ABSTRACT

Fish farming in Indonesia continues to increase where with the increase in production, fish farming has become one of the most important commodities in the world. With the increase in fish farming in Indonesia, it can be said that more and more people want to preserve and cultivate fish for trade or just to be preserved. One of the technologies that can help in the fishery and fish farming sector is the emergence of technology that can help feed fish automatically and on a scheduled basis with the help of a tool called an autonomous fish feeder swarm boat. The existence of this technology will help and make it easier for cultivators to lighten energy and save time in feeding fish.

In this final project, a ship design is carried out which aims to design a system called an autonomous boat to support an automatic fish feeder system that can be used to facilitate automatic feeding and be applied to fish ponds. The design of this autonomous boat will use ESP32 with Arduino IDE software which is used to run the fish feeding command.

The results of this autonomous boat design can support the automatic fish feeder system in helping automatic and scheduled feeding. Autonomous Boat will move using an ESP32 type microcontroller which is connected to BTS7960 as an auxiliary driving DC motor for steering the ship. This ship can accommodate a maximum load of 15 kg which will move automatically and can go straight, turn right and left according to orders determined from the start. This autonomous boat has an average maximum speed of 0-200 PWM values.

Keywords: *autonomous, fish feeder swarm boat, EP32, microcontroller, ship*