

ABSTRACT

Landslides are one of the natural disasters that often occur in the Indonesian region. This disaster usually occurs frequently in mountainous areas, hills, steep slopes, or cliffs. Not infrequently landslides also occur on agricultural land and plantations whose positions are located on sloping land. Therefore, it is necessary to create a landslide Early Warning System. Soil slope, soil displacement, and excessive water content in the soil are the main causes of landslides.

To measure these parameters, an Internet of things (IoT) based system is used that is connected to various sensors. In this study the fuzzy value obtained from the measurement of the MPU6050 accelerometer and gyroscope sensor and Soil Moisture sensor sent to the antares server using LoRa. In this case Fuzzy Logic is used to analyze the sensor detection results in the form of three final decisions, namely safe, alert and alert which can be seen on an android device with an accuracy value of 90%.

Keywords : *Early Warning System, Landslide, Antares, LoRa, Fuzzy Logic*