

Aplikasi Sistem Prediksi Temperatur Udara Berbasis Model AdaBoost dan XGBoost

Mochammad Alfian Misbachul Munir¹, Didit Adytia²

^{1,2}Fakultas Informatika, Universitas Telkom, Bandung

¹alfianmisbachulm@student.telkomuniversity.ac.id, ²adytia@telkomuniversity.ac.id

Abstract

Air temperature is one of the essential components in some sectors, such as agriculture, ecology, environment, industry, and energy. Forecasting air temperature may give some benefits to them. Some machine learning methods have been used to do air temperature forecasting. The application we made, Air Temperature Forecasting System Application Based on AdaBoost and XGBoost Model, do air temperature forecasting with AdaBoost and XGBoost. It needs air temperature dataset, training data length, testing scenario, learning rate, and chosen method as inputs. As the results, it will show outputs in graph comparing the actual data and prediction results and metrics coefficients of the trained model. In testing phase, we use air temperature data at Halim Perdanakusuma Airport, Jakarta, in the past five years. For the results, the metrics coefficients, RMSE, MAE, and CC, for AdaBoost model are 0,746, 0,723, and 0,972 each. For XGBoost are 0,175, 0,305, and 0,989. The Application we made had been written as a intellectual property rights in the Ministry of Law and Human Rights number 000305100.

Keywords: air temperature forecasting, AdaBoost, XGBoost, application

