

Parameter Configuration.

```
epochs=5
batch_size=32
SEED = 42
Dropout(0.2)
optimizer='adam'
loss='mse'
patience=3
WINDOW=100
Units=32
RMSE (Root Mean Squared Error)
MAE (Mean Absolute Error)
```

LSTM1 (32) LSTM2 (32)

Layer (type)	Output Shape	Param #
lstm (LSTM)	(None, 100, 32)	4,352
dropout (Dropout)	(None, 100, 32)	0
lstm_1 (LSTM)	(None, 32)	8,320
dropout_1 (Dropout)	(None, 32)	0
dense (Dense)	(None, 1)	33

Total params: 12,705 (49.63 KB)
Trainable params: 12,705 (49.63 KB)
Non-trainable params: 0 (0.00 B)

Epoch 1/5
1397/1397 ————— 80s 56ms/step - loss: 0.0180 - val_loss: 1.9940e-04

Epoch 2/5
1397/1397 ————— 76s 54ms/step - loss: 0.0021 - val_loss: 2.8744e-04

Epoch 3/5
1397/1397 ————— 74s 53ms/step - loss: 0.0011 - val_loss: 1.4861e-04

Epoch 4/5
1397/1397 ————— 74s 53ms/step - loss: 6.6396e-04 - val_loss: 1.7336e-04

Epoch 5/5
1397/1397 ————— 74s 53ms/step - loss: 5.8304e-04 - val_loss: 1.2550e-04

1397/1397 ————— 20s 14ms/step - loss: 3.5867e-05

MSE Train: 5.032995613873936e-05

464/464 ————— 6s 14ms/step - loss: 1.0148e-04

MSE Test: 0.0001255049864994362

464/464 ————— 6s 14ms/step - loss: 9.5735e-05

MSE Val: 0.00011398047354305163

Test Set RMSE (Original Scale): 0.000935 EURUSD

Test Set MAE (Original Scale): 0.000641 EURUSD

Validation Set RMSE (Original Scale): 0.000891 EURUSD

Validation Set MAE (Original Scale): 0.000559 EURUSD

Training Set RMSE (Original Scale): 0.000592 EURUSD

Training Set MAE (Original Scale): 0.000411 EURUSD

LSTM1 (32)

Layer (type)	Output Shape	Param #
lstm_3 (LSTM)	(None, 32)	4,352
dropout_3 (Dropout)	(None, 32)	0
dense_2 (Dense)	(None, 1)	33

Total params: 4,385 (17.13 KB)
Trainable params: 4,385 (17.13 KB)
Non-trainable params: 0 (0.00 B)

```
Epoch 1/5
1397/1397 ————— 64s 44ms/step - loss:
0.0267 - val_loss: 2.1690e-04
Epoch 2/5
1397/1397 ————— 79s 42ms/step - loss:
0.0021 - val_loss: 3.1352e-04
Epoch 3/5
1397/1397 ————— 60s 43ms/step - loss:
0.0012 - val_loss: 2.4167e-04
Epoch 4/5
1397/1397 ————— 83s 44ms/step - loss:
6.5897e-04 - val_loss: 1.6000e-04
Epoch 5/5
1397/1397 ————— 82s 44ms/step - loss:
5.0661e-04 - val_loss: 1.9322e-04

1397/1397 ————— 17s 12ms/step - loss:
3.5326e-05
MSE Train: 6.352925265673548e-05
464/464 ————— 5s 12ms/step - loss:
2.3445e-04
MSE Test: 0.00019322495791129768
464/464 ————— 6s 12ms/step - loss:
1.7564e-04
MSE Val: 0.00017415819456800818
```

```
Test Set RMSE (Original Scale): 0.001160 EURUSD
Test Set MAE (Original Scale): 0.000907 EURUSD
Validation Set RMSE (Original Scale): 0.001102 EURUSD
Validation Set MAE (Original Scale): 0.000821 EURUSD
Training Set RMSE (Original Scale): 0.000665 EURUSD
Training Set MAE (Original Scale): 0.000472 EURUSD
```

LSTM1 (32) LSTM2 (32) LSTM3 (32)

Layer (type)	Output Shape	Param #
lstm_4 (LSTM)	(None, 100, 32)	4,352
dropout_4 (Dropout)	(None, 100, 32)	0
lstm_5 (LSTM)	(None, 100, 32)	8,320
dropout_5 (Dropout)	(None, 100, 32)	0
lstm_6 (LSTM)	(None, 32)	8,320
dropout_6 (Dropout)	(None, 32)	0
dense_3 (Dense)	(None, 1)	33
Total params: 21,025 (82.13 KB)		
Trainable params: 21,025 (82.13 KB)		
Non-trainable params: 0 (0.00 B)		

Epoch 1/5
1397/1397 ————— **245s** 130ms/step - loss: 0.0151 - val_loss: 6.2191e-04

Epoch 2/5
1397/1397 ————— **199s** 129ms/step - loss: 0.0020 - val_loss: 3.6417e-04

Epoch 3/5
1397/1397 ————— **180s** 129ms/step - loss: 0.0011 - val_loss: 2.0624e-04

Epoch 4/5
1397/1397 ————— **204s** 130ms/step - loss: 7.2119e-04 - val_loss: 3.4170e-04

Epoch 5/5
1397/1397 ————— **200s** 129ms/step - loss: 6.3737e-04 - val_loss: 5.4633e-04

1397/1397 ————— **46s** 33ms/step - loss: 1.0213e-04

MSE Train: 0.00020069660968147218

464/464 ————— **16s** 34ms/step - loss: 8.0769e-04

MSE Test: 0.0005463271518237889

464/464 ————— **15s** 33ms/step - loss: 5.1306e-04

MSE Val: 0.00047852707211859524

Test Set RMSE (Original Scale): 0.001951 EURUSD
 Test Set MAE (Original Scale): 0.001558 EURUSD
 Validation Set RMSE (Original Scale): 0.001826 EURUSD
 Validation Set MAE (Original Scale): 0.001531 EURUSD
 Training Set RMSE (Original Scale): 0.001182 EURUSD
 Training Set MAE (Original Scale): 0.000896 EURUSD