159.1230 - val_mae: 5.4570 - val_mse: 159.1230
Epoch 1761/2000
148/148 [=====] - 0s 2ms/step - loss: 156.8475 - mae: 5.2514 - mse: 156.8475 - val_loss: 159.1434 - val_mae: 5.4639 - val_mse: 159.1434
Epoch 1762/2000
148/148 [=====] - 0s 2ms/step - loss: 156.7451 - mae: 5.2517 - mse: 156.7451 - val_loss: 159.7922 - val_mae: 5.4813 - val_mse: 159.7922
Epoch 1763/2000
148/148 [=====] - 0s 2ms/step - loss: 156.9055 - mae: 5.2481 - mse: 156.9055 - val_loss: 159.5410 - val_mae: 5.4724 - val_mse: 159.5410
Epoch 1764/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4742 - mae: 5.2497 - mse: 156.4742 - val_loss: 159.4389 - val_mae: 5.4502 - val_mse: 159.4389
Epoch 1765/2000
148/148 [=====] - 0s 2ms/step - loss: 156.6964 - mae: 5.2461 - mse: 156.6964 - val_loss: 159.5280 - val_mae: 5.4692 - val_mse: 159.5280
Epoch 1766/2000
148/148 [=====] - 0s 2ms/step - loss: 156.5497 - mae: 5.2435 - mse: 156.5497 - val_loss: 160.8083 - val_mae: 5.5280 - val_mse: 160.8083
Epoch 1767/2000
148/148 [=====] - 0s 2ms/step - loss: 156.7238 - mae: 5.2694 - mse: 156.7238 - val_loss: 159.6613 - val_mae: 5.4606 - val_mse: 159.6613
Epoch 1768/2000
148/148 [=====] - 0s 2ms/step - loss: 156.6840 - mae: 5.2527 - mse: 156.6840 - val_loss: 160.1602 - val_mae: 5.5270 - val_mse: 160.1602
Epoch 1769/2000
148/148 [=====] - 0s 2ms/step - loss: 156.7171 - mae: 5.2623 - mse: 156.7171 - val_loss: 159.2170 - val_mae: 5.4755 - val_mse: 159.2170
Epoch 1770/2000
148/148 [=====] - 0s 2ms/step - loss: 156.6620 - mae: 5.2474 - mse: 156.6620 - val_loss: 159.0144 - val_mae: 5.4658 - val_mse: 159.0144
Epoch 1771/2000
148/148 [=====] - 0s 2ms/step - loss: 156.6319 - mae: 5.2472 - mse: 156.6319 - val_loss: 159.2437 - val_mae: 5.4706 - val_mse: 159.2437
Epoch 1772/2000
148/148 [=====] - 0s 2ms/step - loss: 156.5358 - mae: 5.2493 - mse: 156.5358 - val_loss: 159.5919 - val_mae: 5.5145 - val_mse: 159.5919
Epoch 1773/2000
148/148 [=====] - 0s 2ms/step - loss: 156.3837 - mae: 5.2549 - mse: 156.3837 - val_loss: 159.6658 - val_mae: 5.5164 - val_mse: 159.6658
Epoch 1774/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4678 - mae: 5.2587 - mse: 156.4678 - val_loss: 159.2781 - val_mae: 5.4732 - val_mse: 159.2781
Epoch 1775/2000
148/148 [=====] - 0s 2ms/step - loss: 156.5384 - mae: 5.2626 - mse: 156.5384 - val_loss: 159.2222 - val_mae: 5.4477 - val_mse: 159.2222

se: 156.3384 - val_loss: 158.3332 - val_mae: 5.4477 - val_mse: 158.3332
Epoch 1776/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4065 - mae: 5.2529 - mse: 156.4065 - val_loss: 159.1090 - val_mae: 5.4987 - val_mse: 159.1090
Epoch 1777/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4077 - mae: 5.2663 - mse: 156.4077 - val_loss: 159.3010 - val_mae: 5.4718 - val_mse: 159.3010
Epoch 1778/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1668 - mae: 5.2798 - mse: 156.1668 - val_loss: 158.1313 - val_mae: 5.4805 - val_mse: 158.1313
Epoch 1779/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4650 - mae: 5.2408 - mse: 156.4650 - val_loss: 158.8985 - val_mae: 5.4684 - val_mse: 158.8985
Epoch 1780/2000
148/148 [=====] - 0s 3ms/step - loss: 156.4064 - mae: 5.2504 - mse: 156.4064 - val_loss: 158.7182 - val_mae: 5.4804 - val_mse: 158.7182
Epoch 1781/2000
148/148 [=====] - 0s 2ms/step - loss: 156.2778 - mae: 5.2535 - mse: 156.2778 - val_loss: 158.7708 - val_mae: 5.4749 - val_mse: 158.7708
Epoch 1782/2000
148/148 [=====] - 0s 2ms/step - loss: 156.2406 - mae: 5.2582 - mse: 156.2406 - val_loss: 158.1659 - val_mae: 5.4962 - val_mse: 158.1659
Epoch 1783/2000
148/148 [=====] - 0s 2ms/step - loss: 156.2841 - mae: 5.2358 - mse: 156.2841 - val_loss: 159.7337 - val_mae: 5.5034 - val_mse: 159.7337
Epoch 1784/2000
148/148 [=====] - 0s 2ms/step - loss: 156.4356 - mae: 5.2625 - mse: 156.4356 - val_loss: 159.1626 - val_mae: 5.4476 - val_mse: 159.1626
Epoch 1785/2000
148/148 [=====] - 0s 2ms/step - loss: 156.2458 - mae: 5.2546 - mse: 156.2458 - val_loss: 158.4668 - val_mae: 5.4475 - val_mse: 158.4668
Epoch 1786/2000
148/148 [=====] - 0s 2ms/step - loss: 156.3545 - mae: 5.2467 - mse: 156.3545 - val_loss: 158.3602 - val_mae: 5.4625 - val_mse: 158.3602
Epoch 1787/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1500 - mae: 5.2565 - mse: 156.1500 - val_loss: 157.7612 - val_mae: 5.4512 - val_mse: 157.7612
Epoch 1788/2000
148/148 [=====] - 0s 2ms/step - loss: 156.3908 - mae: 5.2395 - mse: 156.3908 - val_loss: 158.5746 - val_mae: 5.4804 - val_mse: 158.5746
Epoch 1789/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1578 - mae: 5.2651 - mse: 156.1578 - val_loss: 159.3111 - val_mae: 5.4696 - val_mse: 159.3111
Epoch 1790/2000
148/148 [=====] - 0s 2ms/step - loss: 156.0704 - mae: 5.2464 - mse: 156.0704 - val_loss: 157.7480 - val_mae: 5.4327 - val_mse: 157.7480
Epoch 1791/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1764 - mae: 5.2534 - mse: 156.1764 - val_loss: 158.0282 - val_mae: 5.4172 - val_mse: 158.0282
Epoch 1792/2000
148/148 [=====] - 0s 3ms/step - loss: 156.2304 - mae: 5.2349 - mse: 156.2304 - val_loss: 158.7011 - val_mae: 5.4526 - val_mse: 158.7011
Epoch 1793/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1162 - mae: 5.2481 - mse: 156.1162 - val_loss: 157.7838 - val_mae: 5.4526 - val_mse: 157.7838
Epoch 1794/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1499 - mae: 5.2497 - mse: 156.1499 - val_loss: 157.5742 - val_mae: 5.4802 - val_mse: 157.5742
Epoch 1795/2000
148/148 [=====] - 0s 2ms/step - loss: 156.2371 - mae: 5.2355 - mse: 156.2371 - val_loss: 158.3261 - val_mae: 5.4354 - val_mse: 158.3261
Epoch 1796/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1653 - mae: 5.2451 - mse: 156.1653 - val_loss: 157.6145 - val_mae: 5.4498 - val_mse: 157.6145
Epoch 1797/2000
148/148 [=====] - 0s 2ms/step - loss: 155.9797 - mae: 5.2233 - mse: 155.9797 - val_loss: 159.5559 - val_mae: 5.5186 - val_mse: 159.5559
Epoch 1798/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1678 - mae: 5.2616 - mse: 156.1678 - val_loss: 158.3037 - val_mae: 5.4367 - val_mse: 158.3037
Epoch 1799/2000
148/148 [=====] - 0s 2ms/step - loss: 156.0700 - mae: 5.2271 - mse: 156.0700 - val_loss: 158.7120 - val_mae: 5.4642 - val_mse: 158.7120

