

ABSTRACT

Basic needs in the fisheries sector have increased where aquaculture actors increase production while still paying attention to the growth and quality of fish. There are many challenges faced by farmers to produce fish optimally and sustainably. One of them is feeding fish. The development of a feeding system that is still applied by the community uses the handfeeding technique, namely the feed is directly spread by hand into the pond/pond, where the technique is less effective because the feeding is stocked not measured, feeding is not scheduled properly and requires more manpower. Therefore, technology is needed that can help cultivators to streamline the time and energy needed.

In this final project, the design of an autonomous boat is carried out, namely the design of an unmanned vessel that aims to support an automatic fish feeder system that can be used to facilitate automatic feeding of fish that is applied to fish ponds. The design of this autonomous boat uses a Raspberry Zero W microcontroller as a control system on the ship.

The results of this autonomous boat design can support the automatic fish feeder system in automatic and scheduled feeding. Autonomous boats can move automatically by using a Raspberry Zero W microcontroller and a BTS7960 motor driver as a speed regulator on the ship and as a ship's steering system assistant. The use of PWM 50-70 is the most effective and efficient PWM. This autonomous boat can accommodate loads of up to 15 kg.

Keywords: *Autonomous boat, Automatic fish feeder, Raspberry zero W, Motor Driver.*