Project

April 26, 2018

In [1]:
```
import pandas as pd
import seaborn as sns
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
```

In [2]:
```
df=pd.read_csv('data2.csv')
```

```
c:\users\admin\anaconda3\envs\tf\lib\site-packages\IPython\core\interactiveshell.py:2785: Dtype
  interactivity=interactivity, compiler=compiler, result=result)
```

In [3]:
```
df.head(2)
```

Out[3]:

	submit_proj_name	lab_proj_name	natural_key	smp_id	horizon_designation	lay_depth_to_top	lay_depth_to_bottom	Texture	Efferv	TC	...	X2491	X2492	X2493	X2494	X2495	X2496	X2497	X2498	X2499	X2500
0	Climate Stations -	Lancaster Co.	C2007USNE021	07N00700	100537	Btkss	90.0	117.0	cl	none	0.256948	...	0.360212	0.359762	0.359262	0.358709	0.358234	0.357688	0.357369	0.357336	0.357118	0.356992
1	Climate Stations -	Lancaster Co.	C2007USNE021	07N00701	100538	Bk1	117.0	150.0	cl	slight	0.989608	...	0.432048	0.431515	0.431022	0.430534	0.430048	0.429607	0.429195	0.428741	0.428359	0.428098

[2 rows x 2165 columns]

In [4]:
```
y=df.iloc[:,13]
```

In [5]:
```
X=df.iloc[:,14:]
```

In [6]:
```
#data =pd.concat([X, y], axis=1)
```

In [7]:
```
X.head(5)
```

Out[7]:

	X350	X351	X352	X353	X354	X355	X356	\
0	0.094647	0.095142	0.093143	0.091554	0.091089	0.090275	0.090072	
1	0.104602	0.103637	0.103900	0.104903	0.105186	0.102833	0.101228	
2	0.146100	0.146168	0.144869	0.143129	0.141967	0.142304	0.141988	
3	0.068633	0.067348	0.065312	0.063980	0.063287	0.061922	0.062781	
4	0.147855	0.147883	0.149184	0.148094	0.145565	0.146379	0.146528	

	X357	X358	X359	...	X2491	X2492	X2493	\
0	0.089330	0.087926	0.088845	...	0.360212	0.359762	0.359262	
1	0.099573	0.097645	0.098340	...	0.432048	0.431515	0.431022	
2	0.141104	0.140281	0.140652	...	0.468780	0.468448	0.468015	
3	0.063678	0.063150	0.063024	...	0.382713	0.382499	0.382221	
4	0.146134	0.145940	0.146517	...	0.373684	0.373017	0.372523	

	X2494	X2495	X2496	X2497	X2498	X2499	X2500
0	0.358709	0.358234	0.357688	0.357369	0.357336	0.357118	0.356992
1	0.430534	0.430048	0.429607	0.429195	0.428741	0.428359	0.428098
2	0.467747	0.467281	0.466530	0.466045	0.465523	0.465207	0.465295
3	0.381835	0.381630	0.381574	0.381377	0.381244	0.381090	0.380786
4	0.372144	0.371711	0.371376	0.371001	0.370496	0.370119	0.369899

[5 rows x 2151 columns]

```
In [8]: y.head(5)
```

Out[8]:
```
0    0.118163
1    0.054236
2    0.051374
3    1.881035
4    0.099760
Name: EOC, dtype: float64
```

```
In [9]: from sklearn.preprocessing import StandardScaler
        scaler=StandardScaler()
        XS=scaler.fit_transform(X)
        YS=scaler.fit_transform(y.values.reshape(-1,1))
```

```
In [10]: Xn = pd.DataFrame(XS, columns = X.columns)
         Yn = pd.DataFrame(YS, columns = ['OC'])
```

```
In [11]: Xn.head()
```

Out[11]:

	X350	X351	X352	X353	X354	X355	X356	\
0	-0.273409	-0.262273	-0.299897	-0.325358	-0.324890	-0.330845	-0.323625	
1	-0.083563	-0.099938	-0.093490	-0.068653	-0.053604	-0.088373	-0.108414	
2	0.707856	0.712796	0.692630	0.666453	0.654248	0.673699	0.677908	
3	-0.769522	-0.793379	-0.833943	-0.855630	-0.859951	-0.878261	-0.850109	
4	0.741338	0.745564	0.775444	0.761935	0.723495	0.752377	0.765489	

```
       X357      X358      X359    ...        X2491     X2492     X2493  \
0 -0.325950 -0.340095 -0.314069    ...    -0.226547 -0.228114 -0.230264
1 -0.128384 -0.152339 -0.130692    ...     0.566385  0.564051  0.562105
2  0.672630  0.671297  0.686451    ...     0.971835  0.971803  0.970580
3 -0.820707 -0.818726 -0.812736    ...     0.021818  0.022915  0.023251
4  0.769642  0.780631  0.799706    ...    -0.077838 -0.081775 -0.083834

      X2494     X2495     X2496     X2497     X2498     X2499     X2500
0 -0.233513 -0.235906 -0.239206 -0.240275 -0.238015 -0.237988 -0.237132
1  0.559663  0.557233  0.555130  0.553031  0.550636  0.548823  0.548132
2  0.970619  0.968444  0.962939  0.960046  0.956882  0.955781  0.958915
3  0.021866  0.022489  0.024620  0.024886  0.026047  0.026770  0.025636
4 -0.085154 -0.087054 -0.088016 -0.089708 -0.092663 -0.094396 -0.094595

[5 rows x 2151 columns]
```

In [12]:
```
Yn.head()
```

Out[12]:
```
         OC
0 -0.396855
1 -0.419312
2 -0.420318
3  0.222433
4 -0.403320
```

In [13]:
```
X=np.array(Xn)
```

In [14]:
```
y=np.array(Yn)
```

In [15]:
```
from sklearn.decomposition import PCA
pca=PCA(n_components=30)
X=pca.fit_transform(X)
```

In [16]:
```
X.shape
```

Out[16]:
```
(9724, 30)
```

In [17]:
```
y.shape
```

Out[17]:
```
(9724, 1)
```

In [18]:
```
from sklearn.model_selection import train_test_split
```

In [19]:
```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.1, random_state=
```

In [20]:
```
X_train.shape
```

Out[20]:
```
(8751, 30)
```

In [21]:
```
y_train.shape
```

Out[21]: (8751, 1)

