ABSTRACT

A tsunami is a natural event when a large ocean wave hits a coastal area. The tsunami itself is usually caused by a large tectonic earthquake in the sea or the eruption of a volcano close to the sea. However, the tsunami did not just come, this disaster has several characteristics such as the rapid receding of sea water and an anomaly in the height of the waves in the middle of the sea. Tsunami detectors already exist, but because the tools are too expensive, Indonesia only has a few tools. In addition, monitoring data from the BMKG is always late due to the absence of a forum so that the public can participate in monitoring the state of the sea in Indonesia.

The purpose of making this tool is to minimize the funds that go out to detect tsunamis so that their distribution can be evenly distributed. In addition, a web called NAMI will be created to monitor the state of the sea. The web aims to make it easier for the public to participate in seeing the latest marine conditions. NAMI is developed on a web service with the Laravel 8 framework, while data processing uses the Fuzzy Tsukamoto Algorithm. The process begins by pulling data from Thingspeak and then entering it into fuzzy python language and then the results are displayed on the NAMI Web.

The results in this study were able to retrieve data from the device with an average time of 0.04008 seconds and successfully processed with fuzzy with a validation level of 96%. So that the community can monitor the sea and find out if there are indications of a tsunami in the middle of the sea so that tsunami early warnings can be faster and evacuations can be carried out earlier.

Keywords : tsunami, wave , Webservice , fuzzy Tsukamoto , NAMI