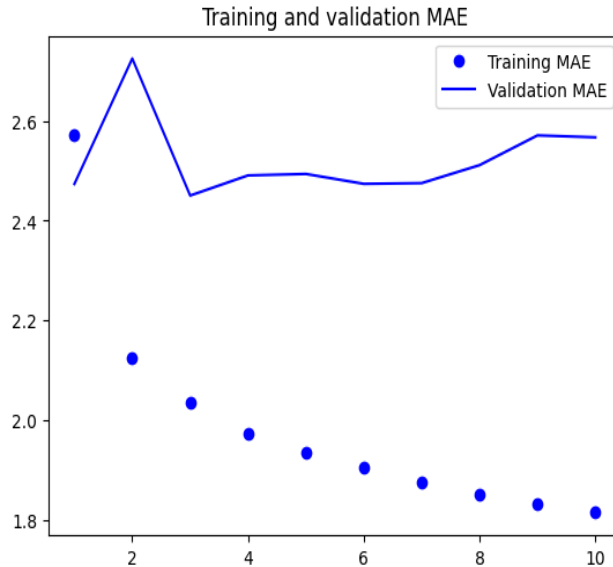


SUMMARY

Analyzing the different models according to their Mean Absolute Error (MAE) values for testing and validation:

Model	Validation MAE	Test MAE
Common-sense Baseline	4.53	4.08
Basic Machine Learning	2.50	2.32
1D Convolutional	2.66	2.56
Simple LSTM	2.58	2.52
Regularized LSTM	2.58	-
Stacked GRU	2.63	2.31
Bidirectional-RNNs	2.57	-



The competitive MAE is provided by the common-sense baseline, which is an appropriate place to start. The common-sense baseline is not exceeded by the fundamental machine learning model, indicating the need for advanced algorithms in this task. Convolutions might not be the best option for collecting time-series patterns in this situation, as demonstrated by the 1D convolutional model's weak results compared to other models. Among the best-performing models is the straightforward LSTM model, which demonstrates promise with a competitive validation MAE and an appropriate test MAE.

The regularized LSTM's performance has a similarity to that of the fundamental machine learning model, indicating that the regularization strategies selected might not be successful. Although it performs poorly in validation, the stacked GRU model performs better in the test set. To lessen overfitting, it can benefit from more tuning. With a test MAE that makes sense and a validation MAE like the common-sense baseline, bidirectional RNNs offer comparable performance. This model does an excellent job of capturing both past and future data.

In conclusion, the bidirectional RNNs and the straightforward LSTM model both stand out as practical approaches for time-series forecasting. They demonstrate possibilities for additional optimization and either match or exceeds the common-sense baseline. The decision between these models may be influenced by computational resources and performance needs.