se: 156.0700 - val_loss: 158.7129 - val_mae: 5.4643 - val_mse: 158.7129
Epoch 1800/2000
148/148 [=====] - 0s 2ms/step - loss: 156.1197 - mae: 5.2322 - mse: 156.1197 - val_loss: 158.7944 - val_mae: 5.4657 - val_mse: 158.7944
Epoch 1801/2000
120/148 [=====>.....] - ETA: 0s - loss: 164.9458 - mae: 5.3496 - mse: 164.9458
148/148 [=====] - 0s 2ms/step - loss: 156.0418 - mae: 5.2265 - mse: 156.0418 - val_loss: 160.2113 - val_mae: 5.5334 - val_mse: 160.2113
Epoch 1802/2000
148/148 [=====] - 0s 2ms/step - loss: 156.3958 - mae: 5.2535 - mse: 156.3958 - val_loss: 158.5197 - val_mae: 5.4436 - val_mse: 158.5197
Epoch 1803/2000
148/148 [=====] - 0s 2ms/step - loss: 156.0082 - mae: 5.2392 - mse: 156.0082 - val_loss: 158.4561 - val_mae: 5.4635 - val_mse: 158.4561
Epoch 1804/2000
148/148 [=====] - 0s 2ms/step - loss: 156.0594 - mae: 5.2483 - mse: 156.0594 - val_loss: 159.1254 - val_mae: 5.4704 - val_mse: 159.1254
Epoch 1805/2000
148/148 [=====] - 0s 2ms/step - loss: 156.0382 - mae: 5.2404 - mse: 156.0382 - val_loss: 157.7302 - val_mae: 5.4209 - val_mse: 157.7302
Epoch 1806/2000
148/148 [=====] - 0s 2ms/step - loss: 155.9809 - mae: 5.2275 - mse: 155.9809 - val_loss: 157.9838 - val_mae: 5.4335 - val_mse: 157.9838
Epoch 1807/2000
148/148 [=====] - 0s 2ms/step - loss: 155.8509 - mae: 5.2268 - mse: 155.8509 - val_loss: 157.2687 - val_mae: 5.4058 - val_mse: 157.2687
Epoch 1808/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7769 - mae: 5.2318 - mse: 155.7769 - val_loss: 157.8364 - val_mae: 5.4846 - val_mse: 157.8364
Epoch 1809/2000
148/148 [=====] - 0s 3ms/step - loss: 155.8861 - mae: 5.2383 - mse: 155.8861 - val_loss: 158.3078 - val_mae: 5.4535 - val_mse: 158.3078
Epoch 1810/2000
148/148 [=====] - 0s 2ms/step - loss: 155.8096 - mae: 5.2570 - mse: 155.8096 - val_loss: 157.3316 - val_mae: 5.4188 - val_mse: 157.3316
Epoch 1811/2000
148/148 [=====] - 0s 3ms/step - loss: 155.9425 - mae: 5.2364 - mse: 155.9425 - val_loss: 157.4261 - val_mae: 5.4137 - val_mse: 157.4261
Epoch 1812/2000
148/148 [=====] - 0s 2ms/step - loss: 155.8178 - mae: 5.2285 - mse: 155.8178 - val_loss: 157.2539 - val_mae: 5.4298 - val_mse: 157.2539
Epoch 1813/2000
148/148 [=====] - 0s 3ms/step - loss: 155.8607 - mae: 5.2341 - mse: 155.8607 - val_loss: 157.8105 - val_mae: 5.4457 - val_mse: 157.8105
Epoch 1814/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7685 - mae: 5.2506 - mse: 155.7685 - val_loss: 157.1665 - val_mae: 5.4351 - val_mse: 157.1665
Epoch 1815/2000
148/148 [=====] - 0s 2ms/step - loss: 155.8042 - mae: 5.2404 - mse: 155.8042 - val_loss: 157.0193 - val_mae: 5.4124 - val_mse: 157.0193
Epoch 1816/2000
148/148 [=====] - 0s 3ms/step - loss: 155.7660 - mae: 5.2279 - mse: 155.7660 - val_loss: 157.2589 - val_mae: 5.4354 - val_mse: 157.2589
Epoch 1817/2000
148/148 [=====] - 0s 3ms/step - loss: 155.6935 - mae: 5.2363 - mse: 155.6935 - val_loss: 157.4289 - val_mae: 5.4451 - val_mse: 157.4289
Epoch 1818/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7601 - mae: 5.2524 - mse: 155.7601 - val_loss: 157.0932 - val_mae: 5.4088 - val_mse: 157.0932
Epoch 1819/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7757 - mae: 5.2316 - mse: 155.7757 - val_loss: 157.1057 - val_mae: 5.4264 - val_mse: 157.1057
Epoch 1820/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7574 - mae: 5.2390 - mse: 155.7574 - val_loss: 157.2208 - val_mae: 5.4176 - val_mse: 157.2208
Epoch 1821/2000
148/148 [=====] - 0s 3ms/step - loss: 155.4961 - mae: 5.2454 - mse: 155.4961 - val_loss: 156.8872 - val_mae: 5.4368 - val_mse: 156.8872
Epoch 1822/2000
148/148 [=====] - 0s 2ms/step - loss: 155.7223 - mae: 5.2348 - mse: 155.7223 - val_loss: 157.1658 - val_mae: 5.4331 - val_mse: 157.1658
Epoch 1823/2000

Epoch 1823/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5257 - mae: 5.2390 - mse: 155.5257 - val_loss: 156.3859 - val_mae: 5.4000 - val_mse: 156.3859
Epoch 1824/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5720 - mae: 5.2168 - mse: 155.5720 - val_loss: 157.7168 - val_mae: 5.4648 - val_mse: 157.7168
Epoch 1825/2000
148/148 [=====] - 0s 3ms/step - loss: 155.5662 - mae: 5.2391 - mse: 155.5662 - val_loss: 156.2273 - val_mae: 5.4100 - val_mse: 156.2273
Epoch 1826/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5940 - mae: 5.2290 - mse: 155.5940 - val_loss: 157.5022 - val_mae: 5.4303 - val_mse: 157.5022
Epoch 1827/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5625 - mae: 5.2350 - mse: 155.5625 - val_loss: 157.1493 - val_mae: 5.4378 - val_mse: 157.1493
Epoch 1828/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5757 - mae: 5.2440 - mse: 155.5757 - val_loss: 157.1319 - val_mae: 5.4281 - val_mse: 157.1319
Epoch 1829/2000
148/148 [=====] - 0s 3ms/step - loss: 155.2805 - mae: 5.2272 - mse: 155.2805 - val_loss: 158.9159 - val_mae: 5.5237 - val_mse: 158.9159
Epoch 1830/2000
148/148 [=====] - 0s 2ms/step - loss: 155.5174 - mae: 5.2621 - mse: 155.5174 - val_loss: 157.8174 - val_mae: 5.4645 - val_mse: 157.8174
Epoch 1831/2000
148/148 [=====] - 0s 2ms/step - loss: 155.4383 - mae: 5.2424 - mse: 155.4383 - val_loss: 156.6060 - val_mae: 5.3915 - val_mse: 156.6060
Epoch 1832/2000
148/148 [=====] - 0s 2ms/step - loss: 155.4896 - mae: 5.2335 - mse: 155.4896 - val_loss: 156.3479 - val_mae: 5.4444 - val_mse: 156.3479
Epoch 1833/2000
148/148 [=====] - 0s 2ms/step - loss: 155.2354 - mae: 5.2277 - mse: 155.2354 - val_loss: 158.8200 - val_mae: 5.5091 - val_mse: 158.8200
Epoch 1834/2000
148/148 [=====] - 0s 2ms/step - loss: 155.4723 - mae: 5.2472 - mse: 155.4723 - val_loss: 157.7966 - val_mae: 5.4459 - val_mse: 157.7966
Epoch 1835/2000
148/148 [=====] - 0s 2ms/step - loss: 155.4058 - mae: 5.2306 - mse: 155.4058 - val_loss: 156.6435 - val_mae: 5.4493 - val_mse: 156.6435
Epoch 1836/2000
148/148 [=====] - 0s 2ms/step - loss: 155.3177 - mae: 5.2352 - mse: 155.3177 - val_loss: 157.0438 - val_mae: 5.4097 - val_mse: 157.0438
Epoch 1837/2000
148/148 [=====] - 0s 2ms/step - loss: 155.4790 - mae: 5.2357 - mse: 155.4790 - val_loss: 157.5783 - val_mae: 5.4456 - val_mse: 157.5783
Epoch 1838/2000
148/148 [=====] - 0s 2ms/step - loss: 155.3004 - mae: 5.2346 - mse: 155.3004 - val_loss: 156.6468 - val_mae: 5.4081 - val_mse: 156.6468
Epoch 1839/2000
148/148 [=====] - 0s 2ms/step - loss: 155.3221 - mae: 5.2175 - mse: 155.3221 - val_loss: 156.7284 - val_mae: 5.4481 - val_mse: 156.7284
Epoch 1840/2000
148/148 [=====] - 0s 2ms/step - loss: 155.1282 - mae: 5.2260 - mse: 155.1282 - val_loss: 158.8768 - val_mae: 5.5131 - val_mse: 158.8768
Epoch 1841/2000
148/148 [=====] - 0s 2ms/step - loss: 155.3706 - mae: 5.2469 - mse: 155.3706 - val_loss: 157.3349 - val_mae: 5.4278 - val_mse: 157.3349
Epoch 1842/2000
148/148 [=====] - 0s 2ms/step - loss: 155.2784 - mae: 5.2243 - mse: 155.2784 - val_loss: 156.9215 - val_mae: 5.4267 - val_mse: 156.9215
Epoch 1843/2000
148/148 [=====] - 0s 2ms/step - loss: 155.1923 - mae: 5.2209 - mse: 155.1923 - val_loss: 157.8839 - val_mae: 5.4947 - val_mse: 157.8839
Epoch 1844/2000
148/148 [=====] - 0s 2ms/step - loss: 155.2470 - mae: 5.2495 - mse: 155.2470 - val_loss: 156.3953 - val_mae: 5.4166 - val_mse: 156.3953
Epoch 1845/2000
148/148 [=====] - 0s 2ms/step - loss: 155.1787 - mae: 5.2409 - mse: 155.1787 - val_loss: 155.8657 - val_mae: 5.4014 - val_mse: 155.8657
Epoch 1846/2000
148/148 [=====] - 0s 2ms/step - loss: 155.1289 - mae: 5.2239 - mse: 155.1289 - val_loss: 155.9785 - val_mae: 5.4080 - val_mse: 155.9785
Epoch 1847/2000

