

ABSTRACT

Weather is an air emergency at certain times and certain areas are relatively narrow and for a short period of time. Weather forecasts in the Indonesian region are uncertain, usually there will be changes every week. In order to accurately estimate and predict the weather and cloud heights in the territory of Indonesia, weather technology and programming algorithms are needed. Then Machine Learning (ML) is used using the Random Forest (RF) method in order to get good and accurate results for the height of the clouds that affect the weather and rainfall.

In this final project, we discuss the prediction of cloud and rain heights using data on the Himawari-8 satellite by applying the RF method, after the prediction results obtained a comparison is made to determine the existing suitability to find out and get optimal results.

Rainfall prediction uses netCDF data to predict cloud height and rain using the Random Forest (RF) method with a reference point, namely kilometers (km). In testing the data as many as 120 data were carried out, the highest accuracy was 100%.

Keywords: *Machine learning, Random Forest, Himawari-8, Cloud Top Height, Rainfall*