In [22]:
```
# Create your first MLP in Keras
import keras
from keras.models import Sequential
from keras.layers import Dense
from keras import optimizers
from keras import backend
from keras import regularizers
from keras.layers import Dropout, Activation
keras.callbacks.TensorBoard(log_dir='./Graph', histogram_freq=0,
          write_graph=True, write_images=True)
def rmse(y_true, y_pred):
    return backend.sqrt(backend.mean(backend.square(y_pred - y_true), axis=-1))

adam=keras.optimizers.Adam(lr=0.0009, beta_1=0.9, beta_2=0.999, epsilon=None, decay=0
# create model
model = Sequential()
model.add(Dense(900,input_dim=30,activation='relu'))
model.add(Dense(600, activation='relu'))
model.add(Dense(300, activation='relu'))
model.add(Dense(300, activation='relu'))
model.add(Dense(300, activation='relu'))
model.add(Dense(300, activation='relu'))
model.add(Dense(150, activation='relu',))
model.add(Dense(60, activation='relu'))
model.add(Dense(30, activation='relu',))
model.add(Dense(1, activation='linear'))

model.summary()
# Compile mode
model.compile(loss='mse', optimizer=adam, metrics=[rmse])
# Fit the model
tbCallBack = keras.callbacks.TensorBoard(log_dir='./Graph', histogram_freq=0, write_gr
model.fit(X_train, y_train, epochs=1000, batch_size=1024,verbose=2,validation_split=0

scores = model.evaluate(X_test, y_test)
print ('\nEvaluate result: rmse=%f' % scores[0])
```

```
Using TensorFlow backend.


WARNING:tensorflow:From c:\users\admin\anaconda3\envs\tf\lib\site-packages\tensorflow\contrib\l
Instructions for updating:
Use the retry module or similar alternatives.
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
```

```
dense_1 (Dense)              (None, 900)               27900
_________________________________________________________________
dense_2 (Dense)              (None, 600)               540600
_________________________________________________________________
dense_3 (Dense)              (None, 300)               180300
_________________________________________________________________
dense_4 (Dense)              (None, 300)               90300
_________________________________________________________________
dense_5 (Dense)              (None, 300)               90300
_________________________________________________________________
dense_6 (Dense)              (None, 300)               90300
_________________________________________________________________
dense_7 (Dense)              (None, 150)               45150
_________________________________________________________________
dense_8 (Dense)              (None, 60)                9060
_________________________________________________________________
dense_9 (Dense)              (None, 30)                1830
_________________________________________________________________
dense_10 (Dense)             (None, 1)                 31
=================================================================
Total params: 1,075,771
Trainable params: 1,075,771
Non-trainable params: 0
_________________________________________________________________
Train on 7875 samples, validate on 876 samples
Epoch 1/1000
 - 0s - loss: 0.9901 - rmse: 0.4490 - val_loss: 0.7166 - val_rmse: 0.3749
Epoch 2/1000
 - 0s - loss: 0.8229 - rmse: 0.3919 - val_loss: 0.6618 - val_rmse: 0.3431
Epoch 3/1000
 - 0s - loss: 0.7409 - rmse: 0.3629 - val_loss: 0.6836 - val_rmse: 0.4063
Epoch 4/1000
 - 0s - loss: 0.6469 - rmse: 0.3381 - val_loss: 0.5901 - val_rmse: 0.3436
Epoch 5/1000
 - 0s - loss: 0.5754 - rmse: 0.3204 - val_loss: 0.4880 - val_rmse: 0.3237
Epoch 6/1000
 - 0s - loss: 0.5748 - rmse: 0.3154 - val_loss: 0.5140 - val_rmse: 0.2459
Epoch 7/1000
 - 0s - loss: 0.5557 - rmse: 0.2935 - val_loss: 0.4238 - val_rmse: 0.2547
Epoch 8/1000
 - 0s - loss: 0.4529 - rmse: 0.3007 - val_loss: 0.3617 - val_rmse: 0.2560
Epoch 9/1000
 - 0s - loss: 0.3613 - rmse: 0.2692 - val_loss: 0.3251 - val_rmse: 0.2491
Epoch 10/1000
 - 0s - loss: 0.3042 - rmse: 0.2455 - val_loss: 0.2956 - val_rmse: 0.2508
Epoch 11/1000
 - 0s - loss: 0.2727 - rmse: 0.2343 - val_loss: 0.3102 - val_rmse: 0.2372
Epoch 12/1000
```

```
 - 0s - loss: 0.2597 - rmse: 0.2288 - val_loss: 0.2300 - val_rmse: 0.2088
Epoch 13/1000
 - 0s - loss: 0.2465 - rmse: 0.2217 - val_loss: 0.2575 - val_rmse: 0.2250
Epoch 14/1000
 - 0s - loss: 0.3610 - rmse: 0.2628 - val_loss: 0.3236 - val_rmse: 0.2162
Epoch 15/1000
 - 0s - loss: 0.3849 - rmse: 0.2637 - val_loss: 0.2841 - val_rmse: 0.2194
Epoch 16/1000
 - 0s - loss: 0.3360 - rmse: 0.2288 - val_loss: 0.3439 - val_rmse: 0.2619
Epoch 17/1000
 - 0s - loss: 0.3051 - rmse: 0.2471 - val_loss: 0.2547 - val_rmse: 0.2780
Epoch 18/1000
 - 0s - loss: 0.2662 - rmse: 0.2379 - val_loss: 0.2267 - val_rmse: 0.2170
Epoch 19/1000
 - 0s - loss: 0.2359 - rmse: 0.2206 - val_loss: 0.1875 - val_rmse: 0.1950
Epoch 20/1000
 - 0s - loss: 0.2252 - rmse: 0.2079 - val_loss: 0.1613 - val_rmse: 0.1845
Epoch 21/1000
 - 0s - loss: 0.2154 - rmse: 0.1965 - val_loss: 0.1924 - val_rmse: 0.2108
Epoch 22/1000
 - 0s - loss: 0.2469 - rmse: 0.2076 - val_loss: 0.1723 - val_rmse: 0.1995
Epoch 23/1000
 - 0s - loss: 0.2266 - rmse: 0.1990 - val_loss: 0.1678 - val_rmse: 0.2066
Epoch 24/1000
 - 0s - loss: 0.2091 - rmse: 0.2101 - val_loss: 0.2414 - val_rmse: 0.1911
Epoch 25/1000
 - 0s - loss: 0.1795 - rmse: 0.2089 - val_loss: 0.1584 - val_rmse: 0.1861
Epoch 26/1000
 - 0s - loss: 0.1612 - rmse: 0.1987 - val_loss: 0.1326 - val_rmse: 0.1896
Epoch 27/1000
 - 0s - loss: 0.1450 - rmse: 0.1812 - val_loss: 0.1489 - val_rmse: 0.1657
Epoch 28/1000
 - 0s - loss: 0.1487 - rmse: 0.1754 - val_loss: 0.1217 - val_rmse: 0.1619
Epoch 29/1000
 - 0s - loss: 0.1307 - rmse: 0.1668 - val_loss: 0.1165 - val_rmse: 0.1578
Epoch 30/1000
 - 0s - loss: 0.1191 - rmse: 0.1599 - val_loss: 0.1110 - val_rmse: 0.1607
Epoch 31/1000
 - 0s - loss: 0.1312 - rmse: 0.1625 - val_loss: 0.1840 - val_rmse: 0.1643
Epoch 32/1000
 - 0s - loss: 0.1672 - rmse: 0.1815 - val_loss: 0.1642 - val_rmse: 0.1713
Epoch 33/1000
 - 0s - loss: 0.1859 - rmse: 0.1836 - val_loss: 0.1504 - val_rmse: 0.1588
Epoch 34/1000
 - 0s - loss: 0.2144 - rmse: 0.1862 - val_loss: 0.1981 - val_rmse: 0.1812
Epoch 35/1000
 - 0s - loss: 0.1458 - rmse: 0.1817 - val_loss: 0.1272 - val_rmse: 0.1680
Epoch 36/1000
```

```
 - 0s - loss: 0.1197 - rmse: 0.1681 - val_loss: 0.1085 - val_rmse: 0.1716
Epoch 37/1000
 - 0s - loss: 0.1112 - rmse: 0.1595 - val_loss: 0.0874 - val_rmse: 0.1477
Epoch 38/1000
 - 0s - loss: 0.0994 - rmse: 0.1515 - val_loss: 0.0999 - val_rmse: 0.1473
Epoch 39/1000
 - 0s - loss: 0.1030 - rmse: 0.1507 - val_loss: 0.0895 - val_rmse: 0.1438
Epoch 40/1000
 - 0s - loss: 0.0987 - rmse: 0.1498 - val_loss: 0.0848 - val_rmse: 0.1489
Epoch 41/1000
 - 0s - loss: 0.1072 - rmse: 0.1539 - val_loss: 0.0878 - val_rmse: 0.1416
Epoch 42/1000
 - 0s - loss: 0.0984 - rmse: 0.1449 - val_loss: 0.0883 - val_rmse: 0.1455
Epoch 43/1000
 - 0s - loss: 0.0919 - rmse: 0.1450 - val_loss: 0.0855 - val_rmse: 0.1352
Epoch 44/1000
 - 0s - loss: 0.0867 - rmse: 0.1378 - val_loss: 0.0829 - val_rmse: 0.1337
Epoch 45/1000
 - 0s - loss: 0.0818 - rmse: 0.1399 - val_loss: 0.0966 - val_rmse: 0.1359
Epoch 46/1000
 - 0s - loss: 0.1113 - rmse: 0.1448 - val_loss: 0.0825 - val_rmse: 0.1428
Epoch 47/1000
 - 0s - loss: 0.1119 - rmse: 0.1616 - val_loss: 0.1201 - val_rmse: 0.1575
Epoch 48/1000
 - 0s - loss: 0.1119 - rmse: 0.1584 - val_loss: 0.0891 - val_rmse: 0.1477
Epoch 49/1000
 - 0s - loss: 0.0905 - rmse: 0.1465 - val_loss: 0.0824 - val_rmse: 0.1426
Epoch 50/1000
 - 0s - loss: 0.0871 - rmse: 0.1361 - val_loss: 0.0893 - val_rmse: 0.1417
Epoch 51/1000
 - 0s - loss: 0.0756 - rmse: 0.1318 - val_loss: 0.0814 - val_rmse: 0.1400
Epoch 52/1000
 - 0s - loss: 0.0732 - rmse: 0.1314 - val_loss: 0.0761 - val_rmse: 0.1342
Epoch 53/1000
 - 0s - loss: 0.0789 - rmse: 0.1302 - val_loss: 0.0832 - val_rmse: 0.1424
Epoch 54/1000
 - 0s - loss: 0.0887 - rmse: 0.1367 - val_loss: 0.1152 - val_rmse: 0.1597
Epoch 55/1000
 - 0s - loss: 0.1088 - rmse: 0.1480 - val_loss: 0.0965 - val_rmse: 0.1516
Epoch 56/1000
 - 0s - loss: 0.1135 - rmse: 0.1451 - val_loss: 0.1119 - val_rmse: 0.1734
Epoch 57/1000
 - 0s - loss: 0.0875 - rmse: 0.1396 - val_loss: 0.0742 - val_rmse: 0.1365
Epoch 58/1000
 - 0s - loss: 0.0754 - rmse: 0.1296 - val_loss: 0.0763 - val_rmse: 0.1317
Epoch 59/1000
 - 0s - loss: 0.0670 - rmse: 0.1250 - val_loss: 0.0685 - val_rmse: 0.1274
Epoch 60/1000
```

```
 - 0s - loss: 0.0715 - rmse: 0.1224 - val_loss: 0.0782 - val_rmse: 0.1258
Epoch 61/1000
 - 0s - loss: 0.0708 - rmse: 0.1245 - val_loss: 0.1087 - val_rmse: 0.1383
Epoch 62/1000
 - 0s - loss: 0.0845 - rmse: 0.1318 - val_loss: 0.0940 - val_rmse: 0.1409
Epoch 63/1000
 - 0s - loss: 0.0793 - rmse: 0.1321 - val_loss: 0.0814 - val_rmse: 0.1317
Epoch 64/1000
 - 0s - loss: 0.0704 - rmse: 0.1236 - val_loss: 0.1093 - val_rmse: 0.1331
Epoch 65/1000
 - 0s - loss: 0.0758 - rmse: 0.1240 - val_loss: 0.0744 - val_rmse: 0.1288
Epoch 66/1000
 - 0s - loss: 0.0841 - rmse: 0.1271 - val_loss: 0.0930 - val_rmse: 0.1379
Epoch 67/1000
 - 0s - loss: 0.0874 - rmse: 0.1331 - val_loss: 0.0797 - val_rmse: 0.1432
Epoch 68/1000
 - 0s - loss: 0.0715 - rmse: 0.1314 - val_loss: 0.0734 - val_rmse: 0.1382
Epoch 69/1000
 - 0s - loss: 0.0638 - rmse: 0.1231 - val_loss: 0.0670 - val_rmse: 0.1234
Epoch 70/1000
 - 0s - loss: 0.0581 - rmse: 0.1164 - val_loss: 0.0758 - val_rmse: 0.1239
Epoch 71/1000
 - 0s - loss: 0.0602 - rmse: 0.1139 - val_loss: 0.0737 - val_rmse: 0.1293
Epoch 72/1000
 - 0s - loss: 0.0742 - rmse: 0.1245 - val_loss: 0.0726 - val_rmse: 0.1338
Epoch 73/1000
 - 0s - loss: 0.0636 - rmse: 0.1226 - val_loss: 0.0896 - val_rmse: 0.1393
Epoch 74/1000
 - 0s - loss: 0.0604 - rmse: 0.1209 - val_loss: 0.0749 - val_rmse: 0.1264
Epoch 75/1000
 - 0s - loss: 0.0630 - rmse: 0.1200 - val_loss: 0.1169 - val_rmse: 0.1335
Epoch 76/1000
 - 0s - loss: 0.0930 - rmse: 0.1330 - val_loss: 0.0849 - val_rmse: 0.1377
Epoch 77/1000
 - 0s - loss: 0.0653 - rmse: 0.1283 - val_loss: 0.0810 - val_rmse: 0.1453
Epoch 78/1000
 - 0s - loss: 0.0624 - rmse: 0.1266 - val_loss: 0.1045 - val_rmse: 0.1438
Epoch 79/1000
 - 0s - loss: 0.0799 - rmse: 0.1381 - val_loss: 0.0904 - val_rmse: 0.1414
Epoch 80/1000
 - 0s - loss: 0.0618 - rmse: 0.1230 - val_loss: 0.0779 - val_rmse: 0.1298
Epoch 81/1000
 - 0s - loss: 0.0614 - rmse: 0.1181 - val_loss: 0.0651 - val_rmse: 0.1228
Epoch 82/1000
 - 0s - loss: 0.0712 - rmse: 0.1214 - val_loss: 0.0896 - val_rmse: 0.1269
Epoch 83/1000
 - 0s - loss: 0.0859 - rmse: 0.1224 - val_loss: 0.0997 - val_rmse: 0.1337
Epoch 84/1000
```

```
 - 0s - loss: 0.0673 - rmse: 0.1214 - val_loss: 0.0749 - val_rmse: 0.1221
Epoch 85/1000
 - 0s - loss: 0.0692 - rmse: 0.1150 - val_loss: 0.0725 - val_rmse: 0.1261
Epoch 86/1000
 - 0s - loss: 0.0554 - rmse: 0.1106 - val_loss: 0.0713 - val_rmse: 0.1259
Epoch 87/1000
 - 0s - loss: 0.0527 - rmse: 0.1079 - val_loss: 0.0704 - val_rmse: 0.1298
Epoch 88/1000
 - 0s - loss: 0.0485 - rmse: 0.1061 - val_loss: 0.0681 - val_rmse: 0.1199
Epoch 89/1000
 - 0s - loss: 0.0542 - rmse: 0.1060 - val_loss: 0.0848 - val_rmse: 0.1399
Epoch 90/1000
 - 0s - loss: 0.0549 - rmse: 0.1130 - val_loss: 0.0797 - val_rmse: 0.1375
Epoch 91/1000
 - 0s - loss: 0.0502 - rmse: 0.1125 - val_loss: 0.0702 - val_rmse: 0.1266
Epoch 92/1000
 - 0s - loss: 0.0524 - rmse: 0.1105 - val_loss: 0.0777 - val_rmse: 0.1189
Epoch 93/1000
 - 0s - loss: 0.0535 - rmse: 0.1084 - val_loss: 0.0683 - val_rmse: 0.1260
Epoch 94/1000
 - 0s - loss: 0.0455 - rmse: 0.1032 - val_loss: 0.0862 - val_rmse: 0.1229
Epoch 95/1000
 - 0s - loss: 0.0534 - rmse: 0.1118 - val_loss: 0.0667 - val_rmse: 0.1221
Epoch 96/1000
 - 0s - loss: 0.0486 - rmse: 0.1099 - val_loss: 0.0671 - val_rmse: 0.1261
Epoch 97/1000
 - 0s - loss: 0.0451 - rmse: 0.1067 - val_loss: 0.0675 - val_rmse: 0.1188
Epoch 98/1000
 - 0s - loss: 0.0500 - rmse: 0.1048 - val_loss: 0.0677 - val_rmse: 0.1246
Epoch 99/1000
 - 0s - loss: 0.0541 - rmse: 0.1134 - val_loss: 0.0874 - val_rmse: 0.1258
Epoch 100/1000
 - 0s - loss: 0.0617 - rmse: 0.1114 - val_loss: 0.0987 - val_rmse: 0.1304
Epoch 101/1000
 - 0s - loss: 0.0550 - rmse: 0.1095 - val_loss: 0.0979 - val_rmse: 0.1405
Epoch 102/1000
 - 0s - loss: 0.0661 - rmse: 0.1124 - val_loss: 0.0823 - val_rmse: 0.1259
Epoch 103/1000
 - 0s - loss: 0.0637 - rmse: 0.1121 - val_loss: 0.0827 - val_rmse: 0.1298
Epoch 104/1000
 - 0s - loss: 0.0497 - rmse: 0.1095 - val_loss: 0.0719 - val_rmse: 0.1300
Epoch 105/1000
 - 0s - loss: 0.0466 - rmse: 0.1036 - val_loss: 0.0894 - val_rmse: 0.1332
Epoch 106/1000
 - 0s - loss: 0.0533 - rmse: 0.1104 - val_loss: 0.0702 - val_rmse: 0.1300
Epoch 107/1000
 - 0s - loss: 0.0484 - rmse: 0.1062 - val_loss: 0.0749 - val_rmse: 0.1315
Epoch 108/1000
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 - 0s - loss: 0.0421 - rmse: 0.1023 - val_loss: 0.0693 - val_rmse: 0.1283
Epoch 109/1000
 - 0s - loss: 0.0471 - rmse: 0.1023 - val_loss: 0.0719 - val_rmse: 0.1253
Epoch 110/1000
 - 0s - loss: 0.0465 - rmse: 0.0989 - val_loss: 0.0732 - val_rmse: 0.1203
Epoch 111/1000
 - 0s - loss: 0.0461 - rmse: 0.0982 - val_loss: 0.0666 - val_rmse: 0.1171
Epoch 112/1000
 - 0s - loss: 0.0397 - rmse: 0.0969 - val_loss: 0.0674 - val_rmse: 0.1154
Epoch 113/1000
 - 0s - loss: 0.0395 - rmse: 0.0959 - val_loss: 0.0710 - val_rmse: 0.1216
Epoch 114/1000
 - 0s - loss: 0.0404 - rmse: 0.0935 - val_loss: 0.0793 - val_rmse: 0.1244
Epoch 115/1000
 - 0s - loss: 0.0384 - rmse: 0.0924 - val_loss: 0.0733 - val_rmse: 0.1176
Epoch 116/1000
 - 0s - loss: 0.0484 - rmse: 0.0965 - val_loss: 0.1240 - val_rmse: 0.1314
Epoch 117/1000
 - 0s - loss: 0.0591 - rmse: 0.1029 - val_loss: 0.0893 - val_rmse: 0.1180
Epoch 118/1000
 - 0s - loss: 0.0531 - rmse: 0.0992 - val_loss: 0.0753 - val_rmse: 0.1220
Epoch 119/1000
 - 0s - loss: 0.0405 - rmse: 0.0931 - val_loss: 0.0671 - val_rmse: 0.1168
Epoch 120/1000
 - 0s - loss: 0.0346 - rmse: 0.0895 - val_loss: 0.0721 - val_rmse: 0.1153
Epoch 121/1000
 - 0s - loss: 0.0373 - rmse: 0.0908 - val_loss: 0.0778 - val_rmse: 0.1182
Epoch 122/1000
 - 0s - loss: 0.0378 - rmse: 0.0923 - val_loss: 0.0733 - val_rmse: 0.1262
Epoch 123/1000
 - 0s - loss: 0.0380 - rmse: 0.0963 - val_loss: 0.0773 - val_rmse: 0.1302
Epoch 124/1000
 - 0s - loss: 0.0378 - rmse: 0.0986 - val_loss: 0.0677 - val_rmse: 0.1258
Epoch 125/1000
 - 0s - loss: 0.0324 - rmse: 0.0902 - val_loss: 0.0748 - val_rmse: 0.1186
Epoch 126/1000
 - 0s - loss: 0.0329 - rmse: 0.0891 - val_loss: 0.0725 - val_rmse: 0.1178
Epoch 127/1000
 - 0s - loss: 0.0338 - rmse: 0.0896 - val_loss: 0.0657 - val_rmse: 0.1162
Epoch 128/1000
 - 0s - loss: 0.0316 - rmse: 0.0833 - val_loss: 0.0689 - val_rmse: 0.1147
Epoch 129/1000
 - 0s - loss: 0.0362 - rmse: 0.0844 - val_loss: 0.0738 - val_rmse: 0.1173
Epoch 130/1000
 - 0s - loss: 0.0333 - rmse: 0.0887 - val_loss: 0.0627 - val_rmse: 0.1116
Epoch 131/1000
 - 0s - loss: 0.0362 - rmse: 0.0854 - val_loss: 0.0689 - val_rmse: 0.1165
Epoch 132/1000
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 - 0s - loss: 0.0333 - rmse: 0.0851 - val_loss: 0.0716 - val_rmse: 0.1140
Epoch 133/1000
 - 0s - loss: 0.0308 - rmse: 0.0818 - val_loss: 0.0606 - val_rmse: 0.1103
Epoch 134/1000
 - 0s - loss: 0.0264 - rmse: 0.0769 - val_loss: 0.0623 - val_rmse: 0.1121