Epoch 1847/2000
148/148 [=====] - 0s 2ms/step - loss: 155.0948 - mae: 5.2264 - mse: 155.0948 - val_loss: 156.1095 - val_mae: 5.3913 - val_mse: 156.1095
Epoch 1848/2000
148/148 [=====] - 0s 2ms/step - loss: 154.8134 - mae: 5.2465 - mse: 154.8134 - val_loss: 155.5109 - val_mae: 5.4161 - val_mse: 155.5109
Epoch 1849/2000
148/148 [=====] - 0s 2ms/step - loss: 155.2081 - mae: 5.2136 - mse: 155.2081 - val_loss: 155.7614 - val_mae: 5.4068 - val_mse: 155.7614
Epoch 1850/2000
148/148 [=====] - 0s 3ms/step - loss: 155.0318 - mae: 5.2193 - mse: 155.0318 - val_loss: 156.7776 - val_mae: 5.4419 - val_mse: 156.7776
Epoch 1851/2000
148/148 [=====] - 0s 2ms/step - loss: 155.0423 - mae: 5.2445 - mse: 155.0423 - val_loss: 156.2577 - val_mae: 5.3917 - val_mse: 156.2577
Epoch 1852/2000
148/148 [=====] - 0s 2ms/step - loss: 155.2121 - mae: 5.2264 - mse: 155.2121 - val_loss: 156.8124 - val_mae: 5.4182 - val_mse: 156.8124
Epoch 1853/2000
148/148 [=====] - 0s 2ms/step - loss: 155.0825 - mae: 5.2383 - mse: 155.0825 - val_loss: 155.8324 - val_mae: 5.3980 - val_mse: 155.8324
Epoch 1854/2000
148/148 [=====] - 0s 2ms/step - loss: 154.9881 - mae: 5.2170 - mse: 154.9881 - val_loss: 156.8059 - val_mae: 5.4203 - val_mse: 156.8059
Epoch 1855/2000
148/148 [=====] - 0s 2ms/step - loss: 155.0963 - mae: 5.2316 - mse: 155.0963 - val_loss: 156.6456 - val_mae: 5.4051 - val_mse: 156.6456
Epoch 1856/2000
148/148 [=====] - 0s 2ms/step - loss: 154.7017 - mae: 5.2248 - mse: 154.7017 - val_loss: 158.0851 - val_mae: 5.4904 - val_mse: 158.0851
Epoch 1857/2000
148/148 [=====] - 0s 2ms/step - loss: 155.0574 - mae: 5.2422 - mse: 155.0574 - val_loss: 155.9845 - val_mae: 5.3862 - val_mse: 155.9845
Epoch 1858/2000
148/148 [=====] - 0s 2ms/step - loss: 154.9083 - mae: 5.2276 - mse: 154.9083 - val_loss: 156.8428 - val_mae: 5.4410 - val_mse: 156.8428
Epoch 1859/2000
148/148 [=====] - 0s 2ms/step - loss: 154.8928 - mae: 5.2252 - mse: 154.8928 - val_loss: 156.0117 - val_mae: 5.3875 - val_mse: 156.0117
Epoch 1860/2000
148/148 [=====] - 0s 2ms/step - loss: 154.8459 - mae: 5.2286 - mse: 154.8459 - val_loss: 156.3689 - val_mae: 5.4145 - val_mse: 156.3689
Epoch 1861/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5654 - mae: 5.2286 - mse: 154.5654 - val_loss: 156.4599 - val_mae: 5.4403 - val_mse: 156.4599
Epoch 1862/2000
148/148 [=====] - 0s 2ms/step - loss: 154.8644 - mae: 5.2381 - mse: 154.8644 - val_loss: 156.1103 - val_mae: 5.4019 - val_mse: 156.1103
Epoch 1863/2000
148/148 [=====] - 0s 2ms/step - loss: 154.8578 - mae: 5.2276 - mse: 154.8578 - val_loss: 156.2775 - val_mae: 5.4006 - val_mse: 156.2775
Epoch 1864/2000
148/148 [=====] - 0s 2ms/step - loss: 154.9141 - mae: 5.2192 - mse: 154.9141 - val_loss: 156.0408 - val_mae: 5.3834 - val_mse: 156.0408
Epoch 1865/2000
148/148 [=====] - 0s 2ms/step - loss: 154.7453 - mae: 5.2143 - mse: 154.7453 - val_loss: 155.4478 - val_mae: 5.4082 - val_mse: 155.4478
Epoch 1866/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5601 - mae: 5.1994 - mse: 154.5601 - val_loss: 157.5697 - val_mae: 5.4872 - val_mse: 157.5697
Epoch 1867/2000
148/148 [=====] - 0s 2ms/step - loss: 154.9200 - mae: 5.2344 - mse: 154.9200 - val_loss: 155.9443 - val_mae: 5.4084 - val_mse: 155.9443
Epoch 1868/2000
148/148 [=====] - 0s 2ms/step - loss: 154.7158 - mae: 5.2249 - mse: 154.7158 - val_loss: 156.0050 - val_mae: 5.4205 - val_mse: 156.0050
Epoch 1869/2000
148/148 [=====] - 0s 2ms/step - loss: 154.7639 - mae: 5.2357 - mse: 154.7639 - val_loss: 155.7112 - val_mae: 5.4095 - val_mse: 155.7112
Epoch 1870/2000
148/148 [=====] - 0s 2ms/step - loss: 154.6070 - mae: 5.2238 - mse: 154.6070 - val_loss: 155.3378 - val_mae: 5.3966 - val_mse: 155.3378
Epoch 1871/2000

Epoch 1871/2000
148/148 [=====] - 0s 2ms/step - loss: 154.6054 - mae: 5.2137 - mse: 154.6054 - val_loss: 155.3873 - val_mae: 5.4338 - val_mse: 155.3873
Epoch 1872/2000
148/148 [=====] - 0s 2ms/step - loss: 154.7127 - mae: 5.2416 - mse: 154.7127 - val_loss: 155.7523 - val_mae: 5.3935 - val_mse: 155.7523
Epoch 1873/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5954 - mae: 5.2210 - mse: 154.5954 - val_loss: 156.6735 - val_mae: 5.4466 - val_mse: 156.6735
Epoch 1874/2000
148/148 [=====] - 0s 2ms/step - loss: 154.6128 - mae: 5.2177 - mse: 154.6128 - val_loss: 155.8864 - val_mae: 5.3997 - val_mse: 155.8864
Epoch 1875/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5856 - mae: 5.2199 - mse: 154.5856 - val_loss: 155.6517 - val_mae: 5.3986 - val_mse: 155.6517
Epoch 1876/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5303 - mae: 5.2241 - mse: 154.5303 - val_loss: 155.5080 - val_mae: 5.4068 - val_mse: 155.5080
Epoch 1877/2000
148/148 [=====] - 0s 2ms/step - loss: 154.3513 - mae: 5.2328 - mse: 154.3513 - val_loss: 155.1803 - val_mae: 5.3732 - val_mse: 155.1803
Epoch 1878/2000
148/148 [=====] - 0s 2ms/step - loss: 154.3106 - mae: 5.2197 - mse: 154.3106 - val_loss: 156.6261 - val_mae: 5.4369 - val_mse: 156.6261
Epoch 1879/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4753 - mae: 5.2340 - mse: 154.4753 - val_loss: 156.6166 - val_mae: 5.4222 - val_mse: 156.6166
Epoch 1880/2000
148/148 [=====] - 0s 2ms/step - loss: 154.6005 - mae: 5.2267 - mse: 154.6005 - val_loss: 155.6555 - val_mae: 5.4156 - val_mse: 155.6555
Epoch 1881/2000
148/148 [=====] - 0s 2ms/step - loss: 154.5429 - mae: 5.2308 - mse: 154.5429 - val_loss: 155.3740 - val_mae: 5.3820 - val_mse: 155.3740
Epoch 1882/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4051 - mae: 5.2164 - mse: 154.4051 - val_loss: 155.2759 - val_mae: 5.3752 - val_mse: 155.2759
Epoch 1883/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4433 - mae: 5.2052 - mse: 154.4433 - val_loss: 155.3064 - val_mae: 5.3892 - val_mse: 155.3064
Epoch 1884/2000
148/148 [=====] - 0s 3ms/step - loss: 154.4510 - mae: 5.2120 - mse: 154.4510 - val_loss: 155.0844 - val_mae: 5.3731 - val_mse: 155.0844
Epoch 1885/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4854 - mae: 5.2074 - mse: 154.4854 - val_loss: 155.7773 - val_mae: 5.4253 - val_mse: 155.7773
Epoch 1886/2000
148/148 [=====] - 0s 2ms/step - loss: 154.3374 - mae: 5.2272 - mse: 154.3374 - val_loss: 155.3476 - val_mae: 5.3638 - val_mse: 155.3476
Epoch 1887/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4106 - mae: 5.2059 - mse: 154.4106 - val_loss: 155.6558 - val_mae: 5.3861 - val_mse: 155.6558
Epoch 1888/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4315 - mae: 5.2152 - mse: 154.4315 - val_loss: 155.3351 - val_mae: 5.3989 - val_mse: 155.3351
Epoch 1889/2000
148/148 [=====] - 0s 3ms/step - loss: 154.2551 - mae: 5.2170 - mse: 154.2551 - val_loss: 155.3548 - val_mae: 5.4100 - val_mse: 155.3548
Epoch 1890/2000
148/148 [=====] - 0s 2ms/step - loss: 154.3405 - mae: 5.2156 - mse: 154.3405 - val_loss: 155.4118 - val_mae: 5.4322 - val_mse: 155.4118
Epoch 1891/2000
148/148 [=====] - 0s 2ms/step - loss: 154.4023 - mae: 5.2204 - mse: 154.4023 - val_loss: 154.8078 - val_mae: 5.3732 - val_mse: 154.8078
Epoch 1892/2000
148/148 [=====] - 0s 3ms/step - loss: 154.2385 - mae: 5.2022 - mse: 154.2385 - val_loss: 155.2778 - val_mae: 5.3797 - val_mse: 155.2778
Epoch 1893/2000
148/148 [=====] - 0s 2ms/step - loss: 154.1310 - mae: 5.2075 - mse: 154.1310 - val_loss: 154.3416 - val_mae: 5.3810 - val_mse: 154.3416
Epoch 1894/2000
148/148 [=====] - 0s 2ms/step - loss: 154.2615 - mae: 5.1992 - mse: 154.2615 - val_loss: 154.7161 - val_mae: 5.3852 - val_mse: 154.7161
Epoch 1895/2000

