

Epoch 1/30

/usr/local/lib/python3.10/dist-packages/keras/src/layers/rnn/rnn.py:204: UserWarning:  
Do not pass an `input\_shape` / `input\_dim` argument to a layer. When using Sequential  
models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().\_\_init\_\_(\*\*kwargs)

**983/983** ————— **8s** 4ms/step - loss: 0.0127

Epoch 2/30

**983/983** ————— **4s** 3ms/step - loss: 3.9611e-04

Epoch 3/30

**983/983** ————— **3s** 3ms/step - loss: 1.9821e-04

Epoch 4/30

**983/983** ————— **4s** 4ms/step - loss: 1.1965e-04

Epoch 5/30

**983/983** ————— **4s** 3ms/step - loss: 1.8256e-04

Epoch 6/30

**983/983** ————— **3s** 3ms/step - loss: 1.3419e-04

Epoch 7/30

**983/983** ————— **3s** 3ms/step - loss: 1.2938e-04

Epoch 8/30

**983/983** ————— **5s** 5ms/step - loss: 1.0828e-04

Epoch 9/30

**983/983** ————— **4s** 3ms/step - loss: 2.7492e-04

Epoch 10/30

**983/983** ————— **5s** 3ms/step - loss: 5.3044e-05

Epoch 11/30

**983/983** ————— **6s** 4ms/step - loss: 2.2581e-04

Epoch 12/30

**983/983** ————— **3s** 3ms/step - loss: 4.7040e-05

Epoch 13/30

**983/983** ————— **3s** 3ms/step - loss: 2.2210e-04

Epoch 14/30

**983/983** ————— **4s** 4ms/step - loss: 4.0771e-05

Epoch 15/30

**983/983** ————— **4s** 3ms/step - loss: 1.8682e-04

Epoch 16/30

**983/983** ————— **5s** 3ms/step - loss: 4.3650e-05

Epoch 17/30

**983/983** ————— **4s** 4ms/step - loss: 1.2441e-04

Epoch 18/30

**983/983** ————— **4s** 4ms/step - loss: 1.2095e-04

Epoch 19/30

**983/983** ————— **3s** 3ms/step - loss: 1.2139e-04

Epoch 20/30

**983/983** ————— **6s** 4ms/step - loss: 1.0695e-04

Epoch 21/30

**983/983** ————— **4s** 3ms/step - loss: 1.2516e-04

Epoch 22/30

**983/983** ————— **3s** 3ms/step - loss: 7.9956e-05

Epoch 23/30

**983/983** ————— **6s** 4ms/step - loss: 1.8633e-04

Epoch 24/30

**983/983** ————— **4s** 3ms/step - loss: 2.5646e-05

Epoch 25/30

**983/983** ————— **5s** 3ms/step - loss: 1.6543e-04

Epoch 26/30

**983/983** ————— **6s** 4ms/step - loss: 2.2087e-05

Epoch 27/30

**983/983** ————— **4s** 3ms/step - loss: 1.4563e-04

Epoch 28/30

**983/983** ————— **6s** 4ms/step - loss: 2.6069e-05

Epoch 29/30

**983/983** ————— **4s** 3ms/step - loss: 1.3320e-04

Epoch 30/30

**983/983** ————— **5s** 3ms/step - loss: 2.9614e-05

**31/31** ————— **1s** 18ms/step

**8/8** ————— **0s** 4ms/step

Train MSE: 1.158389988118466, RMSE: 1.0762852726477614, MAPE:  
27.475415980678257%

Test MSE: 0.883291443097736, RMSE: 0.9398358596572787, MAPE:  
5.372221221121265%