Epoch 135/1000
 - 0s - loss: 0.0297 - rmse: 0.0794 - val_loss: 0.0956 - val_rmse: 0.1214
Epoch 136/1000
 - 0s - loss: 0.0365 - rmse: 0.0854 - val_loss: 0.0699 - val_rmse: 0.1185
Epoch 137/1000
 - 0s - loss: 0.0341 - rmse: 0.0869 - val_loss: 0.0725 - val_rmse: 0.1243
Epoch 138/1000
 - 0s - loss: 0.0309 - rmse: 0.0829 - val_loss: 0.0773 - val_rmse: 0.1153
Epoch 139/1000
 - 0s - loss: 0.0306 - rmse: 0.0783 - val_loss: 0.0715 - val_rmse: 0.1178
Epoch 140/1000
 - 0s - loss: 0.0281 - rmse: 0.0793 - val_loss: 0.0665 - val_rmse: 0.1150
Epoch 141/1000
 - 0s - loss: 0.0263 - rmse: 0.0764 - val_loss: 0.0627 - val_rmse: 0.1139
Epoch 142/1000
 - 0s - loss: 0.0298 - rmse: 0.0782 - val_loss: 0.0727 - val_rmse: 0.1192
Epoch 143/1000
 - 0s - loss: 0.0331 - rmse: 0.0807 - val_loss: 0.0755 - val_rmse: 0.1191
Epoch 144/1000
 - 0s - loss: 0.0407 - rmse: 0.0890 - val_loss: 0.0732 - val_rmse: 0.1194
Epoch 145/1000
 - 0s - loss: 0.0389 - rmse: 0.0843 - val_loss: 0.0844 - val_rmse: 0.1244
Epoch 146/1000
 - 0s - loss: 0.0600 - rmse: 0.1014 - val_loss: 0.1146 - val_rmse: 0.1323
Epoch 147/1000
 - 0s - loss: 0.0503 - rmse: 0.1071 - val_loss: 0.0747 - val_rmse: 0.1245
Epoch 148/1000
 - 0s - loss: 0.0491 - rmse: 0.1017 - val_loss: 0.0841 - val_rmse: 0.1355
Epoch 149/1000
 - 0s - loss: 0.0502 - rmse: 0.1018 - val_loss: 0.0751 - val_rmse: 0.1290
Epoch 150/1000
 - 0s - loss: 0.0480 - rmse: 0.1050 - val_loss: 0.0735 - val_rmse: 0.1318
Epoch 151/1000
 - 0s - loss: 0.0397 - rmse: 0.0988 - val_loss: 0.0925 - val_rmse: 0.1273
Epoch 152/1000
 - 0s - loss: 0.0490 - rmse: 0.0967 - val_loss: 0.0740 - val_rmse: 0.1225
Epoch 153/1000
 - 0s - loss: 0.0514 - rmse: 0.1009 - val_loss: 0.0887 - val_rmse: 0.1309
Epoch 154/1000
 - 0s - loss: 0.0441 - rmse: 0.0938 - val_loss: 0.0694 - val_rmse: 0.1163
Epoch 155/1000
 - 0s - loss: 0.0368 - rmse: 0.0890 - val_loss: 0.0585 - val_rmse: 0.1107
Epoch 156/1000
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 - 0s - loss: 0.0347 - rmse: 0.0879 - val_loss: 0.0648 - val_rmse: 0.1103
Epoch 157/1000
 - 0s - loss: 0.0299 - rmse: 0.0830 - val_loss: 0.0666 - val_rmse: 0.1143
Epoch 158/1000
 - 0s - loss: 0.0278 - rmse: 0.0806 - val_loss: 0.0598 - val_rmse: 0.1108
Epoch 159/1000
 - 0s - loss: 0.0257 - rmse: 0.0789 - val_loss: 0.0673 - val_rmse: 0.1162
Epoch 160/1000
 - 0s - loss: 0.0296 - rmse: 0.0759 - val_loss: 0.0791 - val_rmse: 0.1221
Epoch 161/1000
 - 0s - loss: 0.0299 - rmse: 0.0777 - val_loss: 0.0696 - val_rmse: 0.1155
Epoch 162/1000
 - 0s - loss: 0.0262 - rmse: 0.0759 - val_loss: 0.0656 - val_rmse: 0.1153
Epoch 163/1000
 - 0s - loss: 0.0246 - rmse: 0.0721 - val_loss: 0.0623 - val_rmse: 0.1109
Epoch 164/1000
 - 0s - loss: 0.0262 - rmse: 0.0730 - val_loss: 0.0733 - val_rmse: 0.1193
Epoch 165/1000
 - 0s - loss: 0.0313 - rmse: 0.0760 - val_loss: 0.1021 - val_rmse: 0.1240
Epoch 166/1000
 - 0s - loss: 0.0331 - rmse: 0.0808 - val_loss: 0.0763 - val_rmse: 0.1197
Epoch 167/1000
 - 0s - loss: 0.0297 - rmse: 0.0815 - val_loss: 0.0819 - val_rmse: 0.1191
Epoch 168/1000
 - 0s - loss: 0.0361 - rmse: 0.0837 - val_loss: 0.0816 - val_rmse: 0.1207
Epoch 169/1000
 - 0s - loss: 0.0330 - rmse: 0.0814 - val_loss: 0.0756 - val_rmse: 0.1185
Epoch 170/1000
 - 0s - loss: 0.0316 - rmse: 0.0765 - val_loss: 0.0799 - val_rmse: 0.1270
Epoch 171/1000
 - 0s - loss: 0.0343 - rmse: 0.0892 - val_loss: 0.0757 - val_rmse: 0.1381
Epoch 172/1000
 - 0s - loss: 0.0314 - rmse: 0.0859 - val_loss: 0.0747 - val_rmse: 0.1310
Epoch 173/1000
 - 0s - loss: 0.0316 - rmse: 0.0799 - val_loss: 0.0611 - val_rmse: 0.1107
Epoch 174/1000
 - 0s - loss: 0.0264 - rmse: 0.0751 - val_loss: 0.0685 - val_rmse: 0.1185
Epoch 175/1000
 - 0s - loss: 0.0243 - rmse: 0.0740 - val_loss: 0.0567 - val_rmse: 0.1067
Epoch 176/1000
 - 0s - loss: 0.0417 - rmse: 0.0819 - val_loss: 0.0927 - val_rmse: 0.1332
Epoch 177/1000
 - 0s - loss: 0.0477 - rmse: 0.0969 - val_loss: 0.0792 - val_rmse: 0.1353
Epoch 178/1000
 - 0s - loss: 0.0341 - rmse: 0.0916 - val_loss: 0.0721 - val_rmse: 0.1206
Epoch 179/1000
 - 0s - loss: 0.0277 - rmse: 0.0816 - val_loss: 0.0646 - val_rmse: 0.1145
Epoch 180/1000
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 - 0s - loss: 0.0251 - rmse: 0.0740 - val_loss: 0.0719 - val_rmse: 0.1134
Epoch 181/1000
 - 0s - loss: 0.0282 - rmse: 0.0728 - val_loss: 0.0743 - val_rmse: 0.1138
Epoch 182/1000
 - 0s - loss: 0.0293 - rmse: 0.0744 - val_loss: 0.0770 - val_rmse: 0.1212
Epoch 183/1000
 - 0s - loss: 0.0242 - rmse: 0.0735 - val_loss: 0.0618 - val_rmse: 0.1147
Epoch 184/1000
 - 0s - loss: 0.0259 - rmse: 0.0708 - val_loss: 0.0633 - val_rmse: 0.1140
Epoch 185/1000
 - 0s - loss: 0.0217 - rmse: 0.0680 - val_loss: 0.0794 - val_rmse: 0.1184
Epoch 186/1000
 - 0s - loss: 0.0292 - rmse: 0.0721 - val_loss: 0.0716 - val_rmse: 0.1141
Epoch 187/1000
 - 0s - loss: 0.0259 - rmse: 0.0699 - val_loss: 0.0614 - val_rmse: 0.1152
Epoch 188/1000
 - 0s - loss: 0.0229 - rmse: 0.0665 - val_loss: 0.0623 - val_rmse: 0.1121
Epoch 189/1000
 - 0s - loss: 0.0212 - rmse: 0.0625 - val_loss: 0.0724 - val_rmse: 0.1154
Epoch 190/1000
 - 0s - loss: 0.0234 - rmse: 0.0656 - val_loss: 0.0668 - val_rmse: 0.1161
Epoch 191/1000
 - 0s - loss: 0.0215 - rmse: 0.0652 - val_loss: 0.0624 - val_rmse: 0.1133
Epoch 192/1000
 - 0s - loss: 0.0197 - rmse: 0.0621 - val_loss: 0.0594 - val_rmse: 0.1124
Epoch 193/1000
 - 0s - loss: 0.0213 - rmse: 0.0638 - val_loss: 0.0699 - val_rmse: 0.1123
Epoch 194/1000
 - 0s - loss: 0.0185 - rmse: 0.0603 - val_loss: 0.0624 - val_rmse: 0.1116
Epoch 195/1000
 - 0s - loss: 0.0161 - rmse: 0.0571 - val_loss: 0.0641 - val_rmse: 0.1112
Epoch 196/1000
 - 0s - loss: 0.0165 - rmse: 0.0571 - val_loss: 0.0604 - val_rmse: 0.1104
Epoch 197/1000
 - 0s - loss: 0.0174 - rmse: 0.0571 - val_loss: 0.0651 - val_rmse: 0.1135
Epoch 198/1000
 - 0s - loss: 0.0186 - rmse: 0.0586 - val_loss: 0.0710 - val_rmse: 0.1164
Epoch 199/1000
 - 0s - loss: 0.0247 - rmse: 0.0666 - val_loss: 0.0702 - val_rmse: 0.1145
Epoch 200/1000
 - 0s - loss: 0.0211 - rmse: 0.0648 - val_loss: 0.0671 - val_rmse: 0.1158
Epoch 201/1000
 - 0s - loss: 0.0190 - rmse: 0.0624 - val_loss: 0.0623 - val_rmse: 0.1163
Epoch 202/1000
 - 0s - loss: 0.0196 - rmse: 0.0635 - val_loss: 0.0713 - val_rmse: 0.1171
Epoch 203/1000
 - 0s - loss: 0.0189 - rmse: 0.0605 - val_loss: 0.0592 - val_rmse: 0.1114
Epoch 204/1000
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 - 0s - loss: 0.0161 - rmse: 0.0584 - val_loss: 0.0619 - val_rmse: 0.1115
Epoch 205/1000
 - 0s - loss: 0.0165 - rmse: 0.0589 - val_loss: 0.0598 - val_rmse: 0.1121
Epoch 206/1000
 - 0s - loss: 0.0163 - rmse: 0.0566 - val_loss: 0.0731 - val_rmse: 0.1140
Epoch 207/1000
 - 0s - loss: 0.0186 - rmse: 0.0585 - val_loss: 0.0814 - val_rmse: 0.1216
Epoch 208/1000
 - 0s - loss: 0.0205 - rmse: 0.0652 - val_loss: 0.0615 - val_rmse: 0.1197
Epoch 209/1000
 - 0s - loss: 0.0161 - rmse: 0.0595 - val_loss: 0.0666 - val_rmse: 0.1178
Epoch 210/1000
 - 0s - loss: 0.0158 - rmse: 0.0561 - val_loss: 0.0665 - val_rmse: 0.1147
Epoch 211/1000
 - 0s - loss: 0.0187 - rmse: 0.0568 - val_loss: 0.0747 - val_rmse: 0.1209
Epoch 212/1000
 - 0s - loss: 0.0265 - rmse: 0.0696 - val_loss: 0.0735 - val_rmse: 0.1184
Epoch 213/1000
 - 0s - loss: 0.0216 - rmse: 0.0701 - val_loss: 0.0693 - val_rmse: 0.1147
Epoch 214/1000
 - 0s - loss: 0.0229 - rmse: 0.0651 - val_loss: 0.0699 - val_rmse: 0.1184
Epoch 215/1000
 - 0s - loss: 0.0191 - rmse: 0.0623 - val_loss: 0.0730 - val_rmse: 0.1157
Epoch 216/1000
 - 0s - loss: 0.0190 - rmse: 0.0612 - val_loss: 0.0768 - val_rmse: 0.1183
Epoch 217/1000
 - 0s - loss: 0.0188 - rmse: 0.0613 - val_loss: 0.0703 - val_rmse: 0.1150
Epoch 218/1000
 - 0s - loss: 0.0183 - rmse: 0.0607 - val_loss: 0.0667 - val_rmse: 0.1151
Epoch 219/1000
 - 0s - loss: 0.0168 - rmse: 0.0548 - val_loss: 0.0654 - val_rmse: 0.1122
Epoch 220/1000
 - 0s - loss: 0.0226 - rmse: 0.0592 - val_loss: 0.1013 - val_rmse: 0.1224
Epoch 221/1000
 - 0s - loss: 0.0382 - rmse: 0.0728 - val_loss: 0.0795 - val_rmse: 0.1273
Epoch 222/1000
 - 0s - loss: 0.0398 - rmse: 0.0833 - val_loss: 0.0756 - val_rmse: 0.1358
Epoch 223/1000
 - 0s - loss: 0.0271 - rmse: 0.0741 - val_loss: 0.0736 - val_rmse: 0.1220
Epoch 224/1000
 - 0s - loss: 0.0226 - rmse: 0.0686 - val_loss: 0.0822 - val_rmse: 0.1200
Epoch 225/1000
 - 0s - loss: 0.0193 - rmse: 0.0638 - val_loss: 0.0636 - val_rmse: 0.1160
Epoch 226/1000
 - 0s - loss: 0.0213 - rmse: 0.0632 - val_loss: 0.0765 - val_rmse: 0.1205
Epoch 227/1000
 - 0s - loss: 0.0216 - rmse: 0.0678 - val_loss: 0.0644 - val_rmse: 0.1153
Epoch 228/1000
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 - 0s - loss: 0.0208 - rmse: 0.0657 - val_loss: 0.0731 - val_rmse: 0.1180
Epoch 229/1000
 - 0s - loss: 0.0184 - rmse: 0.0631 - val_loss: 0.0658 - val_rmse: 0.1152
Epoch 230/1000
 - 0s - loss: 0.0169 - rmse: 0.0620 - val_loss: 0.0742 - val_rmse: 0.1158
Epoch 231/1000
 - 0s - loss: 0.0157 - rmse: 0.0566 - val_loss: 0.0626 - val_rmse: 0.1128
Epoch 232/1000
 - 0s - loss: 0.0152 - rmse: 0.0539 - val_loss: 0.0644 - val_rmse: 0.1144
Epoch 233/1000
 - 0s - loss: 0.0157 - rmse: 0.0544 - val_loss: 0.0679 - val_rmse: 0.1167
Epoch 234/1000
 - 0s - loss: 0.0176 - rmse: 0.0542 - val_loss: 0.0797 - val_rmse: 0.1167
Epoch 235/1000
 - 0s - loss: 0.0184 - rmse: 0.0557 - val_loss: 0.0629 - val_rmse: 0.1159
Epoch 236/1000
 - 0s - loss: 0.0164 - rmse: 0.0548 - val_loss: 0.0733 - val_rmse: 0.1171
Epoch 237/1000
 - 0s - loss: 0.0164 - rmse: 0.0537 - val_loss: 0.0816 - val_rmse: 0.1172
Epoch 238/1000
 - 0s - loss: 0.0289 - rmse: 0.0651 - val_loss: 0.0760 - val_rmse: 0.1300
Epoch 239/1000
 - 0s - loss: 0.0237 - rmse: 0.0721 - val_loss: 0.0801 - val_rmse: 0.1306
Epoch 240/1000
 - 0s - loss: 0.0190 - rmse: 0.0670 - val_loss: 0.0780 - val_rmse: 0.1212
Epoch 241/1000
 - 0s - loss: 0.0175 - rmse: 0.0658 - val_loss: 0.0634 - val_rmse: 0.1212
Epoch 242/1000
 - 0s - loss: 0.0147 - rmse: 0.0589 - val_loss: 0.0669 - val_rmse: 0.1201
Epoch 243/1000
 - 0s - loss: 0.0182 - rmse: 0.0605 - val_loss: 0.0653 - val_rmse: 0.1163
Epoch 244/1000
 - 0s - loss: 0.0152 - rmse: 0.0562 - val_loss: 0.0658 - val_rmse: 0.1154
Epoch 245/1000
 - 0s - loss: 0.0143 - rmse: 0.0549 - val_loss: 0.0706 - val_rmse: 0.1155
Epoch 246/1000
 - 0s - loss: 0.0124 - rmse: 0.0502 - val_loss: 0.0671 - val_rmse: 0.1161
Epoch 247/1000
 - 0s - loss: 0.0136 - rmse: 0.0500 - val_loss: 0.0649 - val_rmse: 0.1180
Epoch 248/1000
 - 0s - loss: 0.0145 - rmse: 0.0514 - val_loss: 0.0599 - val_rmse: 0.1141
Epoch 249/1000
 - 0s - loss: 0.0148 - rmse: 0.0486 - val_loss: 0.0704 - val_rmse: 0.1165
Epoch 250/1000
 - 0s - loss: 0.0155 - rmse: 0.0499 - val_loss: 0.0752 - val_rmse: 0.1190
Epoch 251/1000
 - 0s - loss: 0.0154 - rmse: 0.0517 - val_loss: 0.0728 - val_rmse: 0.1222
Epoch 252/1000
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 - 0s - loss: 0.0200 - rmse: 0.0601 - val_loss: 0.0825 - val_rmse: 0.1256
Epoch 253/1000
 - 0s - loss: 0.0203 - rmse: 0.0663 - val_loss: 0.0661 - val_rmse: 0.1166
Epoch 254/1000
 - 0s - loss: 0.0180 - rmse: 0.0596 - val_loss: 0.0675 - val_rmse: 0.1180
Epoch 255/1000
 - 0s - loss: 0.0152 - rmse: 0.0581 - val_loss: 0.0620 - val_rmse: 0.1154
Epoch 256/1000
 - 0s - loss: 0.0157 - rmse: 0.0552 - val_loss: 0.0831 - val_rmse: 0.1207
Epoch 257/1000
 - 0s - loss: 0.0290 - rmse: 0.0618 - val_loss: 0.0866 - val_rmse: 0.1235
Epoch 258/1000
 - 0s - loss: 0.0389 - rmse: 0.0731 - val_loss: 0.0912 - val_rmse: 0.1410
Epoch 259/1000
 - 0s - loss: 0.0327 - rmse: 0.0844 - val_loss: 0.0870 - val_rmse: 0.1318
Epoch 260/1000
 - 0s - loss: 0.0244 - rmse: 0.0706 - val_loss: 0.0784 - val_rmse: 0.1309
Epoch 261/1000
 - 0s - loss: 0.0203 - rmse: 0.0669 - val_loss: 0.0633 - val_rmse: 0.1185
Epoch 262/1000
 - 0s - loss: 0.0171 - rmse: 0.0595 - val_loss: 0.0655 - val_rmse: 0.1207
Epoch 263/1000
 - 0s - loss: 0.0145 - rmse: 0.0544 - val_loss: 0.0657 - val_rmse: 0.1151
Epoch 264/1000
 - 0s - loss: 0.0134 - rmse: 0.0503 - val_loss: 0.0589 - val_rmse: 0.1133
Epoch 265/1000
 - 0s - loss: 0.0130 - rmse: 0.0474 - val_loss: 0.0741 - val_rmse: 0.1159
Epoch 266/1000
 - 0s - loss: 0.0127 - rmse: 0.0467 - val_loss: 0.0614 - val_rmse: 0.1105
Epoch 267/1000
 - 0s - loss: 0.0117 - rmse: 0.0448 - val_loss: 0.0624 - val_rmse: 0.1132
Epoch 268/1000
 - 0s - loss: 0.0122 - rmse: 0.0448 - val_loss: 0.0726 - val_rmse: 0.1158
Epoch 269/1000
 - 0s - loss: 0.0118 - rmse: 0.0472 - val_loss: 0.0705 - val_rmse: 0.1148
Epoch 270/1000
 - 0s - loss: 0.0116 - rmse: 0.0461 - val_loss: 0.0713 - val_rmse: 0.1155
Epoch 271/1000
 - 0s - loss: 0.0135 - rmse: 0.0461 - val_loss: 0.0652 - val_rmse: 0.1157
Epoch 272/1000
 - 0s - loss: 0.0190 - rmse: 0.0522 - val_loss: 0.0626 - val_rmse: 0.1165
Epoch 273/1000
 - 0s - loss: 0.0130 - rmse: 0.0549 - val_loss: 0.0707 - val_rmse: 0.1160
Epoch 274/1000
 - 0s - loss: 0.0146 - rmse: 0.0524 - val_loss: 0.0650 - val_rmse: 0.1165
Epoch 275/1000
 - 0s - loss: 0.0157 - rmse: 0.0521 - val_loss: 0.0729 - val_rmse: 0.1163
Epoch 276/1000
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 - 0s - loss: 0.0190 - rmse: 0.0551 - val_loss: 0.0668 - val_rmse: 0.1140
Epoch 277/1000
 - 0s - loss: 0.0169 - rmse: 0.0516 - val_loss: 0.0695 - val_rmse: 0.1162
Epoch 278/1000
 - 0s - loss: 0.0173 - rmse: 0.0575 - val_loss: 0.0683 - val_rmse: 0.1197
Epoch 279/1000
 - 0s - loss: 0.0161 - rmse: 0.0601 - val_loss: 0.0679 - val_rmse: 0.1191
Epoch 280/1000
 - 0s - loss: 0.0142 - rmse: 0.0574 - val_loss: 0.0779 - val_rmse: 0.1158
Epoch 281/1000
 - 0s - loss: 0.0130 - rmse: 0.0536 - val_loss: 0.0613 - val_rmse: 0.1148
Epoch 282/1000
 - 0s - loss: 0.0136 - rmse: 0.0508 - val_loss: 0.0660 - val_rmse: 0.1157
Epoch 283/1000
 - 0s - loss: 0.0118 - rmse: 0.0465 - val_loss: 0.0583 - val_rmse: 0.1131
Epoch 284/1000
 - 0s - loss: 0.0158 - rmse: 0.0476 - val_loss: 0.0708 - val_rmse: 0.1199
Epoch 285/1000
 - 0s - loss: 0.0156 - rmse: 0.0517 - val_loss: 0.0707 - val_rmse: 0.1174
Epoch 286/1000
 - 0s - loss: 0.0177 - rmse: 0.0522 - val_loss: 0.0678 - val_rmse: 0.1156
Epoch 287/1000
 - 0s - loss: 0.0157 - rmse: 0.0481 - val_loss: 0.0641 - val_rmse: 0.1163
Epoch 288/1000
 - 0s - loss: 0.0099 - rmse: 0.0426 - val_loss: 0.0683 - val_rmse: 0.1128
Epoch 289/1000
 - 0s - loss: 0.0104 - rmse: 0.0424 - val_loss: 0.0778 - val_rmse: 0.1176
Epoch 290/1000
 - 0s - loss: 0.0129 - rmse: 0.0449 - val_loss: 0.0657 - val_rmse: 0.1148
Epoch 291/1000
 - 0s - loss: 0.0109 - rmse: 0.0425 - val_loss: 0.0669 - val_rmse: 0.1138
Epoch 292/1000
 - 0s - loss: 0.0121 - rmse: 0.0441 - val_loss: 0.0714 - val_rmse: 0.1153
Epoch 293/1000
 - 0s - loss: 0.0099 - rmse: 0.0414 - val_loss: 0.0661 - val_rmse: 0.1173
Epoch 294/1000
 - 0s - loss: 0.0127 - rmse: 0.0431 - val_loss: 0.0734 - val_rmse: 0.1164
Epoch 295/1000
 - 0s - loss: 0.0118 - rmse: 0.0426 - val_loss: 0.0819 - val_rmse: 0.1154
Epoch 296/1000
 - 0s - loss: 0.0195 - rmse: 0.0483 - val_loss: 0.0764 - val_rmse: 0.1203
Epoch 297/1000
 - 0s - loss: 0.0190 - rmse: 0.0563 - val_loss: 0.0701 - val_rmse: 0.1284
Epoch 298/1000
 - 0s - loss: 0.0171 - rmse: 0.0601 - val_loss: 0.0743 - val_rmse: 0.1278
Epoch 299/1000
 - 0s - loss: 0.0180 - rmse: 0.0561 - val_loss: 0.0877 - val_rmse: 0.1234
Epoch 300/1000
```