Epoch 1895/2000
148/148 [=====] - 0s 3ms/step - loss: 154.2390 - mae: 5.2079 - mse: 154.2390 - val_loss: 155.1890 - val_mae: 5.4118 - val_mse: 155.1890
Epoch 1896/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9519 - mae: 5.1988 - mse: 153.9519 - val_loss: 156.0869 - val_mae: 5.4854 - val_mse: 156.0869
Epoch 1897/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8310 - mae: 5.2405 - mse: 153.8310 - val_loss: 157.0945 - val_mae: 5.4716 - val_mse: 157.0945
Epoch 1898/2000
148/148 [=====] - 0s 2ms/step - loss: 154.2962 - mae: 5.2278 - mse: 154.2962 - val_loss: 155.1995 - val_mae: 5.4036 - val_mse: 155.1995
Epoch 1899/2000
148/148 [=====] - 0s 2ms/step - loss: 154.3189 - mae: 5.2119 - mse: 154.3189 - val_loss: 155.2839 - val_mae: 5.3955 - val_mse: 155.2839
Epoch 1900/2000
148/148 [=====] - 0s 2ms/step - loss: 154.1265 - mae: 5.2079 - mse: 154.1265 - val_loss: 155.3212 - val_mae: 5.3966 - val_mse: 155.3212
Epoch 1901/2000
135/148 [=====>...] - ETA: 0s - loss: 151.7997 - mae: 5.2073 - mse: 151.7997
148/148 [=====] - 0s 2ms/step - loss: 154.0730 - mae: 5.2147 - mse: 154.0730 - val_loss: 154.8825 - val_mae: 5.3736 - val_mse: 154.8825
Epoch 1902/2000
148/148 [=====] - 0s 2ms/step - loss: 154.0053 - mae: 5.2117 - mse: 154.0053 - val_loss: 155.1042 - val_mae: 5.4098 - val_mse: 155.1042
Epoch 1903/2000
148/148 [=====] - 0s 2ms/step - loss: 154.1066 - mae: 5.2159 - mse: 154.1066 - val_loss: 155.4541 - val_mae: 5.4212 - val_mse: 155.4541
Epoch 1904/2000
148/148 [=====] - 0s 2ms/step - loss: 154.0312 - mae: 5.2094 - mse: 154.0312 - val_loss: 154.4462 - val_mae: 5.3527 - val_mse: 154.4462
Epoch 1905/2000
148/148 [=====] - 0s 2ms/step - loss: 154.0365 - mae: 5.2085 - mse: 154.0365 - val_loss: 154.1345 - val_mae: 5.3793 - val_mse: 154.1345
Epoch 1906/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9684 - mae: 5.1965 - mse: 153.9684 - val_loss: 155.6953 - val_mae: 5.4258 - val_mse: 155.6953
Epoch 1907/2000
148/148 [=====] - 0s 3ms/step - loss: 154.1143 - mae: 5.2172 - mse: 154.1143 - val_loss: 154.9412 - val_mae: 5.3823 - val_mse: 154.9412
Epoch 1908/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9579 - mae: 5.2084 - mse: 153.9579 - val_loss: 154.2148 - val_mae: 5.3599 - val_mse: 154.2148
Epoch 1909/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9846 - mae: 5.1919 - mse: 153.9846 - val_loss: 154.1871 - val_mae: 5.4145 - val_mse: 154.1871
Epoch 1910/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8768 - mae: 5.2091 - mse: 153.8768 - val_loss: 155.2038 - val_mae: 5.4259 - val_mse: 155.2038
Epoch 1911/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9855 - mae: 5.2204 - mse: 153.9855 - val_loss: 155.1220 - val_mae: 5.4232 - val_mse: 155.1220
Epoch 1912/2000
148/148 [=====] - 0s 2ms/step - loss: 154.0072 - mae: 5.2113 - mse: 154.0072 - val_loss: 154.8473 - val_mae: 5.3861 - val_mse: 154.8473
Epoch 1913/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8840 - mae: 5.2121 - mse: 153.8840 - val_loss: 155.4150 - val_mae: 5.4007 - val_mse: 155.4150
Epoch 1914/2000
148/148 [=====] - 0s 2ms/step - loss: 154.0830 - mae: 5.2077 - mse: 154.0830 - val_loss: 154.8395 - val_mae: 5.3862 - val_mse: 154.8395
Epoch 1915/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9107 - mae: 5.2070 - mse: 153.9107 - val_loss: 155.2263 - val_mae: 5.3913 - val_mse: 155.2263
Epoch 1916/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9749 - mae: 5.1943 - mse: 153.9749 - val_loss: 155.3486 - val_mae: 5.4243 - val_mse: 155.3486
Epoch 1917/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9276 - mae: 5.2202 - mse: 153.9276 - val_loss: 154.3885 - val_mae: 5.3982 - val_mse: 154.3885
Epoch 1918/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9227 - mae: 5.2054 - mse: 153.9227 - val_loss: 154.3885 - val_mae: 5.3982 - val_mse: 154.3885

148/148 [=====] - 0s 2ms/step - loss: 153.9337 - mae: 5.2034 - m
se: 153.9337 - val_loss: 155.5809 - val_mae: 5.3981 - val_mse: 155.5809
Epoch 1919/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8855 - mae: 5.1923 - m
se: 153.8855 - val_loss: 154.6236 - val_mae: 5.3564 - val_mse: 154.6236
Epoch 1920/2000
148/148 [=====] - 0s 2ms/step - loss: 153.9366 - mae: 5.1925 - m
se: 153.9366 - val_loss: 154.3117 - val_mae: 5.3667 - val_mse: 154.3117
Epoch 1921/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8640 - mae: 5.1816 - m
se: 153.8640 - val_loss: 155.3331 - val_mae: 5.4211 - val_mse: 155.3331
Epoch 1922/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8231 - mae: 5.2151 - m
se: 153.8231 - val_loss: 154.6156 - val_mae: 5.3634 - val_mse: 154.6156
Epoch 1923/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7967 - mae: 5.2070 - m
se: 153.7967 - val_loss: 153.9459 - val_mae: 5.3982 - val_mse: 153.9459
Epoch 1924/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8754 - mae: 5.1966 - m
se: 153.8754 - val_loss: 154.2706 - val_mae: 5.3474 - val_mse: 154.2706
Epoch 1925/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7456 - mae: 5.1910 - m
se: 153.7456 - val_loss: 154.2845 - val_mae: 5.3776 - val_mse: 154.2845
Epoch 1926/2000
148/148 [=====] - 0s 2ms/step - loss: 153.8047 - mae: 5.1937 - m
se: 153.8047 - val_loss: 154.6926 - val_mae: 5.3872 - val_mse: 154.6926
Epoch 1927/2000
148/148 [=====] - 0s 3ms/step - loss: 153.7956 - mae: 5.1917 - m
se: 153.7956 - val_loss: 154.2915 - val_mae: 5.3550 - val_mse: 154.2915
Epoch 1928/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7587 - mae: 5.1962 - m
se: 153.7587 - val_loss: 154.4909 - val_mae: 5.3737 - val_mse: 154.4909
Epoch 1929/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7576 - mae: 5.1877 - m
se: 153.7576 - val_loss: 154.5786 - val_mae: 5.3739 - val_mse: 154.5786
Epoch 1930/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7325 - mae: 5.1860 - m
se: 153.7325 - val_loss: 154.2252 - val_mae: 5.3839 - val_mse: 154.2252
Epoch 1931/2000
148/148 [=====] - 0s 3ms/step - loss: 153.7147 - mae: 5.1863 - m
se: 153.7147 - val_loss: 154.5577 - val_mae: 5.3868 - val_mse: 154.5577
Epoch 1932/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7419 - mae: 5.2009 - m
se: 153.7419 - val_loss: 154.3414 - val_mae: 5.3657 - val_mse: 154.3414
Epoch 1933/2000
148/148 [=====] - 0s 3ms/step - loss: 153.6274 - mae: 5.1846 - m
se: 153.6274 - val_loss: 155.4712 - val_mae: 5.4253 - val_mse: 155.4712
Epoch 1934/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7049 - mae: 5.1938 - m
se: 153.7049 - val_loss: 154.9100 - val_mae: 5.3796 - val_mse: 154.9100
Epoch 1935/2000
148/148 [=====] - 0s 3ms/step - loss: 153.7191 - mae: 5.2004 - m
se: 153.7191 - val_loss: 154.0105 - val_mae: 5.3378 - val_mse: 154.0105
Epoch 1936/2000
148/148 [=====] - 0s 3ms/step - loss: 153.7017 - mae: 5.1904 - m
se: 153.7017 - val_loss: 154.0282 - val_mae: 5.3605 - val_mse: 154.0282
Epoch 1937/2000
148/148 [=====] - 0s 3ms/step - loss: 153.5337 - mae: 5.1894 - m
se: 153.5337 - val_loss: 153.6767 - val_mae: 5.3862 - val_mse: 153.6767
Epoch 1938/2000
148/148 [=====] - 0s 3ms/step - loss: 153.3094 - mae: 5.1806 - m
se: 153.3094 - val_loss: 154.9625 - val_mae: 5.3943 - val_mse: 154.9625
Epoch 1939/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5547 - mae: 5.1881 - m
se: 153.5547 - val_loss: 154.0247 - val_mae: 5.3435 - val_mse: 154.0247
Epoch 1940/2000
148/148 [=====] - 0s 3ms/step - loss: 153.6258 - mae: 5.1891 - m
se: 153.6258 - val_loss: 153.9817 - val_mae: 5.3505 - val_mse: 153.9817
Epoch 1941/2000
148/148 [=====] - 0s 2ms/step - loss: 153.6206 - mae: 5.1938 - m
se: 153.6206 - val_loss: 153.9700 - val_mae: 5.3401 - val_mse: 153.9700
Epoch 1942/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5641 - mae: 5.1931 - m

