

ABSTRACT

Wind is the movement of air from an area of high pressure to an area of low pressure. The formation of wind direction occurs due to the difference in air pressure in two different places. Strong winds are one of the natural disasters that often occur in Indonesia that can cause various types of damage or even casualties. Therefore, mitigation regarding the dangers of strong winds is needed by the community. The development of classification methods is necessary to obtain precise and fast classification results to reduce misinformation in the public.

In this Final Project, a strong wind *monitoring* system will be designed at several points using the concept of *wireless* sensor network to detect the level of danger from strong winds. This study will use various types of parameters such as wind speed, wind direction, temperature, and air humidity. The system will be integrated with the webserver to make it easier for users to monitor strong winds around the *nodes* in real time.

In the results of research on strong wind detection devices, accuracy testing results were obtained on *node 1* getting an average accuracy of 95.24% and on *node 2* getting tool accuracy results of 95.99% when compared to *portable* anemometers. In the test results that have been carried out on the *mesh* network, the *throughput* test results obtained an average value of 625.1 bps, in the *delay* test obtained a *delay* time with an average of 1.356 ms with an average *packet loss* of 0%.

Key Word: *Mitigation, IoT, Strong Wind*