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 - 0s - loss: 0.0308 - rmse: 0.0650 - val_loss: 0.0880 - val_rmse: 0.1271
Epoch 301/1000
 - 0s - loss: 0.0252 - rmse: 0.0709 - val_loss: 0.0951 - val_rmse: 0.1306
Epoch 302/1000
 - 0s - loss: 0.0537 - rmse: 0.0922 - val_loss: 0.0762 - val_rmse: 0.1342
Epoch 303/1000
 - 0s - loss: 0.0789 - rmse: 0.1097 - val_loss: 0.1317 - val_rmse: 0.1434
Epoch 304/1000
 - 0s - loss: 0.0823 - rmse: 0.1187 - val_loss: 0.0739 - val_rmse: 0.1383
Epoch 305/1000
 - 0s - loss: 0.0659 - rmse: 0.1101 - val_loss: 0.0717 - val_rmse: 0.1230
Epoch 306/1000
 - 0s - loss: 0.0476 - rmse: 0.1003 - val_loss: 0.0646 - val_rmse: 0.1215
Epoch 307/1000
 - 0s - loss: 0.0324 - rmse: 0.0882 - val_loss: 0.0674 - val_rmse: 0.1184
Epoch 308/1000
 - 0s - loss: 0.0276 - rmse: 0.0814 - val_loss: 0.0574 - val_rmse: 0.1114
Epoch 309/1000
 - 0s - loss: 0.0242 - rmse: 0.0754 - val_loss: 0.0588 - val_rmse: 0.1140
Epoch 310/1000
 - 0s - loss: 0.0231 - rmse: 0.0707 - val_loss: 0.0717 - val_rmse: 0.1149
Epoch 311/1000
 - 0s - loss: 0.0222 - rmse: 0.0678 - val_loss: 0.0656 - val_rmse: 0.1177
Epoch 312/1000
 - 0s - loss: 0.0175 - rmse: 0.0652 - val_loss: 0.0690 - val_rmse: 0.1198
Epoch 313/1000
 - 0s - loss: 0.0219 - rmse: 0.0668 - val_loss: 0.0857 - val_rmse: 0.1234
Epoch 314/1000
 - 0s - loss: 0.0230 - rmse: 0.0713 - val_loss: 0.0739 - val_rmse: 0.1217
Epoch 315/1000
 - 0s - loss: 0.0181 - rmse: 0.0655 - val_loss: 0.0658 - val_rmse: 0.1207
Epoch 316/1000
 - 0s - loss: 0.0187 - rmse: 0.0643 - val_loss: 0.0872 - val_rmse: 0.1221
Epoch 317/1000
 - 0s - loss: 0.0191 - rmse: 0.0660 - val_loss: 0.0735 - val_rmse: 0.1253
Epoch 318/1000
 - 0s - loss: 0.0185 - rmse: 0.0676 - val_loss: 0.0810 - val_rmse: 0.1244
Epoch 319/1000
 - 0s - loss: 0.0170 - rmse: 0.0610 - val_loss: 0.0622 - val_rmse: 0.1132
Epoch 320/1000
 - 0s - loss: 0.0128 - rmse: 0.0551 - val_loss: 0.0672 - val_rmse: 0.1146
Epoch 321/1000
 - 0s - loss: 0.0129 - rmse: 0.0524 - val_loss: 0.0618 - val_rmse: 0.1126
Epoch 322/1000
 - 0s - loss: 0.0112 - rmse: 0.0500 - val_loss: 0.0628 - val_rmse: 0.1124
Epoch 323/1000
 - 0s - loss: 0.0112 - rmse: 0.0482 - val_loss: 0.0650 - val_rmse: 0.1143
Epoch 324/1000
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 - 0s - loss: 0.0137 - rmse: 0.0492 - val_loss: 0.0740 - val_rmse: 0.1153
Epoch 325/1000
 - 0s - loss: 0.0128 - rmse: 0.0482 - val_loss: 0.0774 - val_rmse: 0.1168
Epoch 326/1000
 - 0s - loss: 0.0135 - rmse: 0.0483 - val_loss: 0.0603 - val_rmse: 0.1153
Epoch 327/1000
 - 0s - loss: 0.0110 - rmse: 0.0453 - val_loss: 0.0704 - val_rmse: 0.1161
Epoch 328/1000
 - 0s - loss: 0.0132 - rmse: 0.0465 - val_loss: 0.0683 - val_rmse: 0.1135
Epoch 329/1000
 - 0s - loss: 0.0121 - rmse: 0.0464 - val_loss: 0.0673 - val_rmse: 0.1174
Epoch 330/1000
 - 0s - loss: 0.0119 - rmse: 0.0472 - val_loss: 0.0658 - val_rmse: 0.1175
Epoch 331/1000
 - 0s - loss: 0.0159 - rmse: 0.0506 - val_loss: 0.0744 - val_rmse: 0.1165
Epoch 332/1000
 - 0s - loss: 0.0128 - rmse: 0.0484 - val_loss: 0.0880 - val_rmse: 0.1241
Epoch 333/1000
 - 0s - loss: 0.0193 - rmse: 0.0549 - val_loss: 0.0835 - val_rmse: 0.1195
Epoch 334/1000
 - 0s - loss: 0.0181 - rmse: 0.0506 - val_loss: 0.0806 - val_rmse: 0.1164
Epoch 335/1000
 - 0s - loss: 0.0198 - rmse: 0.0517 - val_loss: 0.0747 - val_rmse: 0.1212
Epoch 336/1000
 - 0s - loss: 0.0175 - rmse: 0.0552 - val_loss: 0.0688 - val_rmse: 0.1167
Epoch 337/1000
 - 0s - loss: 0.0150 - rmse: 0.0524 - val_loss: 0.0745 - val_rmse: 0.1226
Epoch 338/1000
 - 0s - loss: 0.0130 - rmse: 0.0527 - val_loss: 0.0640 - val_rmse: 0.1208
Epoch 339/1000
 - 0s - loss: 0.0129 - rmse: 0.0479 - val_loss: 0.0727 - val_rmse: 0.1172
Epoch 340/1000
 - 0s - loss: 0.0191 - rmse: 0.0512 - val_loss: 0.0835 - val_rmse: 0.1178
Epoch 341/1000
 - 0s - loss: 0.0159 - rmse: 0.0502 - val_loss: 0.0714 - val_rmse: 0.1171
Epoch 342/1000
 - 0s - loss: 0.0130 - rmse: 0.0453 - val_loss: 0.0669 - val_rmse: 0.1204
Epoch 343/1000
 - 0s - loss: 0.0149 - rmse: 0.0464 - val_loss: 0.0694 - val_rmse: 0.1164
Epoch 344/1000
 - 0s - loss: 0.0152 - rmse: 0.0457 - val_loss: 0.0762 - val_rmse: 0.1168
Epoch 345/1000
 - 0s - loss: 0.0114 - rmse: 0.0422 - val_loss: 0.0712 - val_rmse: 0.1137
Epoch 346/1000
 - 0s - loss: 0.0123 - rmse: 0.0428 - val_loss: 0.0791 - val_rmse: 0.1262
Epoch 347/1000
 - 0s - loss: 0.0153 - rmse: 0.0498 - val_loss: 0.0648 - val_rmse: 0.1158
Epoch 348/1000
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 - 0s - loss: 0.0101 - rmse: 0.0433 - val_loss: 0.0726 - val_rmse: 0.1173
Epoch 349/1000
 - 0s - loss: 0.0149 - rmse: 0.0453 - val_loss: 0.0631 - val_rmse: 0.1142
Epoch 350/1000
 - 0s - loss: 0.0129 - rmse: 0.0438 - val_loss: 0.0639 - val_rmse: 0.1205
Epoch 351/1000
 - 0s - loss: 0.0110 - rmse: 0.0481 - val_loss: 0.0661 - val_rmse: 0.1202
Epoch 352/1000
 - 0s - loss: 0.0097 - rmse: 0.0452 - val_loss: 0.0601 - val_rmse: 0.1156
Epoch 353/1000
 - 0s - loss: 0.0091 - rmse: 0.0415 - val_loss: 0.0660 - val_rmse: 0.1162
Epoch 354/1000
 - 0s - loss: 0.0110 - rmse: 0.0402 - val_loss: 0.0620 - val_rmse: 0.1140
Epoch 355/1000
 - 0s - loss: 0.0107 - rmse: 0.0412 - val_loss: 0.0716 - val_rmse: 0.1199
Epoch 356/1000
 - 0s - loss: 0.0123 - rmse: 0.0425 - val_loss: 0.0594 - val_rmse: 0.1143
Epoch 357/1000
 - 0s - loss: 0.0096 - rmse: 0.0390 - val_loss: 0.0685 - val_rmse: 0.1146
Epoch 358/1000
 - 0s - loss: 0.0105 - rmse: 0.0415 - val_loss: 0.0607 - val_rmse: 0.1135
Epoch 359/1000
 - 0s - loss: 0.0130 - rmse: 0.0441 - val_loss: 0.0712 - val_rmse: 0.1199
Epoch 360/1000
 - 0s - loss: 0.0203 - rmse: 0.0547 - val_loss: 0.0855 - val_rmse: 0.1272
Epoch 361/1000
 - 0s - loss: 0.0244 - rmse: 0.0605 - val_loss: 0.0830 - val_rmse: 0.1218
Epoch 362/1000
 - 0s - loss: 0.0165 - rmse: 0.0517 - val_loss: 0.0784 - val_rmse: 0.1224
Epoch 363/1000
 - 0s - loss: 0.0154 - rmse: 0.0545 - val_loss: 0.0654 - val_rmse: 0.1202
Epoch 364/1000
 - 0s - loss: 0.0117 - rmse: 0.0472 - val_loss: 0.0640 - val_rmse: 0.1142
Epoch 365/1000
 - 0s - loss: 0.0095 - rmse: 0.0428 - val_loss: 0.0657 - val_rmse: 0.1147
Epoch 366/1000
 - 0s - loss: 0.0103 - rmse: 0.0411 - val_loss: 0.0639 - val_rmse: 0.1154
Epoch 367/1000
 - 0s - loss: 0.0089 - rmse: 0.0390 - val_loss: 0.0661 - val_rmse: 0.1126
Epoch 368/1000
 - 0s - loss: 0.0118 - rmse: 0.0415 - val_loss: 0.0780 - val_rmse: 0.1225
Epoch 369/1000
 - 0s - loss: 0.0140 - rmse: 0.0428 - val_loss: 0.0750 - val_rmse: 0.1172
Epoch 370/1000
 - 0s - loss: 0.0139 - rmse: 0.0437 - val_loss: 0.0634 - val_rmse: 0.1206
Epoch 371/1000
 - 0s - loss: 0.0132 - rmse: 0.0495 - val_loss: 0.0676 - val_rmse: 0.1195
Epoch 372/1000
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 - 0s - loss: 0.0131 - rmse: 0.0491 - val_loss: 0.0650 - val_rmse: 0.1180
Epoch 373/1000
 - 0s - loss: 0.0169 - rmse: 0.0504 - val_loss: 0.0780 - val_rmse: 0.1159
Epoch 374/1000
 - 0s - loss: 0.0165 - rmse: 0.0477 - val_loss: 0.0777 - val_rmse: 0.1189
Epoch 375/1000
 - 0s - loss: 0.0100 - rmse: 0.0428 - val_loss: 0.0613 - val_rmse: 0.1128
Epoch 376/1000
 - 0s - loss: 0.0084 - rmse: 0.0390 - val_loss: 0.0690 - val_rmse: 0.1172
Epoch 377/1000
 - 0s - loss: 0.0076 - rmse: 0.0356 - val_loss: 0.0721 - val_rmse: 0.1153
Epoch 378/1000
 - 0s - loss: 0.0108 - rmse: 0.0371 - val_loss: 0.0776 - val_rmse: 0.1164
Epoch 379/1000
 - 0s - loss: 0.0091 - rmse: 0.0400 - val_loss: 0.0615 - val_rmse: 0.1137
Epoch 380/1000
 - 0s - loss: 0.0063 - rmse: 0.0377 - val_loss: 0.0617 - val_rmse: 0.1156
Epoch 381/1000
 - 0s - loss: 0.0070 - rmse: 0.0370 - val_loss: 0.0618 - val_rmse: 0.1152
Epoch 382/1000
 - 0s - loss: 0.0064 - rmse: 0.0353 - val_loss: 0.0608 - val_rmse: 0.1136
Epoch 383/1000
 - 0s - loss: 0.0065 - rmse: 0.0345 - val_loss: 0.0632 - val_rmse: 0.1152
Epoch 384/1000
 - 0s - loss: 0.0072 - rmse: 0.0353 - val_loss: 0.0595 - val_rmse: 0.1130
Epoch 385/1000
 - 0s - loss: 0.0078 - rmse: 0.0364 - val_loss: 0.0614 - val_rmse: 0.1141
Epoch 386/1000
 - 0s - loss: 0.0096 - rmse: 0.0354 - val_loss: 0.0600 - val_rmse: 0.1130
Epoch 387/1000
 - 0s - loss: 0.0105 - rmse: 0.0386 - val_loss: 0.0591 - val_rmse: 0.1149
Epoch 388/1000
 - 0s - loss: 0.0079 - rmse: 0.0359 - val_loss: 0.0670 - val_rmse: 0.1140
Epoch 389/1000
 - 0s - loss: 0.0092 - rmse: 0.0349 - val_loss: 0.0649 - val_rmse: 0.1169
Epoch 390/1000
 - 0s - loss: 0.0124 - rmse: 0.0408 - val_loss: 0.0691 - val_rmse: 0.1168
Epoch 391/1000
 - 0s - loss: 0.0138 - rmse: 0.0421 - val_loss: 0.1062 - val_rmse: 0.1243
Epoch 392/1000
 - 0s - loss: 0.0258 - rmse: 0.0551 - val_loss: 0.0750 - val_rmse: 0.1190
Epoch 393/1000
 - 0s - loss: 0.0438 - rmse: 0.0610 - val_loss: 0.0991 - val_rmse: 0.1384
Epoch 394/1000
 - 0s - loss: 0.0545 - rmse: 0.0735 - val_loss: 0.0710 - val_rmse: 0.1270
Epoch 395/1000
 - 0s - loss: 0.0321 - rmse: 0.0736 - val_loss: 0.0720 - val_rmse: 0.1316
Epoch 396/1000
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 - 0s - loss: 0.0347 - rmse: 0.0926 - val_loss: 0.0799 - val_rmse: 0.1217
Epoch 397/1000
 - 0s - loss: 0.0305 - rmse: 0.0790 - val_loss: 0.0979 - val_rmse: 0.1289
Epoch 398/1000
 - 0s - loss: 0.0282 - rmse: 0.0786 - val_loss: 0.0742 - val_rmse: 0.1260
Epoch 399/1000
 - 0s - loss: 0.0197 - rmse: 0.0711 - val_loss: 0.0723 - val_rmse: 0.1178
Epoch 400/1000
 - 0s - loss: 0.0169 - rmse: 0.0643 - val_loss: 0.0669 - val_rmse: 0.1196
Epoch 401/1000
 - 0s - loss: 0.0176 - rmse: 0.0641 - val_loss: 0.0752 - val_rmse: 0.1170
Epoch 402/1000
 - 0s - loss: 0.0146 - rmse: 0.0590 - val_loss: 0.0713 - val_rmse: 0.1191
Epoch 403/1000
 - 0s - loss: 0.0140 - rmse: 0.0541 - val_loss: 0.0780 - val_rmse: 0.1164
Epoch 404/1000
 - 0s - loss: 0.0110 - rmse: 0.0472 - val_loss: 0.0672 - val_rmse: 0.1144
Epoch 405/1000
 - 0s - loss: 0.0090 - rmse: 0.0422 - val_loss: 0.0610 - val_rmse: 0.1144
Epoch 406/1000
 - 0s - loss: 0.0078 - rmse: 0.0388 - val_loss: 0.0712 - val_rmse: 0.1148
Epoch 407/1000
 - 0s - loss: 0.0123 - rmse: 0.0437 - val_loss: 0.0665 - val_rmse: 0.1154
Epoch 408/1000
 - 0s - loss: 0.0110 - rmse: 0.0444 - val_loss: 0.0658 - val_rmse: 0.1147
Epoch 409/1000
 - 0s - loss: 0.0097 - rmse: 0.0436 - val_loss: 0.0742 - val_rmse: 0.1175
Epoch 410/1000
 - 0s - loss: 0.0095 - rmse: 0.0416 - val_loss: 0.0658 - val_rmse: 0.1149
Epoch 411/1000
 - 0s - loss: 0.0076 - rmse: 0.0378 - val_loss: 0.0648 - val_rmse: 0.1143
Epoch 412/1000
 - 0s - loss: 0.0069 - rmse: 0.0358 - val_loss: 0.0672 - val_rmse: 0.1145
Epoch 413/1000
 - 0s - loss: 0.0056 - rmse: 0.0337 - val_loss: 0.0613 - val_rmse: 0.1136
Epoch 414/1000
 - 0s - loss: 0.0055 - rmse: 0.0331 - val_loss: 0.0633 - val_rmse: 0.1130
Epoch 415/1000
 - 0s - loss: 0.0048 - rmse: 0.0327 - val_loss: 0.0655 - val_rmse: 0.1123
Epoch 416/1000
 - 0s - loss: 0.0049 - rmse: 0.0303 - val_loss: 0.0689 - val_rmse: 0.1143
Epoch 417/1000
 - 0s - loss: 0.0049 - rmse: 0.0294 - val_loss: 0.0670 - val_rmse: 0.1146
Epoch 418/1000
 - 0s - loss: 0.0044 - rmse: 0.0285 - val_loss: 0.0613 - val_rmse: 0.1134
Epoch 419/1000
 - 0s - loss: 0.0049 - rmse: 0.0287 - val_loss: 0.0634 - val_rmse: 0.1122
Epoch 420/1000
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 - 0s - loss: 0.0049 - rmse: 0.0287 - val_loss: 0.0621 - val_rmse: 0.1137
Epoch 421/1000
 - 0s - loss: 0.0055 - rmse: 0.0310 - val_loss: 0.0682 - val_rmse: 0.1165
Epoch 422/1000
 - 0s - loss: 0.0072 - rmse: 0.0344 - val_loss: 0.0652 - val_rmse: 0.1163
Epoch 423/1000
 - 0s - loss: 0.0059 - rmse: 0.0364 - val_loss: 0.0627 - val_rmse: 0.1161
Epoch 424/1000
 - 0s - loss: 0.0062 - rmse: 0.0365 - val_loss: 0.0625 - val_rmse: 0.1194
Epoch 425/1000
 - 0s - loss: 0.0058 - rmse: 0.0350 - val_loss: 0.0695 - val_rmse: 0.1207
Epoch 426/1000
 - 0s - loss: 0.0070 - rmse: 0.0345 - val_loss: 0.0609 - val_rmse: 0.1116
Epoch 427/1000
 - 0s - loss: 0.0060 - rmse: 0.0311 - val_loss: 0.0703 - val_rmse: 0.1147
Epoch 428/1000
 - 0s - loss: 0.0055 - rmse: 0.0297 - val_loss: 0.0587 - val_rmse: 0.1129
Epoch 429/1000
 - 0s - loss: 0.0052 - rmse: 0.0293 - val_loss: 0.0639 - val_rmse: 0.1141
Epoch 430/1000
 - 0s - loss: 0.0063 - rmse: 0.0314 - val_loss: 0.0636 - val_rmse: 0.1150
Epoch 431/1000
 - 0s - loss: 0.0065 - rmse: 0.0343 - val_loss: 0.0735 - val_rmse: 0.1179
Epoch 432/1000
 - 0s - loss: 0.0070 - rmse: 0.0345 - val_loss: 0.0660 - val_rmse: 0.1156
Epoch 433/1000
 - 0s - loss: 0.0058 - rmse: 0.0333 - val_loss: 0.0735 - val_rmse: 0.1176
Epoch 434/1000
 - 0s - loss: 0.0047 - rmse: 0.0307 - val_loss: 0.0603 - val_rmse: 0.1127
Epoch 435/1000
 - 0s - loss: 0.0041 - rmse: 0.0282 - val_loss: 0.0638 - val_rmse: 0.1155
Epoch 436/1000
 - 0s - loss: 0.0058 - rmse: 0.0318 - val_loss: 0.0680 - val_rmse: 0.1149
Epoch 437/1000
 - 0s - loss: 0.0042 - rmse: 0.0293 - val_loss: 0.0608 - val_rmse: 0.1155
Epoch 438/1000
 - 0s - loss: 0.0043 - rmse: 0.0279 - val_loss: 0.0703 - val_rmse: 0.1154
Epoch 439/1000
 - 0s - loss: 0.0054 - rmse: 0.0280 - val_loss: 0.0665 - val_rmse: 0.1148
Epoch 440/1000
 - 0s - loss: 0.0050 - rmse: 0.0282 - val_loss: 0.0646 - val_rmse: 0.1131
Epoch 441/1000
 - 0s - loss: 0.0059 - rmse: 0.0333 - val_loss: 0.0652 - val_rmse: 0.1146
Epoch 442/1000
 - 0s - loss: 0.0055 - rmse: 0.0324 - val_loss: 0.0644 - val_rmse: 0.1157
Epoch 443/1000
 - 0s - loss: 0.0060 - rmse: 0.0341 - val_loss: 0.0745 - val_rmse: 0.1185
Epoch 444/1000
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 - 0s - loss: 0.0065 - rmse: 0.0341 - val_loss: 0.0662 - val_rmse: 0.1149
Epoch 445/1000
 - 0s - loss: 0.0052 - rmse: 0.0304 - val_loss: 0.0656 - val_rmse: 0.1154
Epoch 446/1000
 - 0s - loss: 0.0045 - rmse: 0.0270 - val_loss: 0.0711 - val_rmse: 0.1154
Epoch 447/1000
 - 0s - loss: 0.0072 - rmse: 0.0291 - val_loss: 0.0767 - val_rmse: 0.1190
Epoch 448/1000
 - 0s - loss: 0.0096 - rmse: 0.0344 - val_loss: 0.0787 - val_rmse: 0.1224
Epoch 449/1000
 - 0s - loss: 0.0100 - rmse: 0.0374 - val_loss: 0.0629 - val_rmse: 0.1155
Epoch 450/1000
 - 0s - loss: 0.0094 - rmse: 0.0395 - val_loss: 0.0664 - val_rmse: 0.1199
Epoch 451/1000
 - 0s - loss: 0.0090 - rmse: 0.0384 - val_loss: 0.0801 - val_rmse: 0.1228
Epoch 452/1000
 - 0s - loss: 0.0113 - rmse: 0.0401 - val_loss: 0.0631 - val_rmse: 0.1155
Epoch 453/1000
 - 0s - loss: 0.0080 - rmse: 0.0402 - val_loss: 0.0728 - val_rmse: 0.1170
Epoch 454/1000
 - 0s - loss: 0.0064 - rmse: 0.0364 - val_loss: 0.0620 - val_rmse: 0.1145
Epoch 455/1000
 - 0s - loss: 0.0056 - rmse: 0.0320 - val_loss: 0.0670 - val_rmse: 0.1159
Epoch 456/1000
 - 0s - loss: 0.0054 - rmse: 0.0311 - val_loss: 0.0649 - val_rmse: 0.1146
Epoch 457/1000
 - 0s - loss: 0.0042 - rmse: 0.0278 - val_loss: 0.0663 - val_rmse: 0.1132
Epoch 458/1000
 - 0s - loss: 0.0039 - rmse: 0.0275 - val_loss: 0.0697 - val_rmse: 0.1143
Epoch 459/1000
 - 0s - loss: 0.0040 - rmse: 0.0298 - val_loss: 0.0759 - val_rmse: 0.1176
Epoch 460/1000
 - 0s - loss: 0.0053 - rmse: 0.0314 - val_loss: 0.0601 - val_rmse: 0.1118
Epoch 461/1000
 - 0s - loss: 0.0046 - rmse: 0.0271 - val_loss: 0.0607 - val_rmse: 0.1130
Epoch 462/1000
 - 0s - loss: 0.0055 - rmse: 0.0269 - val_loss: 0.0688 - val_rmse: 0.1128
Epoch 463/1000
 - 0s - loss: 0.0061 - rmse: 0.0282 - val_loss: 0.0711 - val_rmse: 0.1159
Epoch 464/1000
 - 0s - loss: 0.0069 - rmse: 0.0349 - val_loss: 0.0822 - val_rmse: 0.1182
Epoch 465/1000
 - 0s - loss: 0.0098 - rmse: 0.0367 - val_loss: 0.0655 - val_rmse: 0.1130
Epoch 466/1000
 - 0s - loss: 0.0084 - rmse: 0.0321 - val_loss: 0.0628 - val_rmse: 0.1169
Epoch 467/1000
 - 0s - loss: 0.0058 - rmse: 0.0303 - val_loss: 0.0682 - val_rmse: 0.1139
Epoch 468/1000
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 - 0s - loss: 0.0046 - rmse: 0.0278 - val_loss: 0.0763 - val_rmse: 0.1187
Epoch 469/1000
 - 0s - loss: 0.0111 - rmse: 0.0341 - val_loss: 0.0658 - val_rmse: 0.1228
Epoch 470/1000
 - 0s - loss: 0.0081 - rmse: 0.0364 - val_loss: 0.0746 - val_rmse: 0.1202
Epoch 471/1000
 - 0s - loss: 0.0080 - rmse: 0.0359 - val_loss: 0.0690 - val_rmse: 0.1199
Epoch 472/1000
 - 0s - loss: 0.0073 - rmse: 0.0382 - val_loss: 0.0653 - val_rmse: 0.1180
Epoch 473/1000
 - 0s - loss: 0.0069 - rmse: 0.0367 - val_loss: 0.0653 - val_rmse: 0.1152
Epoch 474/1000
 - 0s - loss: 0.0088 - rmse: 0.0403 - val_loss: 0.0697 - val_rmse: 0.1204
Epoch 475/1000
 - 0s - loss: 0.0088 - rmse: 0.0416 - val_loss: 0.0846 - val_rmse: 0.1228
Epoch 476/1000
 - 0s - loss: 0.0132 - rmse: 0.0443 - val_loss: 0.0637 - val_rmse: 0.1178
Epoch 477/1000
 - 0s - loss: 0.0165 - rmse: 0.0438 - val_loss: 0.0738 - val_rmse: 0.1214
Epoch 478/1000
 - 0s - loss: 0.0152 - rmse: 0.0473 - val_loss: 0.0910 - val_rmse: 0.1243
Epoch 479/1000
 - 0s - loss: 0.0229 - rmse: 0.0563 - val_loss: 0.0878 - val_rmse: 0.1264
Epoch 480/1000
 - 0s - loss: 0.0198 - rmse: 0.0558 - val_loss: 0.0728 - val_rmse: 0.1219
Epoch 481/1000
 - 0s - loss: 0.0142 - rmse: 0.0501 - val_loss: 0.0936 - val_rmse: 0.1228
Epoch 482/1000
 - 0s - loss: 0.0212 - rmse: 0.0551 - val_loss: 0.0778 - val_rmse: 0.1221
Epoch 483/1000
 - 0s - loss: 0.0233 - rmse: 0.0571 - val_loss: 0.0936 - val_rmse: 0.1254
Epoch 484/1000
 - 0s - loss: 0.0214 - rmse: 0.0584 - val_loss: 0.0793 - val_rmse: 0.1206
Epoch 485/1000
 - 0s - loss: 0.0150 - rmse: 0.0549 - val_loss: 0.0662 - val_rmse: 0.1144
Epoch 486/1000
 - 0s - loss: 0.0113 - rmse: 0.0508 - val_loss: 0.0573 - val_rmse: 0.1124
Epoch 487/1000
 - 0s - loss: 0.0166 - rmse: 0.0552 - val_loss: 0.0617 - val_rmse: 0.1202
Epoch 488/1000
 - 0s - loss: 0.0105 - rmse: 0.0555 - val_loss: 0.0734 - val_rmse: 0.1203
Epoch 489/1000
 - 0s - loss: 0.0088 - rmse: 0.0505 - val_loss: 0.0751 - val_rmse: 0.1180
Epoch 490/1000
 - 0s - loss: 0.0067 - rmse: 0.0435 - val_loss: 0.0650 - val_rmse: 0.1190
Epoch 491/1000
 - 0s - loss: 0.0047 - rmse: 0.0374 - val_loss: 0.0676 - val_rmse: 0.1161
Epoch 492/1000
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 - 0s - loss: 0.0044 - rmse: 0.0338 - val_loss: 0.0675 - val_rmse: 0.1157
