

## ***ABSTRACT***

### ***IMPLEMENTATION OF LoRa ON TSUNAMI EARLY WARNING SYSTEM***

Tsunami is one of the natural disasters that cause tremendous damage to the fall of many casualties. The tsunami was caused by an enormous earthquake caused by the activity of the earth's crust plates and by volcanic activity under the sea. Looking back at the tsunami that hit Aceh in 2004 which claimed 230,000 lives and the Tsunami in Japan in 2011 with 10,000 dead and 17,400 people still missing. Therefore, a tsunami early warning system is needed.

In this final project, the author focuses on how Tsunami Early Warning System can work by sending data from Tsunami detection sensor (node) to gateway using LoRa (Long Range) method. Then the gateway sends data to the network server, ThingSpeak. At the end, ThingSpeak will be integrated with the monitoring application based on Android.

The output obtained from this Final Project is to measuring the length of data transmission that is done starting from the node to the server from ThingSpeak and can display the data that obtained by the sensor on the Android-based application.

**Keywords:** *Tsunami, LoRa , IoT, Android, ThingSpeak*