

ABSTRACT

Indonesia is located in a geographical condition where several areas are characterized by the formation of active mountain paths. Therefore, Indonesia is a country that is potentially prone to volcanic eruptions. To overcome the impact of the disaster, it is necessary to create a monitoring system for the activity of the status of the volcano based on parameters of water temperature and soil moisture. This study aims to create a monitoring system that can provide data in the form of real-time information about volcanic activity. The monitoring system is made based on the Internet Of Things by using an IoT application support device in ThingSpeak. The system performance was carried out from June 15, 2021 to June 22, 2021. The measurement results show that the air temperature is 24⁰C-31⁰C, and soil moisture is 28%-15%. It can be classified that the status of the volcano is at Level I (Normal). The power consumption by the system for 24 hours reaches 44,6 Watts. The success rate of the data transmission system reaches 82%. The monitoring system performance becomes information on the successful delivery of data from volcanic activity. By being known for real or earlier than volcanic activity, disaster management can be carried out as early as possible.

Keywords: water, IoT, moisture, monitoring, temperature, soil