

Abstract

A lot of people have been tried to cultivate Crystal Red Shrimp, but many have failed due to mass shrimp deaths. It usually happens because of the poor quality of water cultivation and low environmental adaptability of the shrimp. It is very important to develop a system to solve the problem, especially on the monitoring and controlling of air quality. This research introduces air quality monitoring and control system using Fuzzy Inference System based on Internet of Things. This system uses several sensors such as temperature, water temperature, dissolved oxygen, and turbidity. The sensors are connected to Raspberry pi 3 which has been implanted in a system using Fuzzy Inference System to automatically control the actuator. The real-time monitoring system can be accessed via Halpeak and also MQTT. From the research results obtained the accuracy of Real-time monitoring of 97.93%. To achieve 90% Growth of Red Crystals for 3 weeks with an average value of 2.191 or 0.1,91 cm more optimal compared with conventional processes.

Keywords: *Aquarium, Internet of Things, Monitoring, Sensor, Automation.*