

Automated COVID-19 Temperature Sensor

14th December 2020

PROJECT DESCRIPTION

COVID-19 currently poses an existential threat to humankind; therefore, all measures should be put in place to mitigate the spread of this deadly disease. Testing if someone has COVID-19 is not a straightforward process that can be easily automated. Therefore, detecting the symptoms of this disease can serve as an indication that the person may have contracted the virus. One of the most telltale signs that a person has COVID-19 would be their temperature as it is often accompanied by a fever.

This project aims to design and implement a contactless system that automates the process of monitoring a persons temperature, and using this as an indicator for the presence of some illness, specifically COVID-19. In addition to the development of the device, we aim to develop a web interface through which the data at a device can be monitored.

EXPECTED OUTCOMES

1. Develop a contactless device that can accurately measure a person's temperature and store this data for monitoring purposes.
2. Be able to alert the user if their temperature is out of the acceptable range, i.e. alert the user if it is detected that they have a fever.
3. Have the device connected to a server, and store the temperature data in a database that is hosted on the server.
4. Develop a web application through which the information in the database is accessible .
5. Upon collection of sufficient data, write a research paper to analyze the performance of the system that we develop in terms of the objectives that we had set out for it, and to compare the performance of different contactless temperature sensor modules on the University of the West Indies, Mona campus.

PARTICIPATING MEMBERS

The group members that are participating in the development of this project are shown in the table below.

Name	IEEE Membership Number
Lindon Falconer	40182096
Paul Wilson	-
Jordan Madden	95541319
Alick Campbell	96628929

Douglas Byfield	95569087
Jermaine James	96626964

CONTACT PERSON

Of the members listed in the previous section, Lindon Falconer will be the contact person for all matters related to this project. His contact information is as follows:

Cell Phone Number	+1(876) 381-5103
Primary E-mail Address	lindon.falconer@alumni.uwi.edu
Secondary Email Address	-

EXPECTED COST

The expected cost of the project is shown in the table below.

Item Overview	Cost(Inclusive of Shipping) / (US)
Electronic Components	\$230.00
Printed Circuit Board	\$50.00
3D Printing (Enclosure)	\$100.00
Raspberry Pi Server Kit	\$120.00
Total	\$500.00

SAFETY PROTOCOLS

In order to adhere to the safety protocols set out by the Government of Jamaica, we plan to take the following actions:

- Host all project meetings virtually, via Zoom or some other virtual conferencing platform.
- Have no more than 5 group members in the same room at any one point in time.
- Terminate all face-to-face interactions between group members in time for us to make it home in time for the curfew imposed by the Government.