148/148 [=====] - 0s 2ms/step - loss: 153.5641 - mae: 5.1831 - mse: 154.3705
Epoch 1943/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3295 - mae: 5.1932 - mse: 154.7926
Epoch 1944/2000
148/148 [=====] - 0s 3ms/step - loss: 153.6132 - mae: 5.1824 - mse: 154.8654
Epoch 1945/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5664 - mae: 5.1994 - mse: 153.7906
Epoch 1946/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5733 - mae: 5.1931 - mse: 154.5522
Epoch 1947/2000
148/148 [=====] - 0s 2ms/step - loss: 153.4865 - mae: 5.1926 - mse: 154.3726
Epoch 1948/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5011 - mae: 5.1942 - mse: 153.5172
Epoch 1949/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5017 - mae: 5.1800 - mse: 153.9919
Epoch 1950/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3829 - mae: 5.1997 - mse: 154.8512
Epoch 1951/2000
148/148 [=====] - 0s 2ms/step - loss: 153.5417 - mae: 5.2002 - mse: 154.0407
Epoch 1952/2000
148/148 [=====] - 0s 2ms/step - loss: 153.4959 - mae: 5.1798 - mse: 153.8914
Epoch 1953/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3167 - mae: 5.1874 - mse: 155.4526
Epoch 1954/2000
148/148 [=====] - 0s 3ms/step - loss: 153.4470 - mae: 5.2025 - mse: 154.3276
Epoch 1955/2000
148/148 [=====] - 0s 2ms/step - loss: 153.4502 - mae: 5.1906 - mse: 153.9666
Epoch 1956/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3721 - mae: 5.1882 - mse: 154.1035
Epoch 1957/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0046 - mae: 5.1892 - mse: 156.3723
Epoch 1958/2000
148/148 [=====] - 0s 2ms/step - loss: 153.7039 - mae: 5.2043 - mse: 153.9950
Epoch 1959/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2375 - mae: 5.1946 - mse: 154.7950
Epoch 1960/2000
148/148 [=====] - 0s 3ms/step - loss: 153.3694 - mae: 5.1750 - mse: 153.9622
Epoch 1961/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3703 - mae: 5.1827 - mse: 154.1368
Epoch 1962/2000
148/148 [=====] - 0s 3ms/step - loss: 153.3161 - mae: 5.1833 - mse: 154.0010
Epoch 1963/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3536 - mae: 5.1957 - mse: 153.8370
Epoch 1964/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2065 - mae: 5.1876 - mse: 153.9637
Epoch 1965/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2251 - mae: 5.1723 - mse: 154.9730
Epoch 1966/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1222 - mae: 5.1600 - mse: 154.9730

148/148 [=====] - 0s 3ms/step - loss: 153.1293 - mae: 5.1690 - mse: 154.8722 - val_loss: 154.8722 - val_mae: 5.4308 - val_mse: 154.8722
Epoch 1967/2000
148/148 [=====] - 0s 2ms/step - loss: 153.3553 - mae: 5.2003 - mse: 153.3553 - val_loss: 153.8039 - val_mae: 5.3507 - val_mse: 153.8039
Epoch 1968/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1635 - mae: 5.1965 - mse: 153.1635 - val_loss: 153.2677 - val_mae: 5.3384 - val_mse: 153.2677
Epoch 1969/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1785 - mae: 5.1881 - mse: 153.1785 - val_loss: 154.5529 - val_mae: 5.3863 - val_mse: 154.5529
Epoch 1970/2000
148/148 [=====] - 0s 2ms/step - loss: 152.9560 - mae: 5.2188 - mse: 152.9560 - val_loss: 155.8167 - val_mae: 5.4514 - val_mse: 155.8167
Epoch 1971/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2723 - mae: 5.1949 - mse: 153.2723 - val_loss: 154.1812 - val_mae: 5.3634 - val_mse: 154.1812
Epoch 1972/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1937 - mae: 5.1814 - mse: 153.1937 - val_loss: 154.1191 - val_mae: 5.3979 - val_mse: 154.1191
Epoch 1973/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2248 - mae: 5.2041 - mse: 153.2248 - val_loss: 153.7541 - val_mae: 5.3510 - val_mse: 153.7541
Epoch 1974/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1033 - mae: 5.1817 - mse: 153.1033 - val_loss: 154.1324 - val_mae: 5.3697 - val_mse: 154.1324
Epoch 1975/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1342 - mae: 5.1882 - mse: 153.1342 - val_loss: 154.3407 - val_mae: 5.3782 - val_mse: 154.3407
Epoch 1976/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0721 - mae: 5.1949 - mse: 153.0721 - val_loss: 153.9893 - val_mae: 5.3636 - val_mse: 153.9893
Epoch 1977/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2053 - mae: 5.1892 - mse: 153.2053 - val_loss: 153.8739 - val_mae: 5.3834 - val_mse: 153.8739
Epoch 1978/2000
148/148 [=====] - 0s 3ms/step - loss: 153.1243 - mae: 5.1810 - mse: 153.1243 - val_loss: 154.2182 - val_mae: 5.3908 - val_mse: 154.2182
Epoch 1979/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2383 - mae: 5.1886 - mse: 153.2383 - val_loss: 154.2168 - val_mae: 5.3722 - val_mse: 154.2168
Epoch 1980/2000
148/148 [=====] - 0s 2ms/step - loss: 152.8641 - mae: 5.1801 - mse: 152.8641 - val_loss: 154.9923 - val_mae: 5.4266 - val_mse: 154.9923
Epoch 1981/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1805 - mae: 5.1789 - mse: 153.1805 - val_loss: 153.6707 - val_mae: 5.3655 - val_mse: 153.6707
Epoch 1982/2000
148/148 [=====] - 0s 2ms/step - loss: 153.2262 - mae: 5.1759 - mse: 153.2262 - val_loss: 153.5732 - val_mae: 5.3535 - val_mse: 153.5732
Epoch 1983/2000
148/148 [=====] - 0s 3ms/step - loss: 152.6779 - mae: 5.1805 - mse: 152.6779 - val_loss: 154.2424 - val_mae: 5.3941 - val_mse: 154.2424
Epoch 1984/2000
148/148 [=====] - 0s 2ms/step - loss: 152.9212 - mae: 5.1760 - mse: 152.9212 - val_loss: 155.4633 - val_mae: 5.4204 - val_mse: 155.4633
Epoch 1985/2000
148/148 [=====] - 0s 2ms/step - loss: 153.1496 - mae: 5.1912 - mse: 153.1496 - val_loss: 153.3709 - val_mae: 5.3386 - val_mse: 153.3709
Epoch 1986/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0489 - mae: 5.1712 - mse: 153.0489 - val_loss: 153.8447 - val_mae: 5.3702 - val_mse: 153.8447
Epoch 1987/2000
148/148 [=====] - 0s 3ms/step - loss: 153.0315 - mae: 5.1968 - mse: 153.0315 - val_loss: 153.3644 - val_mae: 5.3501 - val_mse: 153.3644
Epoch 1988/2000
148/148 [=====] - 0s 2ms/step - loss: 152.8672 - mae: 5.1650 - mse: 152.8672 - val_loss: 154.9403 - val_mae: 5.4275 - val_mse: 154.9403
Epoch 1989/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0423 - mae: 5.1903 - mse: 153.0423 - val_loss: 153.2005 - val_mae: 5.3610 - val_mse: 153.2005
Epoch 1990/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0045 - mae: 5.1724 - mse: 153.0045 - val_loss: 153.2005 - val_mae: 5.3610 - val_mse: 153.2005

```

148/148 [=====] - 0s 2ms/step - loss: 153.0845 - mae: 5.1734 - m
se: 153.0845 - val_loss: 153.5379 - val_mae: 5.3350 - val_mse: 153.5379
Epoch 1991/2000
148/148 [=====] - 0s 2ms/step - loss: 152.9892 - mae: 5.1692 - m
se: 152.9892 - val_loss: 153.2366 - val_mae: 5.3424 - val_mse: 153.2366
Epoch 1992/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0558 - mae: 5.1759 - m
se: 153.0558 - val_loss: 153.2579 - val_mae: 5.3398 - val_mse: 153.2579
Epoch 1993/2000
148/148 [=====] - 0s 2ms/step - loss: 152.8324 - mae: 5.1763 - m
se: 152.8324 - val_loss: 153.0128 - val_mae: 5.3767 - val_mse: 153.0128
Epoch 1994/2000
148/148 [=====] - 0s 2ms/step - loss: 152.5997 - mae: 5.1680 - m
se: 152.5997 - val_loss: 154.3628 - val_mae: 5.4258 - val_mse: 154.3628
Epoch 1995/2000
148/148 [=====] - 0s 2ms/step - loss: 152.7953 - mae: 5.1922 - m
se: 152.7953 - val_loss: 154.6428 - val_mae: 5.4201 - val_mse: 154.6428
Epoch 1996/2000
148/148 [=====] - 0s 2ms/step - loss: 152.8218 - mae: 5.1875 - m
se: 152.8218 - val_loss: 154.2153 - val_mae: 5.3917 - val_mse: 154.2153
Epoch 1997/2000
148/148 [=====] - 0s 3ms/step - loss: 152.8775 - mae: 5.1984 - m
se: 152.8775 - val_loss: 154.1938 - val_mae: 5.3832 - val_mse: 154.1938
Epoch 1998/2000
148/148 [=====] - 0s 2ms/step - loss: 153.0047 - mae: 5.1877 - m
se: 153.0047 - val_loss: 153.4013 - val_mae: 5.3437 - val_mse: 153.4013
Epoch 1999/2000
148/148 [=====] - 0s 2ms/step - loss: 152.8125 - mae: 5.1907 - m
se: 152.8125 - val_loss: 153.6412 - val_mae: 5.3615 - val_mse: 153.6412
Epoch 2000/2000
148/148 [=====] - 0s 3ms/step - loss: 152.7542 - mae: 5.1906 - m
se: 152.7542 - val_loss: 153.1234 - val_mae: 5.3809 - val_mse: 153.1234

