UNIVERSITI TEKNOLOGI MARA CAWANGAN PULAU PINANG

AUTOMATIC AQUAPONIC MONITORING SYSTEM

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BACHELOR OF ENGINEERING (HONS) ELECTRICAL AND ELECTRONIC ENGINEERING

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Agricultural goods demand is gradually growing with the rise of the world population. However, because of climate change in the world, many plants are often damaged by the weather. Aquaponic which was introduced a long time ago, but it has become popular nowadays especially in Malaysia. It is one of suitable solution for the food security and sustainability, but when operate it manually it will require more time and labour force to keep monitor it. This research proposed an automatic aquaponic monitoring system which helps the owner to monitor the system through Blynk application on their smartphones. It helps users to monitor the temperature, humidity, light, water level in fish tank and water flow in the reservoir. The system also will notify the owner when any abnormal or failure occurs in the system which include the function of water pump, lamp, or exhaust fan. It also will automatically maintain the good surrounding for the crops. With this system, it will reduce labour cost and operation cost.

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