/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.

 31/31
 1s 9ms/step

 8/8
 0s 2ms/step

/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)

31/31 — 1s 12ms/step

8/8 — — **0s** 2ms/step

/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)

31/31 — **1s** 12ms/step

8/8 — **Os** 3ms/step

Metrics for All Models:

Vanilla RNN:

Train MSE: 41.19178382850053, RMSE: 6.418082566351147, MAPE:

27.408145926398152%

Test MSE: 12.652347330941863, RMSE: 3.557013822146586, MAPE:

5.371123930717515%

GRU:

Train MSE: 6.128740086435289, RMSE: 2.4756292304049263, MAPE:

27.495722950078104%

Test MSE: 6.981985281739997, RMSE: 2.642344656122664, MAPE:

5.42927052379958%

LSTM:

Train MSE: 8.671556464757673, RMSE: 2.9447506625786968, MAPE:

27.524726890779245%

Test MSE: 10.03175792455393, RMSE: 3.167295048547566, MAPE:

5.431726604653077%

