Utilizing the MCC as the evaluation metric, with trends similar to other metrics, we investigate the impact of encoder dimensions on predictive performance while holding the *sliding window size* W, the *number of samples* k, learning rate, and epochs constant. The analysis reveals that encoder dimension sensitivity is less critical for datasets with readily distinguishable drifts due to larger distribution differences, which exhibit tolerance to varying encoder sizes.
Conversely, datasets with more subtle drifts require precise selection of encoder dimensions, which is essential for maintaining model performance and underscores the need to calibrate model capacity to the complexity of the task without overfitting.

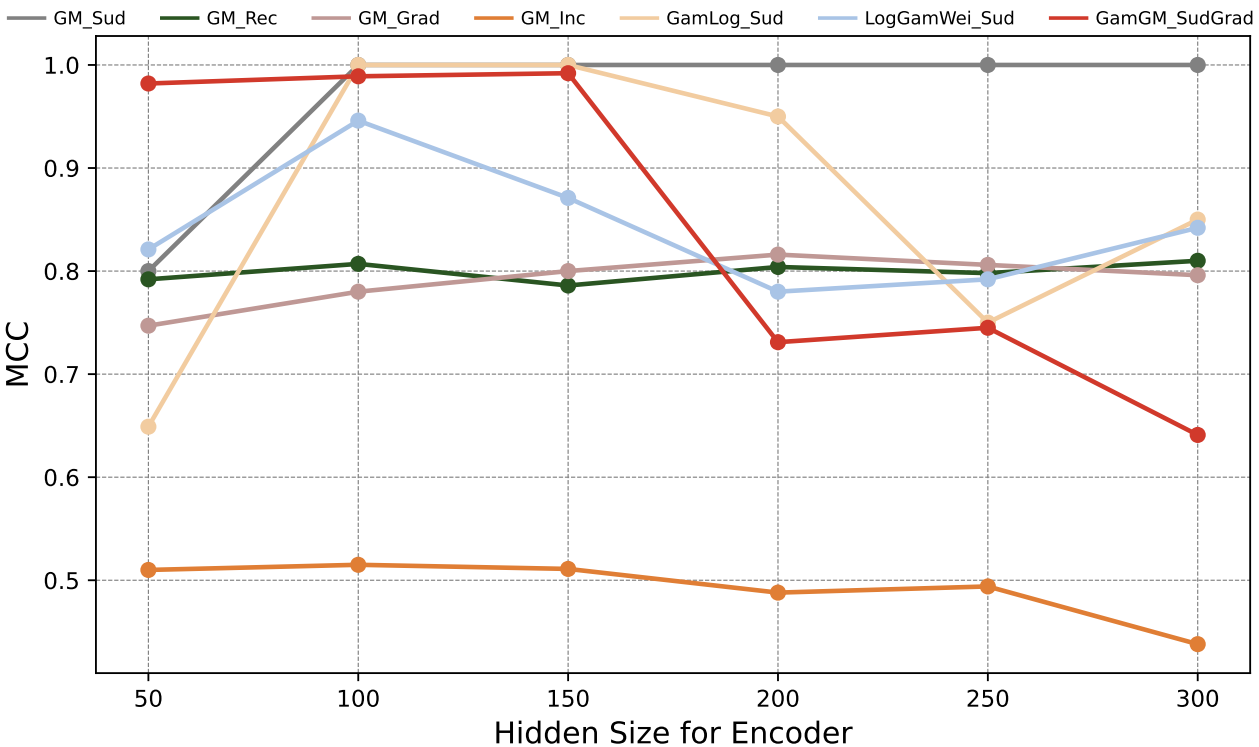

Figure 1: Sensitivity analysis of accuracy to encoder dimensions in MCD.

Similarly, by adjusting the dimensions of the encoder's hidden layers, we also record the time taken for sampling, training, and drift detection across each window for differing encoder dimensions, as shown in the table below. In alignment with our prior calculations, training and model updating constitute the majority of the time expended.

Table 1: Sensitivity analysis of time(s) to encoder dimensions in MCD.

Hidden Size	Sampling Time	Training Time	Inference Time
50	0.0067	0.2106	0.0112
100	0.0065	0.2248	0.0117
150	0.0065	0.2297	0.0103
200	0.0069	0.2302	0.0120
250	0.0071	0.2456	0.0120
300	0.0067	0.2518	0.0121