

Abstract

Forecasting is an activity that functions to predict many things, one of which is sea level, sea level forecasting is useful for ship navigation, offshore construction, and monitoring water levels. In this study, we use data from Sadeng Port for 7 months from April 3, 2020 – November 4, 2020, by comparing the LSTM method with the ConvLSTM method. Based on the results of testing and analysis using lookback scenarios, namely 7, 15, and 30, and with a filter size of 32 and the number of filters 3 and the number of filters 64 and the number of filters 2, the results of the performance evaluation model show that in a scenario with a filter size of 32 and the number of filters filter 3 with the average value obtained in three different lookback scenarios from the 2 models, the results for the LSTM method have a better predictive value than the ConvLSTM model, namely the MAE and RMSE average values that are closest to 0 in the LSTM method with a value of 0.0589 and 0.0871, as well as the value of CC with a value of 0.9866. Furthermore, the results of the performance evaluation model show that the filter size scenario is 64 and the number of filters 2 with the average value obtained in three different lookback scenarios from the 2 models. The results for the LSTM method have a better predictive value than the ConvLSTM model with an average value. The average MAE and RMSE that are closest to 0 are in the LSTM method with values of 0.0552 and 0.0840, as well as CC values with values of 0.9871.

Keywords: *forecasting sea level, lstm, convlstm, mae, rmse, cc.*