```

Visualize the model's training progress using the stats stored in the history object

loss and val_loss parameters explanation -> <https://datascience.stackexchange.com/questions/25267/keras-difference-between-val-loss-and-loss-during-training>

In [1228]:

```

hist = pd.DataFrame(history.history)
hist['epoch'] = history.epoch
hist.tail()

```

Out[1228]:

	loss	mae	mse	val_loss	val_mae	val_mse	epoch
1995	152.821823	5.187477	152.821823	154.215302	5.391671	154.215302	1995
1996	152.877548	5.198437	152.877548	154.193832	5.383163	154.193832	1996
1997	153.004730	5.187716	153.004730	153.401306	5.343699	153.401306	1997
1998	152.812454	5.190718	152.812454	153.641190	5.361545	153.641190	1998
1999	152.754181	5.190578	152.754181	153.123383	5.380948	153.123383	1999

Using matplotlibs to plot learning curves

In [1229]:

```

import matplotlib.pyplot as plt

def plot_history(history):
    hist = pd.DataFrame(history.history)
    hist['epoch'] = history.epoch

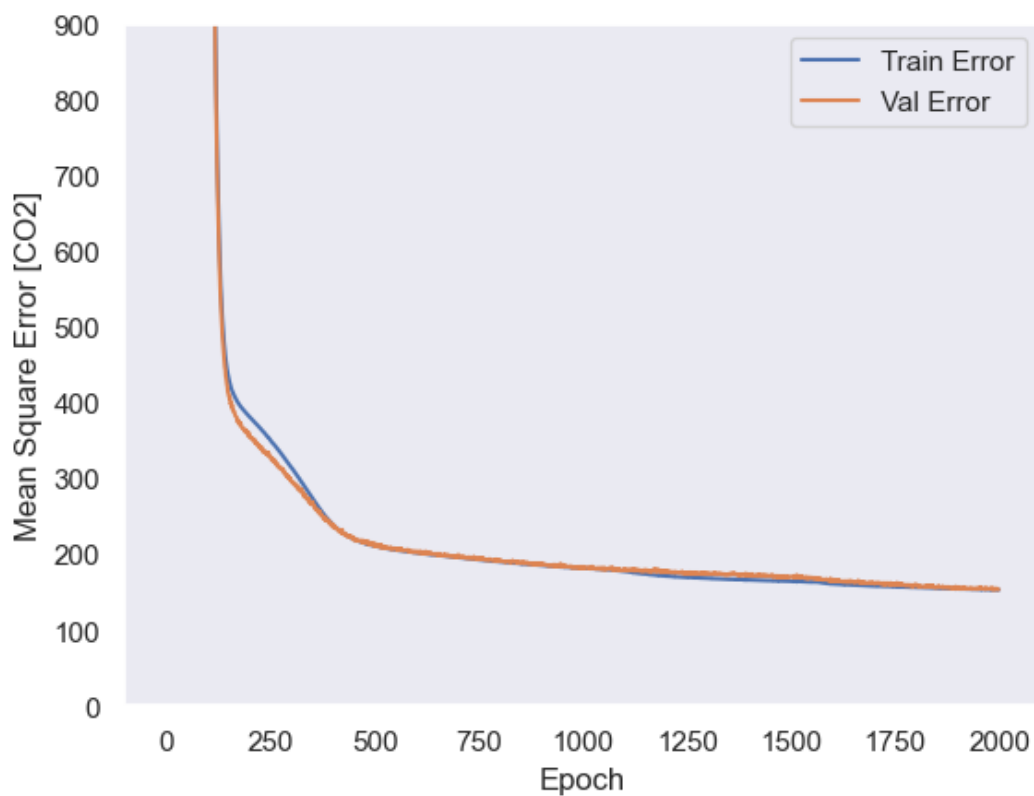
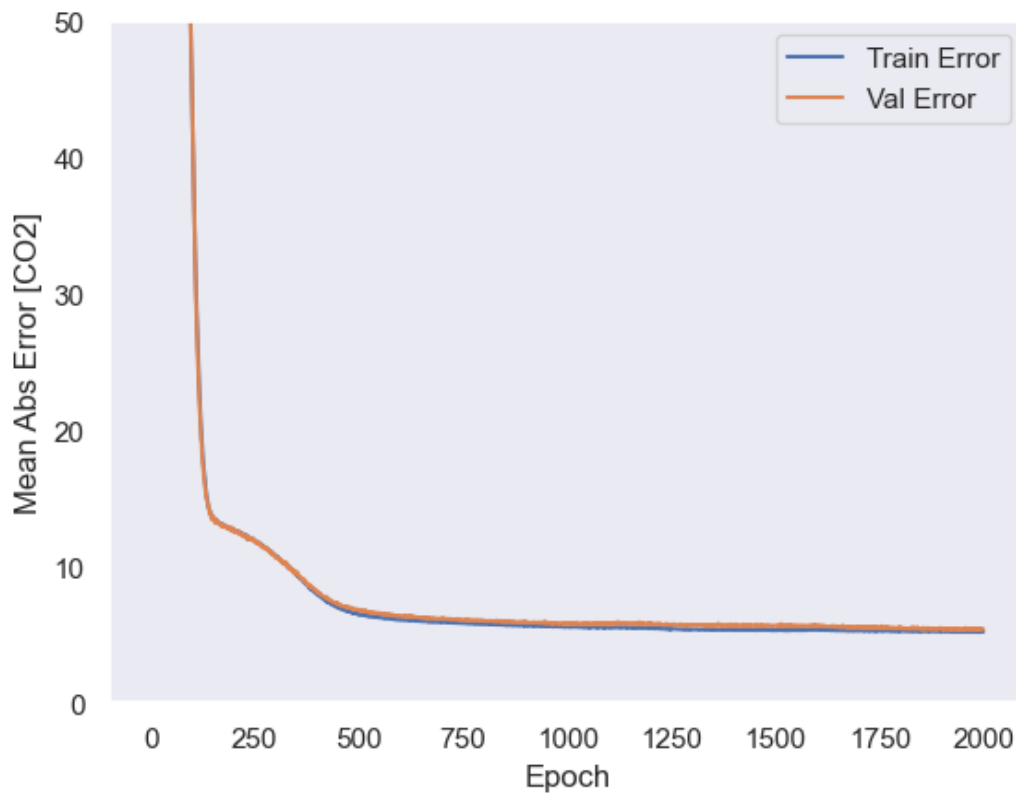
    plt.figure()
    plt.xlabel('Epoch')
    plt.ylabel('Mean Abs Error [CO2]')

```

```
plt.plot(hist['epoch'], hist['mae'], label='Train Error')
plt.plot(hist['epoch'], hist['val_mae'], label='Val Error')
plt.legend()
plt.ylim([0,50])

plt.figure()
plt.xlabel('Epoch')
plt.ylabel('Mean Square Error [CO2]')
plt.plot(hist['epoch'], hist['mse'], label='Train Error')
plt.plot(hist['epoch'], hist['val_mse'], label='Val Error')
plt.legend()
plt.ylim([0, 900])
```

```
plot_history(history)
```



