

## ABSTRACT

Every day technological developments in the world are increasingly modern. All things done by humans today are not far from digital things. Like a security and safety system for humans everything has been monitored in a digital system. In Indonesia such a safety system is still lacking for the coastal areas.

In this final project, this position monitoring system requires several devices such as GPS to find out where fishermen are at sea. Radio Frequency is used to send fishermen's position data everytime, and a device is needed to display the Coordinate position.

As a result of this research a position monitoring system was created. The accuracy of the coordinate read has a range of 20 meters. In addition to knowing the distance in this study also made the calculation of the distance between the coordinate points that are read by the boundary lines made. To use this calculation is to provide a warning by turning on the buzzer continuously if the distance between points and lines is more than 100 meters. The accuracy of the distance calculation from testing at 4 points carried out has an average accuracy of 91.01%. In addition to the GPS module that is used several factors affect the accuracy. This monitoring system uses radio frequency as a communication medium for sending data from the Coordinate reading to the monitoring side. The data received will be stored directly in the database and displayed on the web server.

**Keywords: GPS, Radio Frequency, Raspberry Pi, Boat Position ,  
Coordinat.**