

ABSTRACT

Indonesia is one of the countries in the tropical season. Tropical countries generally have high intensity rainfall varies with time. Changes of rainfall it's quite difficult to predict. Factors that can cause changes in rainfall are the temperature, solar radiation, air pressure, relative humidity, and wind speed. In addition, the importance of knowing the weather change information is very beneficial to human life, sometimes due to difficult weather predicted, all scheduled activities could be stymied, this is why the predictions of rainfall is very important to know. In this final task, will do the prediction of rainfall in Bandung Regency. The data used are time series data. Methods used in this final task is the Fuzzy Association Rule that combines the methods off fuzzy system and association algorithm Frequent Pattern-Growth (FP-Growth). The initial stage of the rainfall assignment this is pre-processing data for the normalization of the weather dataset. Furthermore, fuzzy association rules will give the best information about the relation between attributes in the data. From the rules of the Association (FP-Growth) the relationships between attributes in the dataset is most dominant to weather rainfall against a solar radiation and relative humidity. Of these methods, the best rainfall prediction has generated error rate of 0.49 and accuracy resulting from a grouping classes 75%. The prediction results obtained from 11 rules of optimal membership function from K-Means using minimum support 20% and minimum confidence 50%.

Keywords : *prediction, time series, association rule, FP-Growth, fuzzy inference system*