Epoch 493/1000
 - 0s - loss: 0.0040 - rmse: 0.0301 - val_loss: 0.0665 - val_rmse: 0.1151
Epoch 494/1000
 - 0s - loss: 0.0039 - rmse: 0.0295 - val_loss: 0.0670 - val_rmse: 0.1160
Epoch 495/1000
 - 0s - loss: 0.0035 - rmse: 0.0274 - val_loss: 0.0643 - val_rmse: 0.1134
Epoch 496/1000
 - 0s - loss: 0.0029 - rmse: 0.0264 - val_loss: 0.0684 - val_rmse: 0.1144
Epoch 497/1000
 - 0s - loss: 0.0026 - rmse: 0.0239 - val_loss: 0.0662 - val_rmse: 0.1138
Epoch 498/1000
 - 0s - loss: 0.0020 - rmse: 0.0210 - val_loss: 0.0643 - val_rmse: 0.1115
Epoch 499/1000
 - 0s - loss: 0.0025 - rmse: 0.0227 - val_loss: 0.0649 - val_rmse: 0.1143
Epoch 500/1000
 - 0s - loss: 0.0024 - rmse: 0.0245 - val_loss: 0.0675 - val_rmse: 0.1145
Epoch 501/1000
 - 0s - loss: 0.0022 - rmse: 0.0225 - val_loss: 0.0675 - val_rmse: 0.1151
Epoch 502/1000
 - 0s - loss: 0.0017 - rmse: 0.0206 - val_loss: 0.0664 - val_rmse: 0.1143
Epoch 503/1000
 - 0s - loss: 0.0014 - rmse: 0.0199 - val_loss: 0.0638 - val_rmse: 0.1132
Epoch 504/1000
 - 0s - loss: 0.0013 - rmse: 0.0181 - val_loss: 0.0657 - val_rmse: 0.1134
Epoch 505/1000
 - 0s - loss: 0.0013 - rmse: 0.0177 - val_loss: 0.0629 - val_rmse: 0.1125
Epoch 506/1000
 - 0s - loss: 0.0013 - rmse: 0.0173 - val_loss: 0.0671 - val_rmse: 0.1141
Epoch 507/1000
 - 0s - loss: 0.0013 - rmse: 0.0172 - val_loss: 0.0644 - val_rmse: 0.1128
Epoch 508/1000
 - 0s - loss: 0.0013 - rmse: 0.0173 - val_loss: 0.0673 - val_rmse: 0.1131
Epoch 509/1000
 - 0s - loss: 0.0017 - rmse: 0.0172 - val_loss: 0.0672 - val_rmse: 0.1132
Epoch 510/1000
 - 0s - loss: 0.0018 - rmse: 0.0174 - val_loss: 0.0669 - val_rmse: 0.1159
Epoch 511/1000
 - 0s - loss: 0.0021 - rmse: 0.0192 - val_loss: 0.0664 - val_rmse: 0.1137
Epoch 512/1000
 - 0s - loss: 0.0016 - rmse: 0.0176 - val_loss: 0.0664 - val_rmse: 0.1123
Epoch 513/1000
 - 0s - loss: 0.0021 - rmse: 0.0188 - val_loss: 0.0672 - val_rmse: 0.1133
Epoch 514/1000
 - 0s - loss: 0.0042 - rmse: 0.0211 - val_loss: 0.0698 - val_rmse: 0.1183
Epoch 515/1000
 - 0s - loss: 0.0078 - rmse: 0.0311 - val_loss: 0.0570 - val_rmse: 0.1129
Epoch 516/1000
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 - 0s - loss: 0.0051 - rmse: 0.0318 - val_loss: 0.0749 - val_rmse: 0.1167
Epoch 517/1000
 - 0s - loss: 0.0060 - rmse: 0.0304 - val_loss: 0.0668 - val_rmse: 0.1159
Epoch 518/1000
 - 0s - loss: 0.0079 - rmse: 0.0344 - val_loss: 0.0731 - val_rmse: 0.1198
Epoch 519/1000
 - 0s - loss: 0.0080 - rmse: 0.0401 - val_loss: 0.0689 - val_rmse: 0.1224
Epoch 520/1000
 - 0s - loss: 0.0093 - rmse: 0.0431 - val_loss: 0.0864 - val_rmse: 0.1256
Epoch 521/1000
 - 0s - loss: 0.0119 - rmse: 0.0451 - val_loss: 0.0760 - val_rmse: 0.1325
Epoch 522/1000
 - 0s - loss: 0.0174 - rmse: 0.0546 - val_loss: 0.0746 - val_rmse: 0.1323
Epoch 523/1000
 - 0s - loss: 0.0128 - rmse: 0.0507 - val_loss: 0.0742 - val_rmse: 0.1247
Epoch 524/1000
 - 0s - loss: 0.0120 - rmse: 0.0490 - val_loss: 0.0725 - val_rmse: 0.1190
Epoch 525/1000
 - 0s - loss: 0.0104 - rmse: 0.0462 - val_loss: 0.0652 - val_rmse: 0.1190
Epoch 526/1000
 - 0s - loss: 0.0076 - rmse: 0.0403 - val_loss: 0.0682 - val_rmse: 0.1188
Epoch 527/1000
 - 0s - loss: 0.0055 - rmse: 0.0346 - val_loss: 0.0645 - val_rmse: 0.1145
Epoch 528/1000
 - 0s - loss: 0.0037 - rmse: 0.0291 - val_loss: 0.0682 - val_rmse: 0.1151
Epoch 529/1000
 - 0s - loss: 0.0036 - rmse: 0.0275 - val_loss: 0.0633 - val_rmse: 0.1157
Epoch 530/1000
 - 0s - loss: 0.0043 - rmse: 0.0281 - val_loss: 0.0688 - val_rmse: 0.1145
Epoch 531/1000
 - 0s - loss: 0.0060 - rmse: 0.0314 - val_loss: 0.0696 - val_rmse: 0.1162
Epoch 532/1000
 - 0s - loss: 0.0055 - rmse: 0.0300 - val_loss: 0.0642 - val_rmse: 0.1161
Epoch 533/1000
 - 0s - loss: 0.0042 - rmse: 0.0310 - val_loss: 0.0754 - val_rmse: 0.1194
Epoch 534/1000
 - 0s - loss: 0.0055 - rmse: 0.0302 - val_loss: 0.0691 - val_rmse: 0.1190
Epoch 535/1000
 - 0s - loss: 0.0082 - rmse: 0.0320 - val_loss: 0.0839 - val_rmse: 0.1208
Epoch 536/1000
 - 0s - loss: 0.0091 - rmse: 0.0428 - val_loss: 0.0723 - val_rmse: 0.1192
Epoch 537/1000
 - 0s - loss: 0.0066 - rmse: 0.0365 - val_loss: 0.0626 - val_rmse: 0.1143
Epoch 538/1000
 - 0s - loss: 0.0076 - rmse: 0.0346 - val_loss: 0.0764 - val_rmse: 0.1186
Epoch 539/1000
 - 0s - loss: 0.0065 - rmse: 0.0337 - val_loss: 0.0719 - val_rmse: 0.1202
Epoch 540/1000
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 - 0s - loss: 0.0090 - rmse: 0.0358 - val_loss: 0.0771 - val_rmse: 0.1226
Epoch 541/1000
 - 0s - loss: 0.0114 - rmse: 0.0397 - val_loss: 0.0608 - val_rmse: 0.1150
Epoch 542/1000
 - 0s - loss: 0.0127 - rmse: 0.0405 - val_loss: 0.0736 - val_rmse: 0.1178
Epoch 543/1000
 - 0s - loss: 0.0064 - rmse: 0.0340 - val_loss: 0.0721 - val_rmse: 0.1155
Epoch 544/1000
 - 0s - loss: 0.0070 - rmse: 0.0334 - val_loss: 0.0721 - val_rmse: 0.1181
Epoch 545/1000
 - 0s - loss: 0.0048 - rmse: 0.0306 - val_loss: 0.0742 - val_rmse: 0.1154
Epoch 546/1000
 - 0s - loss: 0.0044 - rmse: 0.0275 - val_loss: 0.0701 - val_rmse: 0.1169
Epoch 547/1000
 - 0s - loss: 0.0028 - rmse: 0.0238 - val_loss: 0.0685 - val_rmse: 0.1149
Epoch 548/1000
 - 0s - loss: 0.0021 - rmse: 0.0210 - val_loss: 0.0665 - val_rmse: 0.1153
Epoch 549/1000
 - 0s - loss: 0.0029 - rmse: 0.0209 - val_loss: 0.0696 - val_rmse: 0.1132
Epoch 550/1000
 - 0s - loss: 0.0026 - rmse: 0.0203 - val_loss: 0.0762 - val_rmse: 0.1160
Epoch 551/1000
 - 0s - loss: 0.0037 - rmse: 0.0214 - val_loss: 0.0688 - val_rmse: 0.1147
Epoch 552/1000
 - 0s - loss: 0.0021 - rmse: 0.0202 - val_loss: 0.0697 - val_rmse: 0.1165
Epoch 553/1000
 - 0s - loss: 0.0019 - rmse: 0.0187 - val_loss: 0.0727 - val_rmse: 0.1155
Epoch 554/1000
 - 0s - loss: 0.0018 - rmse: 0.0183 - val_loss: 0.0671 - val_rmse: 0.1147
Epoch 555/1000
 - 0s - loss: 0.0015 - rmse: 0.0173 - val_loss: 0.0680 - val_rmse: 0.1145
Epoch 556/1000
 - 0s - loss: 0.0017 - rmse: 0.0171 - val_loss: 0.0671 - val_rmse: 0.1143
Epoch 557/1000
 - 0s - loss: 0.0013 - rmse: 0.0161 - val_loss: 0.0694 - val_rmse: 0.1148
Epoch 558/1000
 - 0s - loss: 0.0017 - rmse: 0.0166 - val_loss: 0.0738 - val_rmse: 0.1158
Epoch 559/1000
 - 0s - loss: 0.0023 - rmse: 0.0185 - val_loss: 0.0655 - val_rmse: 0.1144
Epoch 560/1000
 - 0s - loss: 0.0025 - rmse: 0.0189 - val_loss: 0.0680 - val_rmse: 0.1153
Epoch 561/1000
 - 0s - loss: 0.0019 - rmse: 0.0167 - val_loss: 0.0644 - val_rmse: 0.1147
Epoch 562/1000
 - 0s - loss: 0.0017 - rmse: 0.0164 - val_loss: 0.0708 - val_rmse: 0.1147
Epoch 563/1000
 - 0s - loss: 0.0019 - rmse: 0.0170 - val_loss: 0.0701 - val_rmse: 0.1150
Epoch 564/1000
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 - 0s - loss: 0.0024 - rmse: 0.0184 - val_loss: 0.0704 - val_rmse: 0.1152
Epoch 565/1000
 - 0s - loss: 0.0023 - rmse: 0.0173 - val_loss: 0.0706 - val_rmse: 0.1156
Epoch 566/1000
 - 0s - loss: 0.0020 - rmse: 0.0178 - val_loss: 0.0703 - val_rmse: 0.1170
Epoch 567/1000
 - 0s - loss: 0.0031 - rmse: 0.0211 - val_loss: 0.0701 - val_rmse: 0.1156
Epoch 568/1000
 - 0s - loss: 0.0032 - rmse: 0.0198 - val_loss: 0.0719 - val_rmse: 0.1163
Epoch 569/1000
 - 0s - loss: 0.0017 - rmse: 0.0186 - val_loss: 0.0689 - val_rmse: 0.1169
Epoch 570/1000
 - 0s - loss: 0.0011 - rmse: 0.0162 - val_loss: 0.0705 - val_rmse: 0.1157
Epoch 571/1000
 - 0s - loss: 9.5471e-04 - rmse: 0.0149 - val_loss: 0.0673 - val_rmse: 0.1141
Epoch 572/1000
 - 0s - loss: 8.0753e-04 - rmse: 0.0137 - val_loss: 0.0709 - val_rmse: 0.1146
Epoch 573/1000
 - 0s - loss: 6.9589e-04 - rmse: 0.0125 - val_loss: 0.0715 - val_rmse: 0.1139
Epoch 574/1000
 - 0s - loss: 8.3669e-04 - rmse: 0.0133 - val_loss: 0.0692 - val_rmse: 0.1144
Epoch 575/1000
 - 0s - loss: 7.3171e-04 - rmse: 0.0128 - val_loss: 0.0663 - val_rmse: 0.1134
Epoch 576/1000
 - 0s - loss: 7.6678e-04 - rmse: 0.0121 - val_loss: 0.0684 - val_rmse: 0.1139
Epoch 577/1000
 - 0s - loss: 6.9125e-04 - rmse: 0.0114 - val_loss: 0.0678 - val_rmse: 0.1139
Epoch 578/1000
 - 0s - loss: 6.8860e-04 - rmse: 0.0113 - val_loss: 0.0662 - val_rmse: 0.1137
Epoch 579/1000
 - 0s - loss: 0.0012 - rmse: 0.0132 - val_loss: 0.0696 - val_rmse: 0.1148
Epoch 580/1000
 - 0s - loss: 0.0049 - rmse: 0.0170 - val_loss: 0.0718 - val_rmse: 0.1157
Epoch 581/1000
 - 0s - loss: 0.0035 - rmse: 0.0191 - val_loss: 0.0663 - val_rmse: 0.1154
Epoch 582/1000
 - 0s - loss: 0.0030 - rmse: 0.0193 - val_loss: 0.0676 - val_rmse: 0.1157
Epoch 583/1000
 - 0s - loss: 0.0045 - rmse: 0.0230 - val_loss: 0.0780 - val_rmse: 0.1178
Epoch 584/1000
 - 0s - loss: 0.0075 - rmse: 0.0279 - val_loss: 0.0632 - val_rmse: 0.1181
Epoch 585/1000
 - 0s - loss: 0.0154 - rmse: 0.0368 - val_loss: 0.0730 - val_rmse: 0.1167
Epoch 586/1000
 - 0s - loss: 0.0131 - rmse: 0.0398 - val_loss: 0.0678 - val_rmse: 0.1192
Epoch 587/1000
 - 0s - loss: 0.0150 - rmse: 0.0480 - val_loss: 0.0727 - val_rmse: 0.1202
Epoch 588/1000
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 - 0s - loss: 0.0163 - rmse: 0.0467 - val_loss: 0.0878 - val_rmse: 0.1255
Epoch 589/1000
 - 0s - loss: 0.0172 - rmse: 0.0547 - val_loss: 0.0939 - val_rmse: 0.1266
Epoch 590/1000
 - 0s - loss: 0.0244 - rmse: 0.0641 - val_loss: 0.0917 - val_rmse: 0.1302
Epoch 591/1000
 - 0s - loss: 0.0229 - rmse: 0.0613 - val_loss: 0.1043 - val_rmse: 0.1331
Epoch 592/1000
 - 0s - loss: 0.0279 - rmse: 0.0701 - val_loss: 0.0807 - val_rmse: 0.1255
Epoch 593/1000
 - 0s - loss: 0.0272 - rmse: 0.0727 - val_loss: 0.0749 - val_rmse: 0.1274
Epoch 594/1000
 - 0s - loss: 0.0324 - rmse: 0.0683 - val_loss: 0.1182 - val_rmse: 0.1349
Epoch 595/1000
 - 0s - loss: 0.0472 - rmse: 0.0757 - val_loss: 0.1012 - val_rmse: 0.1301
Epoch 596/1000
 - 0s - loss: 0.0470 - rmse: 0.0873 - val_loss: 0.0922 - val_rmse: 0.1478
Epoch 597/1000
 - 0s - loss: 0.0428 - rmse: 0.0935 - val_loss: 0.0862 - val_rmse: 0.1445
Epoch 598/1000
 - 0s - loss: 0.0211 - rmse: 0.0745 - val_loss: 0.0694 - val_rmse: 0.1246
Epoch 599/1000
 - 0s - loss: 0.0138 - rmse: 0.0594 - val_loss: 0.0752 - val_rmse: 0.1195
Epoch 600/1000
 - 0s - loss: 0.0101 - rmse: 0.0535 - val_loss: 0.0694 - val_rmse: 0.1157
Epoch 601/1000
 - 0s - loss: 0.0064 - rmse: 0.0452 - val_loss: 0.0712 - val_rmse: 0.1135
Epoch 602/1000
 - 0s - loss: 0.0060 - rmse: 0.0409 - val_loss: 0.0677 - val_rmse: 0.1155
Epoch 603/1000
 - 0s - loss: 0.0062 - rmse: 0.0382 - val_loss: 0.0674 - val_rmse: 0.1185
Epoch 604/1000
 - 0s - loss: 0.0068 - rmse: 0.0392 - val_loss: 0.0647 - val_rmse: 0.1132
Epoch 605/1000
 - 0s - loss: 0.0049 - rmse: 0.0356 - val_loss: 0.0708 - val_rmse: 0.1149
Epoch 606/1000
 - 0s - loss: 0.0059 - rmse: 0.0374 - val_loss: 0.0714 - val_rmse: 0.1144
Epoch 607/1000
 - 0s - loss: 0.0050 - rmse: 0.0349 - val_loss: 0.0642 - val_rmse: 0.1162
Epoch 608/1000
 - 0s - loss: 0.0046 - rmse: 0.0336 - val_loss: 0.0692 - val_rmse: 0.1133
Epoch 609/1000
 - 0s - loss: 0.0045 - rmse: 0.0325 - val_loss: 0.0714 - val_rmse: 0.1174
Epoch 610/1000
 - 0s - loss: 0.0038 - rmse: 0.0308 - val_loss: 0.0651 - val_rmse: 0.1127
Epoch 611/1000
 - 0s - loss: 0.0034 - rmse: 0.0292 - val_loss: 0.0638 - val_rmse: 0.1157
Epoch 612/1000
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 - 0s - loss: 0.0024 - rmse: 0.0270 - val_loss: 0.0671 - val_rmse: 0.1152
Epoch 613/1000
 - 0s - loss: 0.0017 - rmse: 0.0233 - val_loss: 0.0667 - val_rmse: 0.1151
Epoch 614/1000
 - 0s - loss: 0.0019 - rmse: 0.0223 - val_loss: 0.0656 - val_rmse: 0.1145
Epoch 615/1000
 - 0s - loss: 0.0015 - rmse: 0.0211 - val_loss: 0.0685 - val_rmse: 0.1153
Epoch 616/1000
 - 0s - loss: 0.0014 - rmse: 0.0198 - val_loss: 0.0681 - val_rmse: 0.1140
Epoch 617/1000
 - 0s - loss: 0.0012 - rmse: 0.0187 - val_loss: 0.0668 - val_rmse: 0.1156
Epoch 618/1000
 - 0s - loss: 0.0013 - rmse: 0.0184 - val_loss: 0.0675 - val_rmse: 0.1143
Epoch 619/1000
 - 0s - loss: 0.0010 - rmse: 0.0176 - val_loss: 0.0645 - val_rmse: 0.1141
Epoch 620/1000
 - 0s - loss: 9.7030e-04 - rmse: 0.0172 - val_loss: 0.0663 - val_rmse: 0.1155
Epoch 621/1000
 - 0s - loss: 8.9911e-04 - rmse: 0.0164 - val_loss: 0.0669 - val_rmse: 0.1143
Epoch 622/1000
 - 0s - loss: 8.0944e-04 - rmse: 0.0153 - val_loss: 0.0660 - val_rmse: 0.1142
Epoch 623/1000
 - 0s - loss: 7.4405e-04 - rmse: 0.0152 - val_loss: 0.0683 - val_rmse: 0.1144
Epoch 624/1000
 - 0s - loss: 6.6738e-04 - rmse: 0.0142 - val_loss: 0.0669 - val_rmse: 0.1139
Epoch 625/1000
 - 0s - loss: 7.1844e-04 - rmse: 0.0143 - val_loss: 0.0664 - val_rmse: 0.1140
Epoch 626/1000
 - 0s - loss: 7.7401e-04 - rmse: 0.0138 - val_loss: 0.0651 - val_rmse: 0.1134
Epoch 627/1000
 - 0s - loss: 7.7018e-04 - rmse: 0.0135 - val_loss: 0.0691 - val_rmse: 0.1138
Epoch 628/1000
 - 0s - loss: 8.8278e-04 - rmse: 0.0141 - val_loss: 0.0679 - val_rmse: 0.1143
Epoch 629/1000
 - 0s - loss: 8.6521e-04 - rmse: 0.0147 - val_loss: 0.0673 - val_rmse: 0.1131
Epoch 630/1000
 - 0s - loss: 0.0011 - rmse: 0.0152 - val_loss: 0.0656 - val_rmse: 0.1136
Epoch 631/1000
 - 0s - loss: 9.8020e-04 - rmse: 0.0149 - val_loss: 0.0666 - val_rmse: 0.1134
Epoch 632/1000
 - 0s - loss: 9.9361e-04 - rmse: 0.0145 - val_loss: 0.0686 - val_rmse: 0.1150
Epoch 633/1000
 - 0s - loss: 8.9524e-04 - rmse: 0.0144 - val_loss: 0.0672 - val_rmse: 0.1135
Epoch 634/1000
 - 0s - loss: 0.0011 - rmse: 0.0156 - val_loss: 0.0652 - val_rmse: 0.1138
Epoch 635/1000
 - 0s - loss: 8.8531e-04 - rmse: 0.0143 - val_loss: 0.0686 - val_rmse: 0.1140
Epoch 636/1000
```

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 - 0s - loss: 0.0017 - rmse: 0.0150 - val_loss: 0.0664 - val_rmse: 0.1150
Epoch 637/1000
 - 0s - loss: 0.0011 - rmse: 0.0158 - val_loss: 0.0682 - val_rmse: 0.1147
Epoch 638/1000
 - 0s - loss: 9.6802e-04 - rmse: 0.0149 - val_loss: 0.0663 - val_rmse: 0.1143
Epoch 639/1000
 - 0s - loss: 8.6171e-04 - rmse: 0.0148 - val_loss: 0.0657 - val_rmse: 0.1134
Epoch 640/1000
 - 0s - loss: 8.0033e-04 - rmse: 0.0133 - val_loss: 0.0658 - val_rmse: 0.1137
Epoch 641/1000
 - 0s - loss: 8.2714e-04 - rmse: 0.0132 - val_loss: 0.0636 - val_rmse: 0.1135
Epoch 642/1000
 - 0s - loss: 9.2749e-04 - rmse: 0.0134 - val_loss: 0.0716 - val_rmse: 0.1143
Epoch 643/1000
 - 0s - loss: 0.0016 - rmse: 0.0142 - val_loss: 0.0685 - val_rmse: 0.1150
Epoch 644/1000
 - 0s - loss: 0.0033 - rmse: 0.0173 - val_loss: 0.0642 - val_rmse: 0.1162
Epoch 645/1000
 - 0s - loss: 0.0046 - rmse: 0.0221 - val_loss: 0.0704 - val_rmse: 0.1146
Epoch 646/1000
 - 0s - loss: 0.0039 - rmse: 0.0255 - val_loss: 0.0795 - val_rmse: 0.1173
Epoch 647/1000
 - 0s - loss: 0.0048 - rmse: 0.0268 - val_loss: 0.0791 - val_rmse: 0.1163
Epoch 648/1000
 - 0s - loss: 0.0036 - rmse: 0.0256 - val_loss: 0.0681 - val_rmse: 0.1174
Epoch 649/1000
 - 0s - loss: 0.0035 - rmse: 0.0270 - val_loss: 0.0693 - val_rmse: 0.1184
Epoch 650/1000
 - 0s - loss: 0.0040 - rmse: 0.0283 - val_loss: 0.0596 - val_rmse: 0.1140
Epoch 651/1000
 - 0s - loss: 0.0050 - rmse: 0.0286 - val_loss: 0.0708 - val_rmse: 0.1145
Epoch 652/1000
 - 0s - loss: 0.0032 - rmse: 0.0253 - val_loss: 0.0648 - val_rmse: 0.1135
Epoch 653/1000
 - 0s - loss: 0.0040 - rmse: 0.0266 - val_loss: 0.0647 - val_rmse: 0.1178
Epoch 654/1000
 - 0s - loss: 0.0043 - rmse: 0.0290 - val_loss: 0.0677 - val_rmse: 0.1177
Epoch 655/1000
 - 0s - loss: 0.0034 - rmse: 0.0304 - val_loss: 0.0668 - val_rmse: 0.1166
Epoch 656/1000
 - 0s - loss: 0.0027 - rmse: 0.0272 - val_loss: 0.0726 - val_rmse: 0.1147
Epoch 657/1000
 - 0s - loss: 0.0038 - rmse: 0.0255 - val_loss: 0.0695 - val_rmse: 0.1132
Epoch 658/1000
 - 0s - loss: 0.0020 - rmse: 0.0211 - val_loss: 0.0715 - val_rmse: 0.1143
Epoch 659/1000
 - 0s - loss: 0.0017 - rmse: 0.0200 - val_loss: 0.0644 - val_rmse: 0.1152
Epoch 660/1000
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 - 0s - loss: 0.0012 - rmse: 0.0181 - val_loss: 0.0652 - val_rmse: 0.1138
Epoch 661/1000
 - 0s - loss: 0.0012 - rmse: 0.0167 - val_loss: 0.0668 - val_rmse: 0.1148
Epoch 662/1000
 - 0s - loss: 0.0012 - rmse: 0.0174 - val_loss: 0.0660 - val_rmse: 0.1141
Epoch 663/1000
 - 0s - loss: 7.8796e-04 - rmse: 0.0162 - val_loss: 0.0648 - val_rmse: 0.1140
Epoch 664/1000
 - 0s - loss: 7.2505e-04 - rmse: 0.0149 - val_loss: 0.0652 - val_rmse: 0.1137
Epoch 665/1000
 - 0s - loss: 7.0168e-04 - rmse: 0.0135 - val_loss: 0.0685 - val_rmse: 0.1134
Epoch 666/1000
 - 0s - loss: 6.3622e-04 - rmse: 0.0124 - val_loss: 0.0627 - val_rmse: 0.1127
Epoch 667/1000
 - 0s - loss: 5.7821e-04 - rmse: 0.0119 - val_loss: 0.0649 - val_rmse: 0.1127
Epoch 668/1000
 - 0s - loss: 5.3169e-04 - rmse: 0.0108 - val_loss: 0.0653 - val_rmse: 0.1139
Epoch 669/1000
 - 0s - loss: 5.2659e-04 - rmse: 0.0110 - val_loss: 0.0660 - val_rmse: 0.1136
Epoch 670/1000
 - 0s - loss: 6.1572e-04 - rmse: 0.0114 - val_loss: 0.0656 - val_rmse: 0.1134
Epoch 671/1000
 - 0s - loss: 5.1935e-04 - rmse: 0.0109 - val_loss: 0.0648 - val_rmse: 0.1127
Epoch 672/1000
 - 0s - loss: 5.8181e-04 - rmse: 0.0104 - val_loss: 0.0680 - val_rmse: 0.1131
Epoch 673/1000
 - 0s - loss: 6.5309e-04 - rmse: 0.0106 - val_loss: 0.0635 - val_rmse: 0.1140
Epoch 674/1000
 - 0s - loss: 9.0253e-04 - rmse: 0.0121 - val_loss: 0.0670 - val_rmse: 0.1136
Epoch 675/1000
 - 0s - loss: 6.9367e-04 - rmse: 0.0113 - val_loss: 0.0673 - val_rmse: 0.1140
Epoch 676/1000
 - 0s - loss: 8.7360e-04 - rmse: 0.0115 - val_loss: 0.0695 - val_rmse: 0.1145
Epoch 677/1000
 - 0s - loss: 9.3208e-04 - rmse: 0.0133 - val_loss: 0.0656 - val_rmse: 0.1147
Epoch 678/1000
 - 0s - loss: 8.9996e-04 - rmse: 0.0143 - val_loss: 0.0661 - val_rmse: 0.1134
Epoch 679/1000
 - 0s - loss: 5.6765e-04 - rmse: 0.0119 - val_loss: 0.0678 - val_rmse: 0.1137
Epoch 680/1000
 - 0s - loss: 6.4460e-04 - rmse: 0.0114 - val_loss: 0.0648 - val_rmse: 0.1128
Epoch 681/1000
 - 0s - loss: 5.3864e-04 - rmse: 0.0108 - val_loss: 0.0662 - val_rmse: 0.1134
Epoch 682/1000
 - 0s - loss: 4.6981e-04 - rmse: 0.0099 - val_loss: 0.0664 - val_rmse: 0.1121
Epoch 683/1000
 - 0s - loss: 4.1104e-04 - rmse: 0.0097 - val_loss: 0.0640 - val_rmse: 0.1130
Epoch 684/1000
```

