

Abstract

Weather prediction can be used as a reference for planning an activity in the future. Weather prediction process usually use several parameters such as temperature, air pressure, humidity, wind, rainfall and others. In this study the temperature which is one of the parameters of weather prediction is predicted by using the data series everyday in period January, 1st 2015 - December, 31st 2017. Data was taken from LIPI weather measurement station in the Muaro Anai Padang. The methods used in this research are Convolutional Neural Network (CNN) and Multilayer Perceptron (MLP) approaches. The parameters used on CNN, such as number of filters, kernel size, number of convolutional layer and MLP, such as number of hidden layers, number of neurons, are selected using hyperparameter tuning. After the prediction models of two methods are obtained, Then, evaluated the performance of each model by calculating the value of Root Mean Square Error (RMSE). Based on the results of the study, the models of two methods get the best model with RMSE CNN (0.0952) and MLP (0.0702).

Keywords: Air temperature, Weather, MLP, CNN, Time series.