

## ABSTRACT

*Many people want to keep arowana for its beauty and has a high price. However, people in this era preoccupied with matters which require to get out of the house. Therefore, arowana's owner not have much time to keep arowana. This is a problem for arowana's owner. With this aquarium will help people to keep arowana and aquariums with ease.*

*In this final project created a system that is attached to the aquarium with applied the concept of Internet of Things that can be controller remotely. In this study used a microcontroller Raspberry Pi B, motor servo, ultrasonic sensors, faucet solenoid, relay, temperature sensor, and a webcam. motor servo is mounted on the top of the aquarium serves as a feeder. Ultrasonic sensors mounted on the roof of the inside of the aquarium and faucet solenoid mounted on the exhaust duct. Relay is installed as a controller faucet solenoid. He temperature sensor and the webcam act as observers aquarium. The remote control is meant is then integrated with a microcontroller at the aquarium through gateway provided.*

*From the result of the hardware implementation in the aquarium using the Raspberry Pi B, showed that the feed output after feeding feature operation have a success rate 6 out of 10 attempts. The result of the ultrasonic sensor readings of the distance actually has a difference of 4.8 cm distance. Response valve solenoid to the operation of the relay has a 100% success rate. Measurement result by the water temperature sensor DS18B20 found an average of 28.81 degrees Celcius on the correct number of 29 degrees Celcius.*

**Keywords:** *Internet of Things, microcontroller, solenoid valve, motor servo*