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 - 0s - loss: 3.7980e-04 - rmse: 0.0093 - val_loss: 0.0642 - val_rmse: 0.1130
Epoch 685/1000
 - 0s - loss: 4.5263e-04 - rmse: 0.0093 - val_loss: 0.0637 - val_rmse: 0.1125
Epoch 686/1000
 - 0s - loss: 3.5191e-04 - rmse: 0.0082 - val_loss: 0.0671 - val_rmse: 0.1129
Epoch 687/1000
 - 0s - loss: 3.6765e-04 - rmse: 0.0080 - val_loss: 0.0644 - val_rmse: 0.1127
Epoch 688/1000
 - 0s - loss: 2.6144e-04 - rmse: 0.0076 - val_loss: 0.0676 - val_rmse: 0.1137
Epoch 689/1000
 - 0s - loss: 3.5197e-04 - rmse: 0.0081 - val_loss: 0.0655 - val_rmse: 0.1133
Epoch 690/1000
 - 0s - loss: 3.5101e-04 - rmse: 0.0083 - val_loss: 0.0645 - val_rmse: 0.1127
Epoch 691/1000
 - 0s - loss: 2.9129e-04 - rmse: 0.0076 - val_loss: 0.0637 - val_rmse: 0.1128
Epoch 692/1000
 - 0s - loss: 3.8991e-04 - rmse: 0.0078 - val_loss: 0.0673 - val_rmse: 0.1131
Epoch 693/1000
 - 0s - loss: 8.5484e-04 - rmse: 0.0104 - val_loss: 0.0660 - val_rmse: 0.1134
Epoch 694/1000
 - 0s - loss: 0.0025 - rmse: 0.0128 - val_loss: 0.0611 - val_rmse: 0.1130
Epoch 695/1000
 - 0s - loss: 0.0034 - rmse: 0.0180 - val_loss: 0.0668 - val_rmse: 0.1132
Epoch 696/1000
 - 0s - loss: 0.0028 - rmse: 0.0215 - val_loss: 0.0735 - val_rmse: 0.1162
Epoch 697/1000
 - 0s - loss: 0.0026 - rmse: 0.0214 - val_loss: 0.0686 - val_rmse: 0.1153
Epoch 698/1000
 - 0s - loss: 0.0021 - rmse: 0.0186 - val_loss: 0.0670 - val_rmse: 0.1138
Epoch 699/1000
 - 0s - loss: 0.0016 - rmse: 0.0178 - val_loss: 0.0661 - val_rmse: 0.1133
Epoch 700/1000
 - 0s - loss: 9.6613e-04 - rmse: 0.0160 - val_loss: 0.0657 - val_rmse: 0.1123
Epoch 701/1000
 - 0s - loss: 7.1982e-04 - rmse: 0.0137 - val_loss: 0.0698 - val_rmse: 0.1142
Epoch 702/1000
 - 0s - loss: 0.0011 - rmse: 0.0131 - val_loss: 0.0670 - val_rmse: 0.1128
Epoch 703/1000
 - 0s - loss: 9.9990e-04 - rmse: 0.0122 - val_loss: 0.0630 - val_rmse: 0.1117
Epoch 704/1000
 - 0s - loss: 9.6760e-04 - rmse: 0.0135 - val_loss: 0.0693 - val_rmse: 0.1129
Epoch 705/1000
 - 0s - loss: 8.9235e-04 - rmse: 0.0142 - val_loss: 0.0633 - val_rmse: 0.1124
Epoch 706/1000
 - 0s - loss: 6.2813e-04 - rmse: 0.0126 - val_loss: 0.0638 - val_rmse: 0.1127
Epoch 707/1000
 - 0s - loss: 4.9154e-04 - rmse: 0.0117 - val_loss: 0.0662 - val_rmse: 0.1128
Epoch 708/1000
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 - 0s - loss: 4.1969e-04 - rmse: 0.0106 - val_loss: 0.0671 - val_rmse: 0.1131
Epoch 709/1000
 - 0s - loss: 3.5893e-04 - rmse: 0.0092 - val_loss: 0.0658 - val_rmse: 0.1128
Epoch 710/1000
 - 0s - loss: 3.7203e-04 - rmse: 0.0091 - val_loss: 0.0669 - val_rmse: 0.1138
Epoch 711/1000
 - 0s - loss: 3.6806e-04 - rmse: 0.0091 - val_loss: 0.0637 - val_rmse: 0.1131
Epoch 712/1000
 - 0s - loss: 3.7167e-04 - rmse: 0.0091 - val_loss: 0.0690 - val_rmse: 0.1140
Epoch 713/1000
 - 0s - loss: 3.1947e-04 - rmse: 0.0083 - val_loss: 0.0653 - val_rmse: 0.1124
Epoch 714/1000
 - 0s - loss: 2.4496e-04 - rmse: 0.0074 - val_loss: 0.0660 - val_rmse: 0.1133
Epoch 715/1000
 - 0s - loss: 1.8282e-04 - rmse: 0.0067 - val_loss: 0.0671 - val_rmse: 0.1129
Epoch 716/1000
 - 0s - loss: 1.7637e-04 - rmse: 0.0063 - val_loss: 0.0661 - val_rmse: 0.1126
Epoch 717/1000
 - 0s - loss: 1.7990e-04 - rmse: 0.0060 - val_loss: 0.0661 - val_rmse: 0.1126
Epoch 718/1000
 - 0s - loss: 2.3630e-04 - rmse: 0.0062 - val_loss: 0.0652 - val_rmse: 0.1131
Epoch 719/1000
 - 0s - loss: 2.2704e-04 - rmse: 0.0064 - val_loss: 0.0652 - val_rmse: 0.1132
Epoch 720/1000
 - 0s - loss: 2.8870e-04 - rmse: 0.0070 - val_loss: 0.0660 - val_rmse: 0.1123
Epoch 721/1000
 - 0s - loss: 4.3513e-04 - rmse: 0.0076 - val_loss: 0.0669 - val_rmse: 0.1134
Epoch 722/1000
 - 0s - loss: 5.6413e-04 - rmse: 0.0089 - val_loss: 0.0677 - val_rmse: 0.1126
Epoch 723/1000
 - 0s - loss: 5.6277e-04 - rmse: 0.0084 - val_loss: 0.0680 - val_rmse: 0.1145
Epoch 724/1000
 - 0s - loss: 7.3392e-04 - rmse: 0.0104 - val_loss: 0.0648 - val_rmse: 0.1145
Epoch 725/1000
 - 0s - loss: 0.0016 - rmse: 0.0134 - val_loss: 0.0697 - val_rmse: 0.1140
Epoch 726/1000
 - 0s - loss: 0.0018 - rmse: 0.0151 - val_loss: 0.0679 - val_rmse: 0.1118
Epoch 727/1000
 - 0s - loss: 0.0013 - rmse: 0.0147 - val_loss: 0.0638 - val_rmse: 0.1138
Epoch 728/1000
 - 0s - loss: 9.7932e-04 - rmse: 0.0136 - val_loss: 0.0696 - val_rmse: 0.1150
Epoch 729/1000
 - 0s - loss: 8.5771e-04 - rmse: 0.0132 - val_loss: 0.0644 - val_rmse: 0.1132
Epoch 730/1000
 - 0s - loss: 7.1320e-04 - rmse: 0.0124 - val_loss: 0.0654 - val_rmse: 0.1125
Epoch 731/1000
 - 0s - loss: 4.9806e-04 - rmse: 0.0105 - val_loss: 0.0673 - val_rmse: 0.1119
Epoch 732/1000
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 - 0s - loss: 6.2927e-04 - rmse: 0.0106 - val_loss: 0.0641 - val_rmse: 0.1129
Epoch 733/1000
 - 0s - loss: 4.6641e-04 - rmse: 0.0100 - val_loss: 0.0683 - val_rmse: 0.1119
Epoch 734/1000
 - 0s - loss: 4.0272e-04 - rmse: 0.0094 - val_loss: 0.0677 - val_rmse: 0.1139
Epoch 735/1000
 - 0s - loss: 5.1673e-04 - rmse: 0.0100 - val_loss: 0.0659 - val_rmse: 0.1134
Epoch 736/1000
 - 0s - loss: 5.3935e-04 - rmse: 0.0098 - val_loss: 0.0679 - val_rmse: 0.1133
Epoch 737/1000
 - 0s - loss: 5.4050e-04 - rmse: 0.0091 - val_loss: 0.0661 - val_rmse: 0.1133
Epoch 738/1000
 - 0s - loss: 6.9202e-04 - rmse: 0.0094 - val_loss: 0.0685 - val_rmse: 0.1125
Epoch 739/1000
 - 0s - loss: 4.5768e-04 - rmse: 0.0088 - val_loss: 0.0650 - val_rmse: 0.1125
Epoch 740/1000
 - 0s - loss: 6.6360e-04 - rmse: 0.0092 - val_loss: 0.0633 - val_rmse: 0.1131
Epoch 741/1000
 - 0s - loss: 6.7570e-04 - rmse: 0.0097 - val_loss: 0.0655 - val_rmse: 0.1121
Epoch 742/1000
 - 0s - loss: 6.3624e-04 - rmse: 0.0099 - val_loss: 0.0662 - val_rmse: 0.1129
Epoch 743/1000
 - 0s - loss: 5.0408e-04 - rmse: 0.0107 - val_loss: 0.0667 - val_rmse: 0.1124
Epoch 744/1000
 - 0s - loss: 5.0783e-04 - rmse: 0.0100 - val_loss: 0.0664 - val_rmse: 0.1124
Epoch 745/1000
 - 0s - loss: 4.4746e-04 - rmse: 0.0091 - val_loss: 0.0633 - val_rmse: 0.1126
Epoch 746/1000
 - 0s - loss: 0.0013 - rmse: 0.0113 - val_loss: 0.0772 - val_rmse: 0.1141
Epoch 747/1000
 - 0s - loss: 0.0025 - rmse: 0.0160 - val_loss: 0.0644 - val_rmse: 0.1183
Epoch 748/1000
 - 0s - loss: 0.0021 - rmse: 0.0186 - val_loss: 0.0679 - val_rmse: 0.1119
Epoch 749/1000
 - 0s - loss: 0.0045 - rmse: 0.0211 - val_loss: 0.0607 - val_rmse: 0.1140
Epoch 750/1000
 - 0s - loss: 0.0140 - rmse: 0.0306 - val_loss: 0.0713 - val_rmse: 0.1187
Epoch 751/1000
 - 0s - loss: 0.0171 - rmse: 0.0509 - val_loss: 0.0909 - val_rmse: 0.1430
Epoch 752/1000
 - 0s - loss: 0.0253 - rmse: 0.0653 - val_loss: 0.0856 - val_rmse: 0.1229
Epoch 753/1000
 - 0s - loss: 0.0314 - rmse: 0.0668 - val_loss: 0.0759 - val_rmse: 0.1206
Epoch 754/1000
 - 0s - loss: 0.0327 - rmse: 0.0678 - val_loss: 0.0852 - val_rmse: 0.1289
Epoch 755/1000
 - 0s - loss: 0.0275 - rmse: 0.0723 - val_loss: 0.0854 - val_rmse: 0.1231
Epoch 756/1000
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 - 0s - loss: 0.0245 - rmse: 0.0680 - val_loss: 0.0857 - val_rmse: 0.1294
Epoch 757/1000
 - 0s - loss: 0.0382 - rmse: 0.0732 - val_loss: 0.0928 - val_rmse: 0.1398
Epoch 758/1000
 - 0s - loss: 0.0454 - rmse: 0.0922 - val_loss: 0.0752 - val_rmse: 0.1345
Epoch 759/1000
 - 0s - loss: 0.0467 - rmse: 0.0980 - val_loss: 0.1007 - val_rmse: 0.1317
Epoch 760/1000
 - 0s - loss: 0.0511 - rmse: 0.1048 - val_loss: 0.0979 - val_rmse: 0.1574
Epoch 761/1000
 - 0s - loss: 0.0547 - rmse: 0.1121 - val_loss: 0.0912 - val_rmse: 0.1359
Epoch 762/1000
 - 0s - loss: 0.0965 - rmse: 0.1247 - val_loss: 0.1512 - val_rmse: 0.1430
Epoch 763/1000
 - 0s - loss: 0.1196 - rmse: 0.1269 - val_loss: 0.1546 - val_rmse: 0.1656
Epoch 764/1000
 - 0s - loss: 0.1003 - rmse: 0.1242 - val_loss: 0.0979 - val_rmse: 0.1384
Epoch 765/1000
 - 0s - loss: 0.0715 - rmse: 0.1142 - val_loss: 0.0705 - val_rmse: 0.1364
Epoch 766/1000
 - 0s - loss: 0.0501 - rmse: 0.1109 - val_loss: 0.0824 - val_rmse: 0.1266
Epoch 767/1000
 - 0s - loss: 0.0429 - rmse: 0.0967 - val_loss: 0.0711 - val_rmse: 0.1214
Epoch 768/1000
 - 0s - loss: 0.0321 - rmse: 0.0865 - val_loss: 0.0767 - val_rmse: 0.1202
Epoch 769/1000
 - 0s - loss: 0.0282 - rmse: 0.0817 - val_loss: 0.0617 - val_rmse: 0.1151
Epoch 770/1000
 - 0s - loss: 0.0201 - rmse: 0.0738 - val_loss: 0.0587 - val_rmse: 0.1150
Epoch 771/1000
 - 0s - loss: 0.0160 - rmse: 0.0683 - val_loss: 0.0615 - val_rmse: 0.1141
Epoch 772/1000
 - 0s - loss: 0.0139 - rmse: 0.0634 - val_loss: 0.0698 - val_rmse: 0.1136
Epoch 773/1000
 - 0s - loss: 0.0114 - rmse: 0.0584 - val_loss: 0.0689 - val_rmse: 0.1194
Epoch 774/1000
 - 0s - loss: 0.0152 - rmse: 0.0590 - val_loss: 0.0761 - val_rmse: 0.1144
Epoch 775/1000
 - 0s - loss: 0.0518 - rmse: 0.0691 - val_loss: 0.1164 - val_rmse: 0.1326
Epoch 776/1000
 - 0s - loss: 0.0478 - rmse: 0.0858 - val_loss: 0.0888 - val_rmse: 0.1320
Epoch 777/1000
 - 0s - loss: 0.0348 - rmse: 0.0841 - val_loss: 0.0784 - val_rmse: 0.1247
Epoch 778/1000
 - 0s - loss: 0.0317 - rmse: 0.0794 - val_loss: 0.0786 - val_rmse: 0.1166
Epoch 779/1000
 - 0s - loss: 0.0253 - rmse: 0.0741 - val_loss: 0.0683 - val_rmse: 0.1170
Epoch 780/1000
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 - 0s - loss: 0.0180 - rmse: 0.0681 - val_loss: 0.0641 - val_rmse: 0.1124
Epoch 781/1000
 - 0s - loss: 0.0136 - rmse: 0.0633 - val_loss: 0.0609 - val_rmse: 0.1139
Epoch 782/1000
 - 0s - loss: 0.0114 - rmse: 0.0578 - val_loss: 0.0681 - val_rmse: 0.1131
Epoch 783/1000
 - 0s - loss: 0.0103 - rmse: 0.0518 - val_loss: 0.0587 - val_rmse: 0.1106
Epoch 784/1000
 - 0s - loss: 0.0069 - rmse: 0.0458 - val_loss: 0.0544 - val_rmse: 0.1091
Epoch 785/1000
 - 0s - loss: 0.0054 - rmse: 0.0417 - val_loss: 0.0564 - val_rmse: 0.1089
Epoch 786/1000
 - 0s - loss: 0.0047 - rmse: 0.0389 - val_loss: 0.0610 - val_rmse: 0.1081
Epoch 787/1000
 - 0s - loss: 0.0044 - rmse: 0.0376 - val_loss: 0.0614 - val_rmse: 0.1094
Epoch 788/1000
 - 0s - loss: 0.0041 - rmse: 0.0357 - val_loss: 0.0610 - val_rmse: 0.1110
Epoch 789/1000
 - 0s - loss: 0.0034 - rmse: 0.0337 - val_loss: 0.0610 - val_rmse: 0.1116
Epoch 790/1000
 - 0s - loss: 0.0031 - rmse: 0.0326 - val_loss: 0.0618 - val_rmse: 0.1120
Epoch 791/1000
 - 0s - loss: 0.0030 - rmse: 0.0318 - val_loss: 0.0588 - val_rmse: 0.1106
Epoch 792/1000
 - 0s - loss: 0.0031 - rmse: 0.0317 - val_loss: 0.0611 - val_rmse: 0.1138
Epoch 793/1000
 - 0s - loss: 0.0032 - rmse: 0.0321 - val_loss: 0.0603 - val_rmse: 0.1119
Epoch 794/1000
 - 0s - loss: 0.0032 - rmse: 0.0306 - val_loss: 0.0613 - val_rmse: 0.1120
Epoch 795/1000
 - 0s - loss: 0.0027 - rmse: 0.0298 - val_loss: 0.0605 - val_rmse: 0.1119
Epoch 796/1000
 - 0s - loss: 0.0026 - rmse: 0.0288 - val_loss: 0.0648 - val_rmse: 0.1138
Epoch 797/1000
 - 0s - loss: 0.0028 - rmse: 0.0296 - val_loss: 0.0640 - val_rmse: 0.1143
Epoch 798/1000
 - 0s - loss: 0.0020 - rmse: 0.0273 - val_loss: 0.0605 - val_rmse: 0.1109
Epoch 799/1000
 - 0s - loss: 0.0022 - rmse: 0.0275 - val_loss: 0.0588 - val_rmse: 0.1112
Epoch 800/1000
 - 0s - loss: 0.0022 - rmse: 0.0276 - val_loss: 0.0599 - val_rmse: 0.1127
Epoch 801/1000
 - 0s - loss: 0.0022 - rmse: 0.0275 - val_loss: 0.0612 - val_rmse: 0.1118
Epoch 802/1000
 - 0s - loss: 0.0021 - rmse: 0.0274 - val_loss: 0.0614 - val_rmse: 0.1118
Epoch 803/1000
 - 0s - loss: 0.0019 - rmse: 0.0266 - val_loss: 0.0593 - val_rmse: 0.1107
Epoch 804/1000
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 - 0s - loss: 0.0017 - rmse: 0.0246 - val_loss: 0.0597 - val_rmse: 0.1127
Epoch 805/1000
 - 0s - loss: 0.0018 - rmse: 0.0239 - val_loss: 0.0610 - val_rmse: 0.1115
Epoch 806/1000
 - 0s - loss: 0.0019 - rmse: 0.0240 - val_loss: 0.0602 - val_rmse: 0.1105
Epoch 807/1000
 - 0s - loss: 0.0018 - rmse: 0.0236 - val_loss: 0.0633 - val_rmse: 0.1157
Epoch 808/1000
 - 0s - loss: 0.0027 - rmse: 0.0263 - val_loss: 0.0638 - val_rmse: 0.1161
Epoch 809/1000
 - 0s - loss: 0.0021 - rmse: 0.0265 - val_loss: 0.0609 - val_rmse: 0.1131
Epoch 810/1000
 - 0s - loss: 0.0026 - rmse: 0.0256 - val_loss: 0.0637 - val_rmse: 0.1128
Epoch 811/1000
 - 0s - loss: 0.0024 - rmse: 0.0259 - val_loss: 0.0654 - val_rmse: 0.1130
Epoch 812/1000
 - 0s - loss: 0.0023 - rmse: 0.0247 - val_loss: 0.0651 - val_rmse: 0.1133
Epoch 813/1000
 - 0s - loss: 0.0016 - rmse: 0.0223 - val_loss: 0.0637 - val_rmse: 0.1135
Epoch 814/1000
 - 0s - loss: 0.0019 - rmse: 0.0224 - val_loss: 0.0623 - val_rmse: 0.1131
Epoch 815/1000
 - 0s - loss: 0.0017 - rmse: 0.0233 - val_loss: 0.0602 - val_rmse: 0.1141
Epoch 816/1000
 - 0s - loss: 0.0018 - rmse: 0.0244 - val_loss: 0.0620 - val_rmse: 0.1124
Epoch 817/1000
 - 0s - loss: 0.0016 - rmse: 0.0229 - val_loss: 0.0597 - val_rmse: 0.1113
Epoch 818/1000
 - 0s - loss: 0.0014 - rmse: 0.0218 - val_loss: 0.0621 - val_rmse: 0.1142
Epoch 819/1000
 - 0s - loss: 0.0011 - rmse: 0.0200 - val_loss: 0.0610 - val_rmse: 0.1111
Epoch 820/1000
 - 0s - loss: 9.4745e-04 - rmse: 0.0188 - val_loss: 0.0626 - val_rmse: 0.1132
Epoch 821/1000
 - 0s - loss: 8.5813e-04 - rmse: 0.0179 - val_loss: 0.0610 - val_rmse: 0.1116
Epoch 822/1000
 - 0s - loss: 9.4034e-04 - rmse: 0.0184 - val_loss: 0.0617 - val_rmse: 0.1114
Epoch 823/1000
 - 0s - loss: 0.0011 - rmse: 0.0187 - val_loss: 0.0615 - val_rmse: 0.1130
Epoch 824/1000
 - 0s - loss: 8.7327e-04 - rmse: 0.0180 - val_loss: 0.0603 - val_rmse: 0.1126
Epoch 825/1000
 - 0s - loss: 7.6844e-04 - rmse: 0.0173 - val_loss: 0.0617 - val_rmse: 0.1131
Epoch 826/1000
 - 0s - loss: 7.2578e-04 - rmse: 0.0167 - val_loss: 0.0616 - val_rmse: 0.1125
Epoch 827/1000
