Human Health Status IoT Device Using Data Optimization Algorithm

Albin Lemuel Kushan
Muhammad Hazwan Bin Anuar
Mohd Hafifi Bin Mohd Supir
Ahmad Firdaus Bin Ahmad Fadzil
Anwar Farhan Bin Zolkeplay

Faculty of Computer & Mathematical Sciences, Universiti Teknologi MARA Melaka

albin@tmsk.uitm.edu.my

JM027 – Innovation – Local – Category A: Professional (UiTM Melaka) -

Abstract—

In this day and age, health issues have become one of the hottest topics that are discussed, as the world is facing the ongoing pandemic. Therefore, in order to mitigate the situation, few approaches in Mobile Application Technologies have been explored such as the "MySejahtera" app and the "MyTrace" app. This project aims to produce a device that can be used to identify the current health status of a person using sensor and a data optimization algorithm. Furthermore, this project uses CT-UNO (Arduino Uno) microcontroller as its base together with the LM-35 Body Temperature sensor and the Pulse Sensor for reading heart rate, and a web system to manage the data collected. The web system will also act as the interface for patients and medical officers where a health survey for the patients is conducted through the system. The data that will be collected are the body temperature, heart rate and the health survey, all the data will run through a data optimization algorithm to produce a more accurate result. The data optimization algorithm uses the current data provided by the health department and then compare them with the patient's data, after which the system will produce the current health status of the patient. The project result shows that the usage of smart devices combine with a data optimization algorithm produces accurate outputs that can later be employed to lessen the work that are carried out by the medical officer.

Keywords—Mobile Application , optimization algorithm, internet of things (IoT), body health sensor