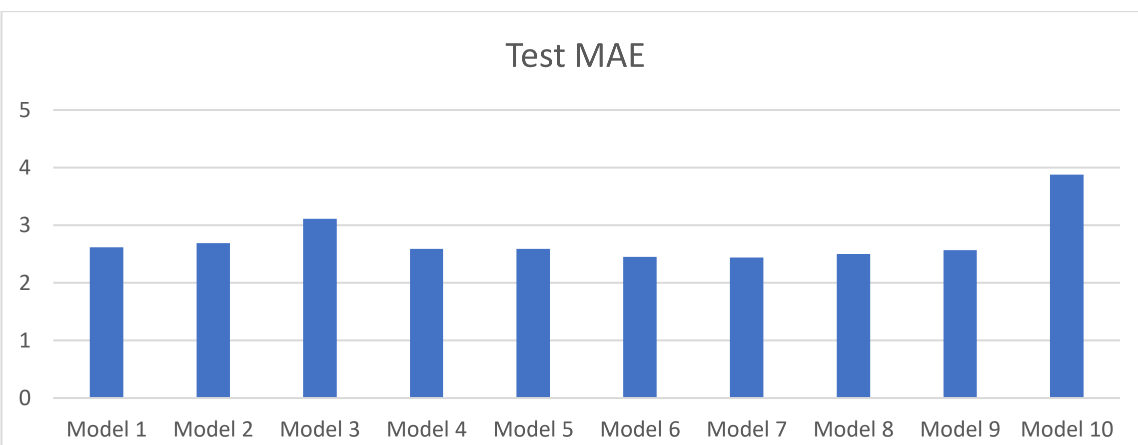
Models	Models	Epochs	Dropout	Stacked	Units	Test MAE
Model 1	CS Model	10	No	No		2.62
Model 2	Basic ML	10	No	No		2.69
Model 3	1 D convolution	10	No	No		3.11
Model 4	Simple LSTM	10	No	No		2.59
Model 5	LSTM and dropout	10	Yes	No		2.59
Model 6	Stacked GRU	10	Yes	Yes	16	2.45
Model 7	Stacked GRU	10	Yes	Yes	32	2.44
Model 8	Stacked LSTM	10	Yes	Yes	16	2.5
Model 9	Stacked LSTM	10	Yes	Yes	32	2.57
Model 10	1D and LSTM	10	No	No	32	3.88

For our assignment, we ran ten different models and used Mean Absolute Error (MAE) as the predictor of model performance, with lower MAE indicating better performance. To expedite the process, we limited the number of training epochs to 10, although this may have impacted the results. Our model progression included a baseline common-sense model, a basic machine learning model, a 1D convolution model, a simple LSTM model, a dropout-regularized LSTM, a dropout-regularized model, a stacked GRU model with 32 and 16 units, a stacked LSTM model with 32 and 16 units, and a model that combines 1D convolution and LSTM as recurrent neural networks (RNN).

It is worth noting that the common-sense model performed better than the basic machine learning model, achieving an MAE of 2.62 compared to 2.69 for the latter. The 1D convolution model performed poorly with an MAE of 3.11 relative to other models. Both the simple LSTM and simple LSTM with dropout yielded similar results. We observed that increasing the number of units in the GRU had a impacts the MAE, with a decrease of 0.01 in MAE. Conversely, in the case of LSTM, increasing units led to worse performance, as the MAE increased from 2.5 to 2.57. Models combining 1D convolution and RNN performed poorly (MAE 3.88).



Considering these results, *I would recommend focusing on fine-tuning the stacked GRU model, exploring different hyperparameters such as the number of units and dropout rates to optimize its performance.*