 - 0s - loss: 6.0367e-04 - rmse: 0.0155 - val_loss: 0.0608 - val_rmse: 0.1118
Epoch 828/1000
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 - 0s - loss: 5.0782e-04 - rmse: 0.0145 - val_loss: 0.0619 - val_rmse: 0.1126
Epoch 829/1000
 - 0s - loss: 4.6867e-04 - rmse: 0.0136 - val_loss: 0.0612 - val_rmse: 0.1130
Epoch 830/1000
 - 0s - loss: 4.3531e-04 - rmse: 0.0132 - val_loss: 0.0617 - val_rmse: 0.1135
Epoch 831/1000
 - 0s - loss: 4.3913e-04 - rmse: 0.0129 - val_loss: 0.0611 - val_rmse: 0.1128
Epoch 832/1000
 - 0s - loss: 5.9784e-04 - rmse: 0.0137 - val_loss: 0.0614 - val_rmse: 0.1129
Epoch 833/1000
 - 0s - loss: 0.0011 - rmse: 0.0169 - val_loss: 0.0612 - val_rmse: 0.1128
Epoch 834/1000
 - 0s - loss: 0.0010 - rmse: 0.0173 - val_loss: 0.0612 - val_rmse: 0.1124
Epoch 835/1000
 - 0s - loss: 8.4287e-04 - rmse: 0.0169 - val_loss: 0.0608 - val_rmse: 0.1136
Epoch 836/1000
 - 0s - loss: 8.7503e-04 - rmse: 0.0174 - val_loss: 0.0612 - val_rmse: 0.1123
Epoch 837/1000
 - 0s - loss: 0.0010 - rmse: 0.0176 - val_loss: 0.0634 - val_rmse: 0.1137
Epoch 838/1000
 - 0s - loss: 8.5646e-04 - rmse: 0.0161 - val_loss: 0.0629 - val_rmse: 0.1151
Epoch 839/1000
 - 0s - loss: 0.0011 - rmse: 0.0163 - val_loss: 0.0620 - val_rmse: 0.1144
Epoch 840/1000
 - 0s - loss: 0.0012 - rmse: 0.0162 - val_loss: 0.0613 - val_rmse: 0.1138
Epoch 841/1000
 - 0s - loss: 0.0017 - rmse: 0.0161 - val_loss: 0.0615 - val_rmse: 0.1131
Epoch 842/1000
 - 0s - loss: 0.0017 - rmse: 0.0172 - val_loss: 0.0658 - val_rmse: 0.1140
Epoch 843/1000
 - 0s - loss: 0.0025 - rmse: 0.0209 - val_loss: 0.0674 - val_rmse: 0.1134
Epoch 844/1000
 - 0s - loss: 0.0050 - rmse: 0.0255 - val_loss: 0.0770 - val_rmse: 0.1169
Epoch 845/1000
 - 0s - loss: 0.0087 - rmse: 0.0309 - val_loss: 0.0813 - val_rmse: 0.1225
Epoch 846/1000
 - 0s - loss: 0.0303 - rmse: 0.0449 - val_loss: 0.1065 - val_rmse: 0.1361
Epoch 847/1000
 - 0s - loss: 0.0400 - rmse: 0.0692 - val_loss: 0.1109 - val_rmse: 0.1442
Epoch 848/1000
 - 0s - loss: 0.0508 - rmse: 0.0861 - val_loss: 0.0997 - val_rmse: 0.1339
Epoch 849/1000
 - 0s - loss: 0.0439 - rmse: 0.0827 - val_loss: 0.0885 - val_rmse: 0.1322
Epoch 850/1000
 - 0s - loss: 0.0331 - rmse: 0.0789 - val_loss: 0.0836 - val_rmse: 0.1225
Epoch 851/1000
 - 0s - loss: 0.0312 - rmse: 0.0713 - val_loss: 0.0685 - val_rmse: 0.1157
Epoch 852/1000
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 - 0s - loss: 0.0272 - rmse: 0.0657 - val_loss: 0.0833 - val_rmse: 0.1183
Epoch 853/1000
 - 0s - loss: 0.0275 - rmse: 0.0669 - val_loss: 0.0933 - val_rmse: 0.1263
Epoch 854/1000
 - 0s - loss: 0.0246 - rmse: 0.0668 - val_loss: 0.0774 - val_rmse: 0.1166
Epoch 855/1000
 - 0s - loss: 0.0220 - rmse: 0.0699 - val_loss: 0.0676 - val_rmse: 0.1162
Epoch 856/1000
 - 0s - loss: 0.0167 - rmse: 0.0634 - val_loss: 0.0697 - val_rmse: 0.1220
Epoch 857/1000
 - 0s - loss: 0.0158 - rmse: 0.0614 - val_loss: 0.0652 - val_rmse: 0.1147
Epoch 858/1000
 - 0s - loss: 0.0111 - rmse: 0.0505 - val_loss: 0.0629 - val_rmse: 0.1147
Epoch 859/1000
 - 0s - loss: 0.0090 - rmse: 0.0456 - val_loss: 0.0631 - val_rmse: 0.1151
Epoch 860/1000
 - 0s - loss: 0.0083 - rmse: 0.0422 - val_loss: 0.0689 - val_rmse: 0.1165
Epoch 861/1000
 - 0s - loss: 0.0101 - rmse: 0.0426 - val_loss: 0.0724 - val_rmse: 0.1141
Epoch 862/1000
 - 0s - loss: 0.0103 - rmse: 0.0417 - val_loss: 0.0711 - val_rmse: 0.1148
Epoch 863/1000
 - 0s - loss: 0.0125 - rmse: 0.0420 - val_loss: 0.0667 - val_rmse: 0.1148
Epoch 864/1000
 - 0s - loss: 0.0118 - rmse: 0.0396 - val_loss: 0.0739 - val_rmse: 0.1178
Epoch 865/1000
 - 0s - loss: 0.0093 - rmse: 0.0391 - val_loss: 0.0658 - val_rmse: 0.1150
Epoch 866/1000
 - 0s - loss: 0.0104 - rmse: 0.0384 - val_loss: 0.0682 - val_rmse: 0.1164
Epoch 867/1000
 - 0s - loss: 0.0183 - rmse: 0.0425 - val_loss: 0.0716 - val_rmse: 0.1150
Epoch 868/1000
 - 0s - loss: 0.0159 - rmse: 0.0457 - val_loss: 0.0752 - val_rmse: 0.1130
Epoch 869/1000
 - 0s - loss: 0.0140 - rmse: 0.0442 - val_loss: 0.0692 - val_rmse: 0.1121
Epoch 870/1000
 - 0s - loss: 0.0122 - rmse: 0.0420 - val_loss: 0.0686 - val_rmse: 0.1154
Epoch 871/1000
 - 0s - loss: 0.0097 - rmse: 0.0390 - val_loss: 0.0669 - val_rmse: 0.1096
Epoch 872/1000
 - 0s - loss: 0.0082 - rmse: 0.0351 - val_loss: 0.0703 - val_rmse: 0.1165
Epoch 873/1000
 - 0s - loss: 0.0084 - rmse: 0.0374 - val_loss: 0.0630 - val_rmse: 0.1129
Epoch 874/1000
 - 0s - loss: 0.0115 - rmse: 0.0378 - val_loss: 0.0693 - val_rmse: 0.1161
Epoch 875/1000
 - 0s - loss: 0.0089 - rmse: 0.0347 - val_loss: 0.0703 - val_rmse: 0.1183
Epoch 876/1000
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 - 0s - loss: 0.0080 - rmse: 0.0342 - val_loss: 0.0737 - val_rmse: 0.1148
Epoch 877/1000
 - 0s - loss: 0.0094 - rmse: 0.0345 - val_loss: 0.0862 - val_rmse: 0.1157
Epoch 878/1000
 - 0s - loss: 0.0104 - rmse: 0.0369 - val_loss: 0.0655 - val_rmse: 0.1114
Epoch 879/1000
 - 0s - loss: 0.0072 - rmse: 0.0346 - val_loss: 0.0783 - val_rmse: 0.1144
Epoch 880/1000
 - 0s - loss: 0.0100 - rmse: 0.0375 - val_loss: 0.0713 - val_rmse: 0.1138
Epoch 881/1000
 - 0s - loss: 0.0089 - rmse: 0.0367 - val_loss: 0.0765 - val_rmse: 0.1137
Epoch 882/1000
 - 0s - loss: 0.0109 - rmse: 0.0395 - val_loss: 0.0790 - val_rmse: 0.1156
Epoch 883/1000
 - 0s - loss: 0.0081 - rmse: 0.0365 - val_loss: 0.0755 - val_rmse: 0.1144
Epoch 884/1000
 - 0s - loss: 0.0091 - rmse: 0.0355 - val_loss: 0.0734 - val_rmse: 0.1205
Epoch 885/1000
 - 0s - loss: 0.0131 - rmse: 0.0427 - val_loss: 0.0722 - val_rmse: 0.1177
Epoch 886/1000
 - 0s - loss: 0.0096 - rmse: 0.0383 - val_loss: 0.0654 - val_rmse: 0.1163
Epoch 887/1000
 - 0s - loss: 0.0079 - rmse: 0.0361 - val_loss: 0.0707 - val_rmse: 0.1131
Epoch 888/1000
 - 0s - loss: 0.0082 - rmse: 0.0365 - val_loss: 0.0708 - val_rmse: 0.1155
Epoch 889/1000
 - 0s - loss: 0.0057 - rmse: 0.0322 - val_loss: 0.0671 - val_rmse: 0.1113
Epoch 890/1000
 - 0s - loss: 0.0041 - rmse: 0.0269 - val_loss: 0.0680 - val_rmse: 0.1131
Epoch 891/1000
 - 0s - loss: 0.0042 - rmse: 0.0251 - val_loss: 0.0713 - val_rmse: 0.1142
Epoch 892/1000
 - 0s - loss: 0.0035 - rmse: 0.0242 - val_loss: 0.0672 - val_rmse: 0.1116
Epoch 893/1000
 - 0s - loss: 0.0034 - rmse: 0.0225 - val_loss: 0.0710 - val_rmse: 0.1144
Epoch 894/1000
 - 0s - loss: 0.0039 - rmse: 0.0234 - val_loss: 0.0715 - val_rmse: 0.1150
Epoch 895/1000
 - 0s - loss: 0.0031 - rmse: 0.0224 - val_loss: 0.0672 - val_rmse: 0.1108
Epoch 896/1000
 - 0s - loss: 0.0027 - rmse: 0.0204 - val_loss: 0.0675 - val_rmse: 0.1124
Epoch 897/1000
 - 0s - loss: 0.0026 - rmse: 0.0196 - val_loss: 0.0689 - val_rmse: 0.1118
Epoch 898/1000
 - 0s - loss: 0.0022 - rmse: 0.0185 - val_loss: 0.0712 - val_rmse: 0.1123
Epoch 899/1000
 - 0s - loss: 0.0021 - rmse: 0.0184 - val_loss: 0.0683 - val_rmse: 0.1110
Epoch 900/1000
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 - 0s - loss: 0.0018 - rmse: 0.0183 - val_loss: 0.0684 - val_rmse: 0.1112
Epoch 901/1000
 - 0s - loss: 0.0016 - rmse: 0.0170 - val_loss: 0.0681 - val_rmse: 0.1116
Epoch 902/1000
 - 0s - loss: 0.0013 - rmse: 0.0156 - val_loss: 0.0676 - val_rmse: 0.1118
Epoch 903/1000
 - 0s - loss: 0.0012 - rmse: 0.0144 - val_loss: 0.0684 - val_rmse: 0.1114
Epoch 904/1000
 - 0s - loss: 0.0011 - rmse: 0.0137 - val_loss: 0.0681 - val_rmse: 0.1120
Epoch 905/1000
 - 0s - loss: 0.0011 - rmse: 0.0135 - val_loss: 0.0674 - val_rmse: 0.1113
Epoch 906/1000
 - 0s - loss: 9.4288e-04 - rmse: 0.0127 - val_loss: 0.0676 - val_rmse: 0.1114
Epoch 907/1000
 - 0s - loss: 0.0010 - rmse: 0.0126 - val_loss: 0.0690 - val_rmse: 0.1125
Epoch 908/1000
 - 0s - loss: 8.6045e-04 - rmse: 0.0121 - val_loss: 0.0701 - val_rmse: 0.1136
Epoch 909/1000
 - 0s - loss: 8.3182e-04 - rmse: 0.0119 - val_loss: 0.0674 - val_rmse: 0.1122
Epoch 910/1000
 - 0s - loss: 7.3061e-04 - rmse: 0.0112 - val_loss: 0.0686 - val_rmse: 0.1123
Epoch 911/1000
 - 0s - loss: 8.4484e-04 - rmse: 0.0114 - val_loss: 0.0690 - val_rmse: 0.1125
Epoch 912/1000
 - 0s - loss: 0.0013 - rmse: 0.0125 - val_loss: 0.0694 - val_rmse: 0.1123
Epoch 913/1000
 - 0s - loss: 0.0012 - rmse: 0.0125 - val_loss: 0.0696 - val_rmse: 0.1130
Epoch 914/1000
 - 0s - loss: 0.0020 - rmse: 0.0144 - val_loss: 0.0720 - val_rmse: 0.1145
Epoch 915/1000
 - 0s - loss: 0.0023 - rmse: 0.0161 - val_loss: 0.0697 - val_rmse: 0.1158
Epoch 916/1000
 - 0s - loss: 0.0030 - rmse: 0.0181 - val_loss: 0.0723 - val_rmse: 0.1149
Epoch 917/1000
 - 0s - loss: 0.0027 - rmse: 0.0173 - val_loss: 0.0672 - val_rmse: 0.1115
Epoch 918/1000
 - 0s - loss: 0.0032 - rmse: 0.0175 - val_loss: 0.0668 - val_rmse: 0.1120
Epoch 919/1000
 - 0s - loss: 0.0035 - rmse: 0.0206 - val_loss: 0.0715 - val_rmse: 0.1124
Epoch 920/1000
 - 0s - loss: 0.0025 - rmse: 0.0196 - val_loss: 0.0716 - val_rmse: 0.1120
Epoch 921/1000
 - 0s - loss: 0.0039 - rmse: 0.0201 - val_loss: 0.0685 - val_rmse: 0.1132
Epoch 922/1000
 - 0s - loss: 0.0033 - rmse: 0.0210 - val_loss: 0.0705 - val_rmse: 0.1169
Epoch 923/1000
 - 0s - loss: 0.0023 - rmse: 0.0205 - val_loss: 0.0694 - val_rmse: 0.1150
Epoch 924/1000
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 - 0s - loss: 0.0016 - rmse: 0.0178 - val_loss: 0.0704 - val_rmse: 0.1147
Epoch 925/1000
 - 0s - loss: 0.0021 - rmse: 0.0178 - val_loss: 0.0683 - val_rmse: 0.1144
Epoch 926/1000
 - 0s - loss: 0.0019 - rmse: 0.0169 - val_loss: 0.0688 - val_rmse: 0.1136
Epoch 927/1000
 - 0s - loss: 0.0014 - rmse: 0.0147 - val_loss: 0.0706 - val_rmse: 0.1127
Epoch 928/1000
 - 0s - loss: 0.0013 - rmse: 0.0143 - val_loss: 0.0718 - val_rmse: 0.1122
Epoch 929/1000
 - 0s - loss: 0.0011 - rmse: 0.0132 - val_loss: 0.0688 - val_rmse: 0.1121
Epoch 930/1000
 - 0s - loss: 9.0804e-04 - rmse: 0.0123 - val_loss: 0.0684 - val_rmse: 0.1115
Epoch 931/1000
 - 0s - loss: 5.7212e-04 - rmse: 0.0107 - val_loss: 0.0669 - val_rmse: 0.1113
Epoch 932/1000
 - 0s - loss: 5.5439e-04 - rmse: 0.0102 - val_loss: 0.0673 - val_rmse: 0.1117
Epoch 933/1000
 - 0s - loss: 6.8766e-04 - rmse: 0.0105 - val_loss: 0.0656 - val_rmse: 0.1117
Epoch 934/1000
 - 0s - loss: 7.8280e-04 - rmse: 0.0108 - val_loss: 0.0679 - val_rmse: 0.1125
Epoch 935/1000
 - 0s - loss: 0.0010 - rmse: 0.0114 - val_loss: 0.0712 - val_rmse: 0.1125
Epoch 936/1000
 - 0s - loss: 0.0032 - rmse: 0.0139 - val_loss: 0.0730 - val_rmse: 0.1138
Epoch 937/1000
 - 0s - loss: 0.0029 - rmse: 0.0160 - val_loss: 0.0695 - val_rmse: 0.1152
Epoch 938/1000
 - 0s - loss: 0.0027 - rmse: 0.0174 - val_loss: 0.0679 - val_rmse: 0.1139
Epoch 939/1000
 - 0s - loss: 0.0021 - rmse: 0.0166 - val_loss: 0.0695 - val_rmse: 0.1119
Epoch 940/1000
 - 0s - loss: 0.0015 - rmse: 0.0147 - val_loss: 0.0711 - val_rmse: 0.1114
Epoch 941/1000
 - 0s - loss: 0.0011 - rmse: 0.0135 - val_loss: 0.0674 - val_rmse: 0.1112
Epoch 942/1000
 - 0s - loss: 7.4368e-04 - rmse: 0.0121 - val_loss: 0.0660 - val_rmse: 0.1106
Epoch 943/1000
 - 0s - loss: 5.8292e-04 - rmse: 0.0108 - val_loss: 0.0679 - val_rmse: 0.1117
Epoch 944/1000
 - 0s - loss: 0.0010 - rmse: 0.0111 - val_loss: 0.0688 - val_rmse: 0.1123
Epoch 945/1000
 - 0s - loss: 9.1668e-04 - rmse: 0.0112 - val_loss: 0.0684 - val_rmse: 0.1123
Epoch 946/1000
 - 0s - loss: 0.0013 - rmse: 0.0129 - val_loss: 0.0665 - val_rmse: 0.1120
Epoch 947/1000
 - 0s - loss: 0.0011 - rmse: 0.0120 - val_loss: 0.0701 - val_rmse: 0.1138
Epoch 948/1000
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 - 0s - loss: 0.0017 - rmse: 0.0126 - val_loss: 0.0692 - val_rmse: 0.1139
Epoch 949/1000
 - 0s - loss: 0.0017 - rmse: 0.0141 - val_loss: 0.0713 - val_rmse: 0.1143
Epoch 950/1000
 - 0s - loss: 0.0029 - rmse: 0.0166 - val_loss: 0.0702 - val_rmse: 0.1140
Epoch 951/1000
 - 0s - loss: 0.0025 - rmse: 0.0184 - val_loss: 0.0713 - val_rmse: 0.1137
Epoch 952/1000
 - 0s - loss: 0.0036 - rmse: 0.0180 - val_loss: 0.0765 - val_rmse: 0.1191
Epoch 953/1000
 - 0s - loss: 0.0047 - rmse: 0.0203 - val_loss: 0.0786 - val_rmse: 0.1145
Epoch 954/1000
 - 0s - loss: 0.0052 - rmse: 0.0208 - val_loss: 0.0690 - val_rmse: 0.1129
Epoch 955/1000
 - 0s - loss: 0.0066 - rmse: 0.0252 - val_loss: 0.0701 - val_rmse: 0.1123
Epoch 956/1000
 - 0s - loss: 0.0065 - rmse: 0.0294 - val_loss: 0.0717 - val_rmse: 0.1149
Epoch 957/1000
 - 0s - loss: 0.0078 - rmse: 0.0304 - val_loss: 0.0654 - val_rmse: 0.1112
Epoch 958/1000
 - 0s - loss: 0.0081 - rmse: 0.0279 - val_loss: 0.0660 - val_rmse: 0.1118
Epoch 959/1000
 - 0s - loss: 0.0066 - rmse: 0.0280 - val_loss: 0.0680 - val_rmse: 0.1125
Epoch 960/1000
 - 0s - loss: 0.0034 - rmse: 0.0245 - val_loss: 0.0648 - val_rmse: 0.1115
Epoch 961/1000
 - 0s - loss: 0.0021 - rmse: 0.0219 - val_loss: 0.0645 - val_rmse: 0.1107
Epoch 962/1000
 - 0s - loss: 0.0022 - rmse: 0.0198 - val_loss: 0.0711 - val_rmse: 0.1146
Epoch 963/1000
 - 0s - loss: 0.0040 - rmse: 0.0238 - val_loss: 0.0664 - val_rmse: 0.1129
Epoch 964/1000
 - 0s - loss: 0.0040 - rmse: 0.0238 - val_loss: 0.0734 - val_rmse: 0.1177
Epoch 965/1000
 - 0s - loss: 0.0039 - rmse: 0.0272 - val_loss: 0.0630 - val_rmse: 0.1098
Epoch 966/1000
 - 0s - loss: 0.0026 - rmse: 0.0229 - val_loss: 0.0680 - val_rmse: 0.1131
Epoch 967/1000
 - 0s - loss: 0.0020 - rmse: 0.0202 - val_loss: 0.0667 - val_rmse: 0.1106
Epoch 968/1000
 - 0s - loss: 0.0016 - rmse: 0.0175 - val_loss: 0.0674 - val_rmse: 0.1115
Epoch 969/1000
 - 0s - loss: 0.0012 - rmse: 0.0150 - val_loss: 0.0696 - val_rmse: 0.1124
Epoch 970/1000
 - 0s - loss: 8.7855e-04 - rmse: 0.0131 - val_loss: 0.0695 - val_rmse: 0.1114
Epoch 971/1000
 - 0s - loss: 0.0011 - rmse: 0.0132 - val_loss: 0.0687 - val_rmse: 0.1112
Epoch 972/1000
```

