ABSTRACT

Smart Feeding is an efficient and controllable automated system for feeding pets or livestock. Amidst the growing popularity of fish farming as both a hobby and a thriving business sector, the traditional approach to feeding is often done manually. However, time and distance constraints are often an issue, especially when farmers have busy schedules or are located far from where the fish are kept. This project is to develop an automatic fish feeding system that can be managed through an Android application. The research method used is Agile, which includes requirements analysis, design, development, testing, and maintenance. In the needs analysis stage, data search and collection are carried out for application design. The design of the Smart Feeding system includes making containers for fish feed, Internet of Things (IoT)-based Smart Feeding tools, and user interface design in the application. Development is carried out to realize the system design. Containers for fish feed and *Smart Feeding* tools based on the Internet of Things (IoT) are made, and Android applications connected to these tools are implemented using Arduino. The testing stage is carried out to test the entire system, from the Android application to the Internet of Things (IoT)-based Smart Feeding tool. Examination and testing are done to detect possible failures or errors in the system. This project produces a *Smart Feeding* prototype that can control fish feeding accurately through the Android application. In testing using a questionnaire involving 18 respondents with an average usability score of 84.7% based on a Likert scale. These results show that the application gets a positive response from users.

Keywords: *Smart Feeding* based on *Internet of Things* (IoT), Arduino, Agile Method, Application User Interface.