

Abstract

Information about the weather especially rainfall is very useful in some life activities, such as in agriculture, plantation, fisheries, and others. In the process of changing the season easily predicted, when the case of Global Warming turns season change is not easy to forecast. Released by forecasting can provide an illustration of events in the future. Forecasting can be done. In the final model with SARIMA model (Seasonal Autoregressive Inegrated Moving Average) for Seasonal model and ARIMA (Autoregressive Integrated Moving Average) for Non Seasonal model.

In this final project analysis of Seasonal model is SARIMA (1,1,1)x(1,1,1)₆ and SARIMA (1,0,1)x(1,0,1)₆, And the non-seasonal models are ARIMA (1,1,1) and ARIMA (1,1,0), where the model is validated by MAPE (Mean Absolute Percentage Error) and RMSE (Root Mean Square Error). The best model based on validation result for Seasonal model is SARIMA (1,1,1)x(1,1,1)₆ model with MAPE Training value = 53,5035, RMSE Training = 6,8369, MAPE Testing = 298,451 And RMSE Testing = 194,0545, while the best model for Non Seasonal is ARIMA model (1,1,1) with MAPE Training value = 13,3984, RMSE Training = 5,5985, MAPE Testing = 7,1569 and RMSE Testing = 6, 5296.

Keywords: *Rainfall, Forecasting, Time Series Analysis, SARIMA, ARIMA, Seasonal.*