

ABSTRACT

In this day, information about something is so important. The level of confidence in modern society depends on the validity of information. Information that is tested and accurate will have a good impact on the community at large. Weather is an important thing to be informed. Weather conditions can be obtained with information on the presence of convective clouds that can cause rain. Clouds produced by the convection process result from heating of solar radiation is called a convective cloud. According to BMKG, especially in Indonesia, clouds that often produce rain are cumulonimbus clouds and their growth moves vertically or can be called convective clouds. The results of this study are to provide information to users by determining a prediction of a convective cloud that causes rain to fall through the membership function provided and the importance of influence in determining the parameters of the membership function and the rules used. The area to be observed and studied is an area of 5 x 5 km² on the border of West Bandung Regency and Cimahi City.

Fuzzy logic using the Sugeno method is known to have good speed. The more variables that are used as input, the better the output accuracy will be. This study aims to apply Fuzzy Logic which starts from user input on Android and then processed by a computer to predict the emergence of convective clouds. After that, the computer provides display input to Android where the database on the Android application uses Firebase Realtime Database which is connected to the server computer. In this study, it is hoped that residents can consider outdoor activities in the event of convective cloud growth.

The method used in this research is fuzzy logic with the Sugeno method. After analysis and testing, the system can provide fairly good information with an accuracy rate of 73,33%.

Keywords: *Convective Cloud Prediction, Logika Fuzzy, Firebase, Android*