

智慧水族箱

Intelligent Aquarium

周智倫

賴守全

白鎮嘉

Chih-Lun Chou

Shou-Chuan Lai

Chen-Chia Pai

銘傳大學電腦與通訊工程學系

Department of Information and Telecommunications Engineering,
Ming Chuan University

摘要

對於現代人生活越來越繁忙，對於有在家中養魚的名眾有時會疏於照顧，像是忘記餵魚、或者是水槽長期未清理導致魚類死亡。這些不是故意而是你在不知道現況情況下而導致的結果。養魚是種娛樂，但如果處理不當，便會造成死亡。

為了避免重複循環，而這設計出了這款 APP 來連接水族箱，知道水族箱是溫度過高、水質太差、或者即時觀察魚類的情況。

本研究是為了那些忙碌於上班的人亦或者長期不在家中的人所設計的 APP 功能，附有自動餵魚、PH 值感應、即時攝影機、溫度控制等功能。讓你在地也能顧及家裡的魚類，不讓你陷入於魚死了又重複購買的現況。為了實現此研究，必須要先了解手機 APP 的設計以及樹莓派的使用方法，再加上 Arduino 模組的配置，以及附加在樹莓派上面的 PH 感測器、溫度感測器、WIFI 模組等，都必須有深入的了解。

關鍵字： Arduino、Android Studio、Raspberry Pi 3

Abstract

Modern people are getting more and more busy, someone who has fish farming will be neglected. Like forgetting feeding fish, or the sink is not be cleaned that cause the fish to dead. These are not on purpose but the circumstances that you don't know. Fish farming is an entertainment, if you're not handle it property, and it will cause to dead. To avoid from this cycling, we design for this APP to connect the Aquarium to know whether the temperature is too high, or the quality of the water is worse or not, possibly you can check real time monitoring system.

To achieve the project, we must know how the APP design works and the way to use Raspberry pi. In addition, we also need to be proficient in Arduino deploy and PH sensor, temp sensor and wifi module. It must dig deeper into this project.

Keywords: Arduino、Android Studio、Raspberry Pi 3