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AQUARIUM MONITORING AND AUTOMATIC FISH FEEDER (A.M.A.F.F)

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ABSTRACT

Accessible and affordable technology is being developed for IoT-based autonomous feeding and water quality monitoring systems. Lack of time, expertise, or finances frequently causes aquarium owners to fail to give their fish the greatest care possible; alternatively, owners may lack the know-how or experience necessary to give their fish the finest care. This study suggests an Internet of Things-based automatic fish food and water quality monitoring system for aquariums in order to assist with aquarium maintenance. A turbidity level sensor and a pH level sensor are the inputs for water quality controls. Fish feed is dispensed using a servo motor that is powered by a preset timer and a push button. The level of fish food in the tank is determined using an ultrasonic sensor. With a smartphone, the system is linked.

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CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

The popularity of automatic fish feeders for aquariums and water quality monitoring systems is rising as more people realize how important it is to provide their fish with the finest care possible. Even when the owner is away or busy, these devices can assist guarantee that fish are receiving the proper amount of food and that the water quality is kept at a healthy level. There are many benefits to using an automatic fish feeder and water quality monitoring system.

Fish feeding may be automated and tanks monitored with IoT. The pH level and temperature of the water can be measured using sensors. This information can be used to monitor the aquarium's condition and notify the owner of any issues. Fish feeding can also be automated with IoT. A timer or a sensor that measures the amount of food in the tank can be attached to a feeder. This will guarantee that, even when the owner is away, the fish will always be fed. Fish health and wellbeing can be enhanced with the use of automated fish feeding systems and Internet of Things-based aquarium monitoring.

First, by ensuring that fish are receiving the proper amount of food, these systems can aid. This is crucial since erratic eating patterns can result in health issues like obesity, swim bladder disease, and famine.

Next, automatic fish feeders and water quality monitoring devices can help manage aquarium water quality. This is important because poor aquarium maintenance can lead to fast changes in the water quality, which can affect fish health.

Furthermore, automatic fish feeders and water quality monitoring systems can free up the