As we can see by the graphics above graphs there is no overfitting and the train error and the validation error are consistent with one another

Implementing early_stop since it is doing overfitting

In [1230]:

```
#The patience parameter is the amount of epochs to check for improvement

#early_stop = keras.callbacks.EarlyStopping(monitor='val_loss', patience=10)

#history = model.fit(normed_train_data, train_labels, epochs=EPOCHS, validation_split=0.2,
#                    verbose=0, callbacks=[early_stop, PrintDot()])
#plot_history(history)
```

Prints the Mean Absolute Error

To see how the model is doing we check the Mean Absolute Error

In [1231]:

```
loss, mae, mse = model.evaluate(normed_test_data, test_labels, verbose=0)
print("Testing set Mean Abs Error: {:.2f} CO2".format(mae))
```

Testing set Mean Abs Error: 5.24 CO2

5.14g/Km of error it is a good error

Make Predictions

Checking what is inside of normed_test_data - the normalized values

In [1232]:

```
print("Dados de Teste = ", normed_test_data)
```

Dados de Teste =	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	-0.856663	-0.883348	-0.758950	-1.052709	-0.855684
7	0.398718	0.210561	0.069556	-0.018749	0.043191
21	-0.856663	-0.883348	-0.301843	-0.423342	-0.337102
24	-0.856663	-0.883348	-0.301843	-0.423342	-0.337102
25	-0.856663	-0.883348	-0.501827	-0.693071	-0.579107
...
7360	-0.856663	-0.883348	-0.301843	-0.378387	-0.337102
7363	-1.299739	-0.883348	-1.187488	-1.097664	-1.166833
7364	-0.856663	-0.883348	-0.816089	-0.693071	-0.786540
7370	-0.856663	-0.883348	-0.673243	-0.962800	-0.786540
7382	-0.856663	-0.883348	-0.244705	-0.198568	-0.233386

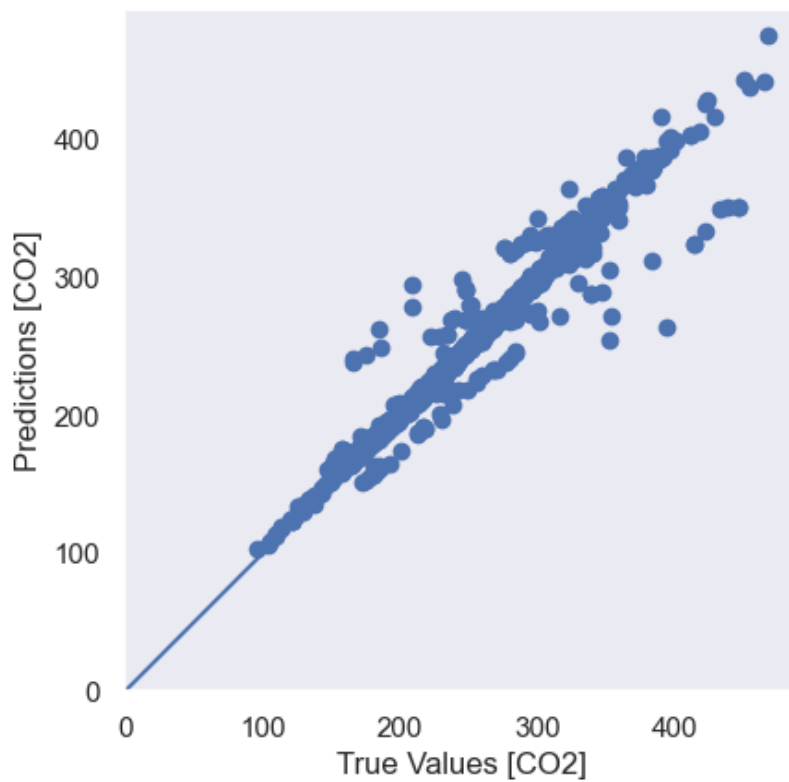
[1477 rows x 5 columns]

Showing the predictions made in the graph

In [1233]:

```
test_predictions = model.predict(normed_test_data).flatten()

plt.scatter(test_labels, test_predictions)
plt.xlabel('True Values [CO2]')
plt.ylabel('Predictions [CO2]')
plt.axis('equal')
plt.axis('square'),
plt.xlim([0, plt.xlim()[1]])
plt.ylim([0, plt.ylim()[1]])
_ = plt.plot([-100, 100], [-100, 100])
```



In [1234]:

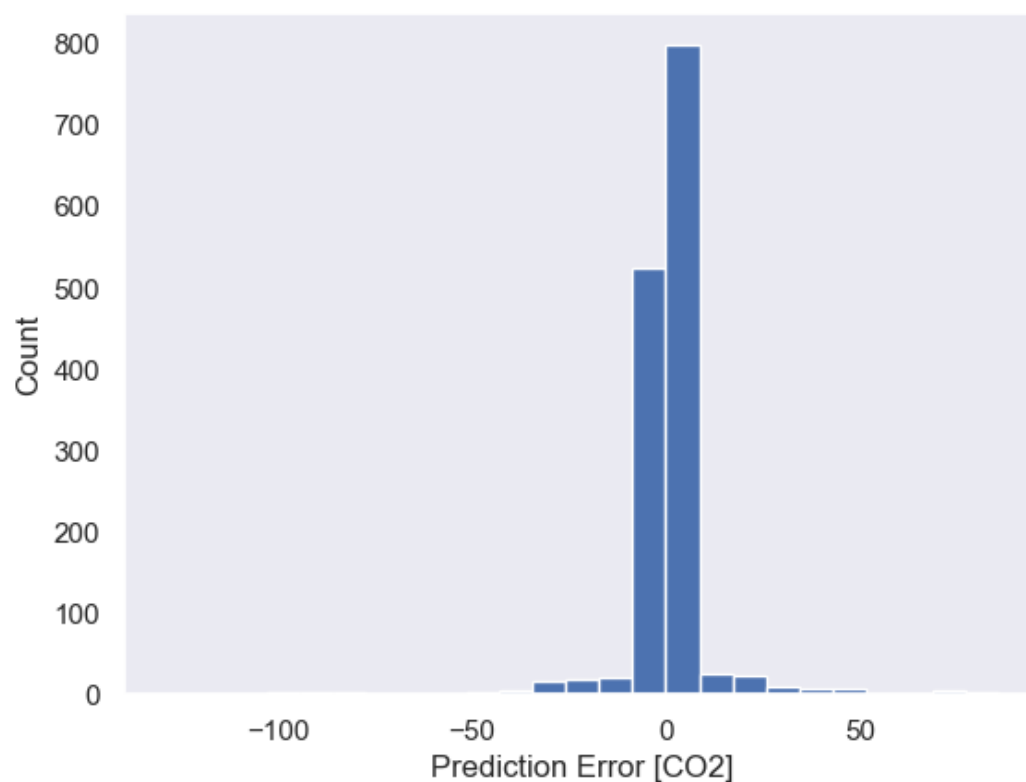
```
print(test_predictions)
```

```
[197.80585 258.86584 232.28369 ... 204.00092 203.29143 240.00473]
```

Looking at Error Distribution

In [1235]:

```
error = test_predictions - test_labels  
plt.hist(error, bins = 25)  
plt.xlabel("Prediction Error [CO2]")  
_ = plt.ylabel("Count")
```



Load all the Data from the CSV Files of each car

In [1236]:

```
seat_ibiza_td_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Seat_Ibiza.csv")
seat_ibiza_tsi_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Seat_Ibiza_tsi.csv")
ford_galaxy_tdi_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Ford_Galaxy.csv")
audi_a4_tdi_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Audi_A4.csv")
audi_80_tdi_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Audi_80.csv")
umm_alter_emissions = pd.read_csv("Previsoes_Emissoes_CO2_UMM_Alter.csv")
renault_clio_dci_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Renault_Clio_dci.csv")
renault_clio_16v_emissions = pd.read_csv("Previsoes_Emissoes_CO2_Renault_Clio_16v.csv")
```

Seat Ibiza 2018 1.0 TSI 75HP -> <https://www.ultimatespecs.com/car-specs/Seat/109924/Seat-Ibiza-2018-10-75HP.html>



In [1237]:

```
seat_ibiza_tsi_emissions.head()
```

Out[1237]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	1.0	3	6.0	4.3	4.9

Linear Regression Prediction

In [1238]:

```
seat_ibiza_tsi_predictions_linear_regression = slr.predict(norm(seat_ibiza_tsi_emissions))

print("Linear Regression Seat Ibiza 2018 1.0 TSI 75HP CO2 Emissions = ", seat_ibiza_tsi_predictions_linear_regression[0], " g/Km")
```

Linear Regression Seat Ibiza 2018 1.0 TSI 75HP CO2 Emissions = 141.32256414273368 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artificial Neural Network Prediction

In [1239]:

```
seat_ibiza_tsi_predictions = model.predict(norm(seat_ibiza_td_emissions))

print("Artificial Neural Network Seat Ibiza 2018 1.0 TSI 75HP CO2 Emissions = ", seat_ibiza_tsi_predictions[0], " g/Km")
```

1/1 [=====] - 0s 33ms/step

Artificial Neural Network Seat Ibiza 2018 1.0 TSI 75HP CO2 Emissions = [155.25848] g/Km

Seat Ibiza 1997 1.9 TD 75HP -> <https://www.ultimatespecs.com/car-specs/Seat/6270/Seat-Ibiza-6K-19-TD.html>