```
 - 0s - loss: 0.0012 - rmse: 0.0151 - val_loss: 0.0685 - val_rmse: 0.1103
Epoch 973/1000
 - 0s - loss: 9.9784e-04 - rmse: 0.0148 - val_loss: 0.0664 - val_rmse: 0.1112
Epoch 974/1000
 - 0s - loss: 6.7469e-04 - rmse: 0.0130 - val_loss: 0.0686 - val_rmse: 0.1117
Epoch 975/1000
 - 0s - loss: 8.5797e-04 - rmse: 0.0120 - val_loss: 0.0673 - val_rmse: 0.1120
Epoch 976/1000
 - 0s - loss: 5.1816e-04 - rmse: 0.0107 - val_loss: 0.0682 - val_rmse: 0.1116
Epoch 977/1000
 - 0s - loss: 5.0713e-04 - rmse: 0.0102 - val_loss: 0.0678 - val_rmse: 0.1108
Epoch 978/1000
 - 0s - loss: 3.3953e-04 - rmse: 0.0089 - val_loss: 0.0680 - val_rmse: 0.1103
Epoch 979/1000
 - 0s - loss: 3.1835e-04 - rmse: 0.0082 - val_loss: 0.0680 - val_rmse: 0.1110
Epoch 980/1000
 - 0s - loss: 2.4764e-04 - rmse: 0.0076 - val_loss: 0.0677 - val_rmse: 0.1109
Epoch 981/1000
 - 0s - loss: 2.5980e-04 - rmse: 0.0072 - val_loss: 0.0675 - val_rmse: 0.1106
Epoch 982/1000
 - 0s - loss: 2.2701e-04 - rmse: 0.0069 - val_loss: 0.0677 - val_rmse: 0.1101
Epoch 983/1000
 - 0s - loss: 2.1445e-04 - rmse: 0.0068 - val_loss: 0.0666 - val_rmse: 0.1099
Epoch 984/1000
 - 0s - loss: 2.0707e-04 - rmse: 0.0064 - val_loss: 0.0682 - val_rmse: 0.1114
Epoch 985/1000
 - 0s - loss: 1.7473e-04 - rmse: 0.0060 - val_loss: 0.0676 - val_rmse: 0.1107
Epoch 986/1000
 - 0s - loss: 1.3717e-04 - rmse: 0.0054 - val_loss: 0.0667 - val_rmse: 0.1106
Epoch 987/1000
 - 0s - loss: 1.3425e-04 - rmse: 0.0052 - val_loss: 0.0670 - val_rmse: 0.1107
Epoch 988/1000
 - 0s - loss: 1.5563e-04 - rmse: 0.0051 - val_loss: 0.0674 - val_rmse: 0.1105
Epoch 989/1000
 - 0s - loss: 1.3496e-04 - rmse: 0.0051 - val_loss: 0.0674 - val_rmse: 0.1104
Epoch 990/1000
 - 0s - loss: 1.6720e-04 - rmse: 0.0052 - val_loss: 0.0678 - val_rmse: 0.1110
Epoch 991/1000
 - 0s - loss: 1.6468e-04 - rmse: 0.0051 - val_loss: 0.0681 - val_rmse: 0.1113
Epoch 992/1000
 - 0s - loss: 1.2965e-04 - rmse: 0.0050 - val_loss: 0.0675 - val_rmse: 0.1110
Epoch 993/1000
 - 0s - loss: 1.1817e-04 - rmse: 0.0048 - val_loss: 0.0675 - val_rmse: 0.1103
Epoch 994/1000
 - 0s - loss: 1.2147e-04 - rmse: 0.0047 - val_loss: 0.0670 - val_rmse: 0.1106
Epoch 995/1000
 - 0s - loss: 1.2538e-04 - rmse: 0.0046 - val_loss: 0.0671 - val_rmse: 0.1106
Epoch 996/1000
```

```
 - 0s - loss: 1.0251e-04 - rmse: 0.0043 - val_loss: 0.0673 - val_rmse: 0.1106
Epoch 997/1000
 - 0s - loss: 1.0079e-04 - rmse: 0.0041 - val_loss: 0.0675 - val_rmse: 0.1105
Epoch 998/1000
 - 0s - loss: 9.2685e-05 - rmse: 0.0039 - val_loss: 0.0670 - val_rmse: 0.1107
Epoch 999/1000
 - 0s - loss: 1.0054e-04 - rmse: 0.0041 - val_loss: 0.0672 - val_rmse: 0.1105
Epoch 1000/1000
 - 0s - loss: 1.0154e-04 - rmse: 0.0041 - val_loss: 0.0668 - val_rmse: 0.1101
973/973 [==============================] - 0s 36us/step

Evaluate result: rmse=0.121172
```