## Abstract

There is a lot of indoor air pollution, especially from cigarette smoke, wall paint, air fresheners and gas. With this situation, the room uses Air Box WP6003 air quality detection device by transmitting information about air quality through visualization index. This study aims to improve prediction accuracy with fuzzy time series methods processed through 2 naïve and moving average models using forecast transformers and without transformers. The level of prediction accuracy is calculated through several metrics, namely Mean Absolute Percentage Error (MAPE), Sum of Squares Error (SSE), Mean Square Error (MSE), Root Mean Square Error (RMSE) and Mean Absolute Error (MAE). These results can be calculated between the actual value and the predicted value. The data used is 204584 data from 4 parameters including Temperature, TVOC, HCHO and CO2. The test results with the difference from the forecast transformer and without transformer are comparable. Temperature value obtained using naïve with transformer from RMSE of 0.158866 and naïve without transformer of 0.782397, data using moving average with transformer obtained by 0.147546 and moving average without transformer of 0.772570. This can be explained by the error analysis performed, where the higher the error value, the further the test results are from the actual value. Based on the test results, it can be concluded that using the naive forecast transformer method to predict air quality has a relatively good level of accuracy.

Keywords: Air Quality; Fuzzy Time Series; Naive; Moving Average