In [1240]:

```
seat_ibiza_td_emissions.head()
```

Out[1240]:

engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	
0	1.9	4	8.1	5.0	6.3

Linear Regression Prediction

In [1241]:

```
seat_ibiza_td_predictions_linear_regression = slr.predict(norm(seat_ibiza_td_emissions))  
  
print("Linear Regression Seat Ibiza 1997 1.9 TD 75HP CO2 Emissions = ", seat_ibiza_td_predictions_linear_regression[0], " g/Km")
```

Linear Regression Seat Ibiza 1997 1.9 TD 75HP CO2 Emissions = 171.3607498937052 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artificial Neural Network Prediction

In [1242]:

```
seat_ibiza_td_predictions = model.predict(norm(seat_ibiza_td_emissions))  
  
print("Artificial Neural Network Seat Ibiza CO2 Emissions = ", seat_ibiza_td_predictions[0], " g/Km")
```

1/1 [=====] - 0s 22ms/step

Artificial Neural Network Seat Ibiza CO2 Emissions = [155.25848] g/Km

Audi A4 1996 1.9 TDI 110HP -> [https://www.ultimatespecs.com/car-specs/Audi/46/Audi-A4-\(B5\)-19-TDI-110.html](https://www.ultimatespecs.com/car-specs/Audi/46/Audi-A4-(B5)-19-TDI-110.html)



In [1243]:

```
audi_a4_tdi_emissions.head()
```

Out[1243]:

engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb	
0	1.9	4	6.0	5.0	4.9

Linear Regression Prediction

In [1244]:

```
audi_a4_tdi_predictions_linear_regression = slr.predict(norm(audi_a4_tdi_emissions))  
  
print("Linear Regression Audi A4 1996 1.9 TDI 110HP CO2 Emissions = ", audi_a4_tdi_predictions_linear_regression[0], " g/Km")
```

Linear Regression Audi A4 1996 1.9 TDI 110HP CO2 Emissions = 153.66716034939293 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

X has feature names, but LinearRegression was fitted without feature names

Artifitial Neural Network Prediction

In [1245]:

```
audi_a4_tdi_predictions = model.predict(norm(audi_a4_tdi_emissions))

print("Artifitial Neural Network Audi A4 1996 1.9 TDI 110HP CO2 Emissions = ", audi_a4_tdi_predictions[0], " g/Km")
```

1/1 [=====] - 0s 21ms/step
Artifitial Neural Network Audi A4 1996 1.9 TDI 110HP CO2 Emissions = [128.9285] g/Km

Ford Galaxy 1998 1.9 TDI 110HP -> <https://www.ultimatespecs.com/car-specs/Ford/7180/Ford-Galaxy-I-19-TDI-110.html>



In [1246]:

```
ford_galaxy_tdi_emissions.head()
```

Out[1246]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	1.9	4	8.6	5.3	6.5

Linear Regression Prediction

In [1247]:

```
ford_galaxy_tdi_predictions_linear_regression = slr.predict(norm(ford_galaxy_tdi_emissions))

print("Linear Regression Ford Galaxy 1998 1.9 TDI 110HP CO2 Emissions = ", ford_galaxy_tdi_predictions_linear_regression[0], " g/Km")
```

Linear Regression Ford Galaxy 1998 1.9 TDI 110HP CO2 Emissions = 174.53281799869143 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artifitial Neural Network Prediction

In [1248]:

```
ford_galaxy_tdi_predictions = model.predict(norm(ford_galaxy_tdi_emissions))

print("Artifitial Neural Network Ford Galaxy 1998 1.9 TDI 110HP CO2 Emissions = ", ford_galaxy_tdi_predictions[0], " g/Km")
```

1/1 [=====] - 0s 23ms/step
Artifitial Neural Network Ford Galaxy 1998 1.9 TDI 110HP CO2 Emissions = [163.39128] g/Km

Audi 80 1994 1.9 TDI 90HP -> [https://www.ultimatespecs.com/car-specs/Audi/29/Audi-80-\(B3-B4\)-19-TDI.html](https://www.ultimatespecs.com/car-specs/Audi/29/Audi-80-(B3-B4)-19-TDI.html)

In [1249]:

```
audi_80_tdi_emissions.head()
```

Out[1249]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	1.9	4	6.2	5.2	5.3

Linear Regression Prediction

In [1250]:

```
audi_80_tdi_predictions_linear_regression = slr.predict(norm(audi_80_tdi_emissions))  
  
print("Linear Regression Audi 80 1994 1.9 TDI 90HP CO2 Emissions = ", audi_80_tdi_predictions_linear_regression[0], " g/Km")
```

Linear Regression Audi 80 1994 1.9 TDI 90HP CO2 Emissions = 158.55230672171396 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artificial Neural Network Prediction

In [1251]:

```
audi_80_tdi_predictions = model.predict(norm(audi_80_tdi_emissions))  
  
print("Artificial Neural Network Audi 80 1994 1.9 TDI 90HP CO2 Emissions = ", audi_80_tdi_predictions[0], " g/Km")
```

1/1 [=====] - 0s 38ms/step

Artificial Neural Network Audi 80 1994 1.9 TDI 90HP CO2 Emissions = [134.60515] g/Km

UMM Alter Turbo Intercooler 1992 2.5 110HP -> <https://www.ultimatespecs.com/car-specs/UMM/16105/UMM-Alter-25-Turbo-Diesel.html>

In [1252]:

```
umm_alter_emissions.head()
```

Out[1252]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	2.5	4	9.4	9.5	10.0

Linear Regression Prediction

In [1253]:

```
umm_alter_predictions_linear_regression = slr.predict(norm(umm_alter_emissions))  
  
print("Linear Regression UMM Alter 1992 2.5 110HP CO2 Emissions = ", umm_alter_predictions_linear_regression[0], " g/Km")
```

Linear Regression UMM Alter 1992 2.5 110HP CO2 Emissions = 222.8992731212411 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artifitial Neural Network Prediction

In [1254]:

```
umm_alter_tdi_predictions = model.predict(norm(umm_alter_emissions))

print("Artifitial Neural Network UMM Alter 1992 2.5 110HP CO2 Emissions = ", umm_alter_tdi_predictions[0], " g/Km")
```

1/1 [=====] - 0s 23ms/step
Artifitial Neural Network UMM Alter 1992 2.5 110HP CO2 Emissions = [225.13492] g/Km

Renault Clio 2005 1.5 DCI 80HP -> <https://www.ultimatespecs.com/car-specs/Renault/50584/Renault-Clio-2-Phase-2-5-Doors-15-dCi-80HP-Confort-Expression.html>



In [1255]:

```
renault_clio_dci_emissions.head()
```

Out[1255]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	1.5	4	5.3	3.5	4.2

Linear Regression Prediction

In [1256]:

```
renault_clio_dci_predictions_linear_regression = slr.predict(norm(renault_clio_dci_emissions))

print("Linear Regression Renault Clio 2005 1.5 80HP CO2 Emissions = ", renault_clio_dci_predictions_linear_regression[0], " g/Km")
```

Linear Regression Renault Clio 2005 1.5 80HP CO2 Emissions = 140.94056313660545 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artifitial Neural Network Prediction

In [1257]:

```
renault_clio_dci_predictions = model.predict(norm(renault_clio_dci_emissions))

print("Artifitial Neural Network Renault Clio 2005 1.5 80HP CO2 Emissions = ", renault_clio_dci_predictions[0], " g/Km")
```

1/1 [=====] - 0s 24ms/step
Artifitial Neural Network Renault Clio 2005 1.5 80HP CO2 Emissions = [107.63325] g/Km

Renault Clio 2005 1.2 16V 75HP -> <https://www.ultimatespecs.com/car-specs/Renault/978/Renault-Clio-2-Phase-2-5-Doors-12-16v-Confort-Expression.html>



In [1258]:

```
renault_clio_16v_emissions.head()
```

Out[1258]:

	engine_size	Cylinders	fuel_cons_city	fuel_cons_hwy	fuel_cons_comb
0	1.2	4	7.8	4.9	5.9

Linear Regression Prediction

In [1259]:

```
renault_clio_16v_predictions_linear_regression = slr.predict(norm(renault_clio_16v_emissions))
```

```
print("Linear Regression Renault Clio 2005 1.2 16V 75HP CO2 Emissions = ", renault_clio_16v_predictions_linear_regression[0], " g/Km")
```

Linear Regression Renault Clio 2005 1.2 16V 75HP CO2 Emissions = 162.69512527669127 g/Km

c:\Users\vasco\AppData\Local\Programs\Python\Python311\Lib\site-packages\sklearn\base.py:432: UserWarning:

X has feature names, but LinearRegression was fitted without feature names

Artificial Neural Network Prediction

In [1260]:

```
renault_clio_16v_predictions = model.predict(norm(renault_clio_16v_emissions))
```

```
print("Artificial Neural Network Renault Clio 2005 1.2 16V 75HP CO2 Emissions = ", renault_clio_16v_predictions[0], " g/Km")
```

1/1 [=====] - 0s 26ms/step

Artificial Neural Network Renault Clio 2005 1.2 16V 75HP CO2 Emissions = [152.27133] g/Km

As it can be seen in the predictions above using the Linear Regression as the Artificial Neural Network do not quite match with those on the images, the prediction made by the Artificial Neural Network do vary a lot I have messed with the EPOCHS number to see if more training would help, as well as added another dense layer and played with the learning rate with these last generated more error.

My thought why it might be predicting wrong values it would be because need more features to evaluate.