

Panic Alarm For Elders

A wearable device that calls for help in one – click.

20181CSE0621 – Sai Ram. K
20181CSE0643 – Satyam Mourya
20181CSE0660 – Shaiq Iqbal
20181CSE0669 – Shivam Singh
20181CSE0670 – Shlaghana J.S.

Abstract

- The core functionality of this device is to alert the care-takers when a person who is differently abled, elderly or are in need of help.
- The device is wearable and has a simple interface and is capable of sending a pre saved message template in case of distress.
- The use of this device is aimed for the elderly being the top priority followed by any individual needing assistance for safety purposes.

Introduction

- There can be any sudden situation of panic. It could be because of an intruder entering our house or bad health status. Situations can be many for panicking and may vary from person to person.
- During these situations we employ the use of a panic alarm that alerts the provided caretaker to rush for help.

Statement

- The purpose of a panic alarm is to allow a person under distress to quickly and silently call for help in the event of an emergency. Panic alarms are also called "distress alarms", "hold-up alarms", or "panic buttons".
- Panic alarms are used when it may be unsafe or uncomfortable to call for help in other ways.
- For example, if a belligerent person is standing in your lobby, it may be unwise to further escalate the situation by picking up a phone to call for assistance. A panic alarm can provide a quick and convenient way to summon help without drawing attention

Literature Survey

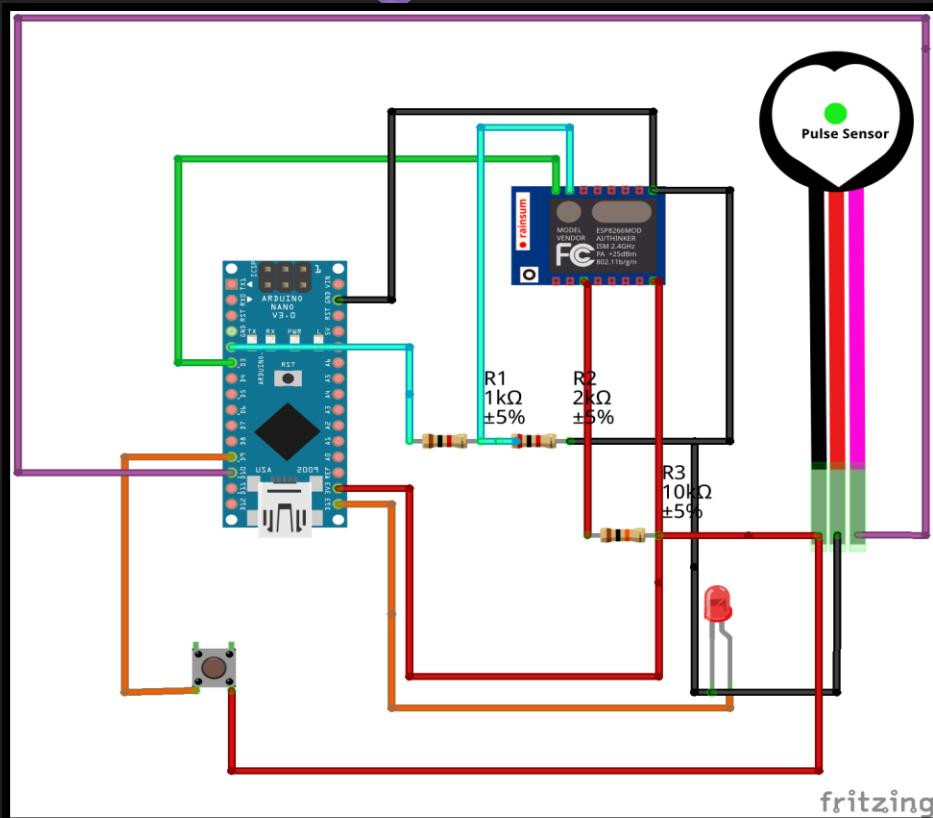
○ Citation :

1. B. Choudhury, T. S. Choudhury, A. Pramanik, W. Arif and J. Mehedi, "Design and implementation of an SMS based home security system," 2015 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), Coimbatore, India, 2015, pp. 1-7, doi: 10.1109/ICECCT.2015.7226115.
2. S. D. Damayanti, M. Suryanegara, I. K. A. Enriko and M. I. Nashiruddin, "Designing A LoRa-Based Panic Button for Bali Smart Island Project," 2019 7th International Conference on Smart Computing & Communications (ICSCC), Sarawak, Malaysia, 2019, pp. 1-5, doi: 10.1109/ICSCC.2019.8843614.

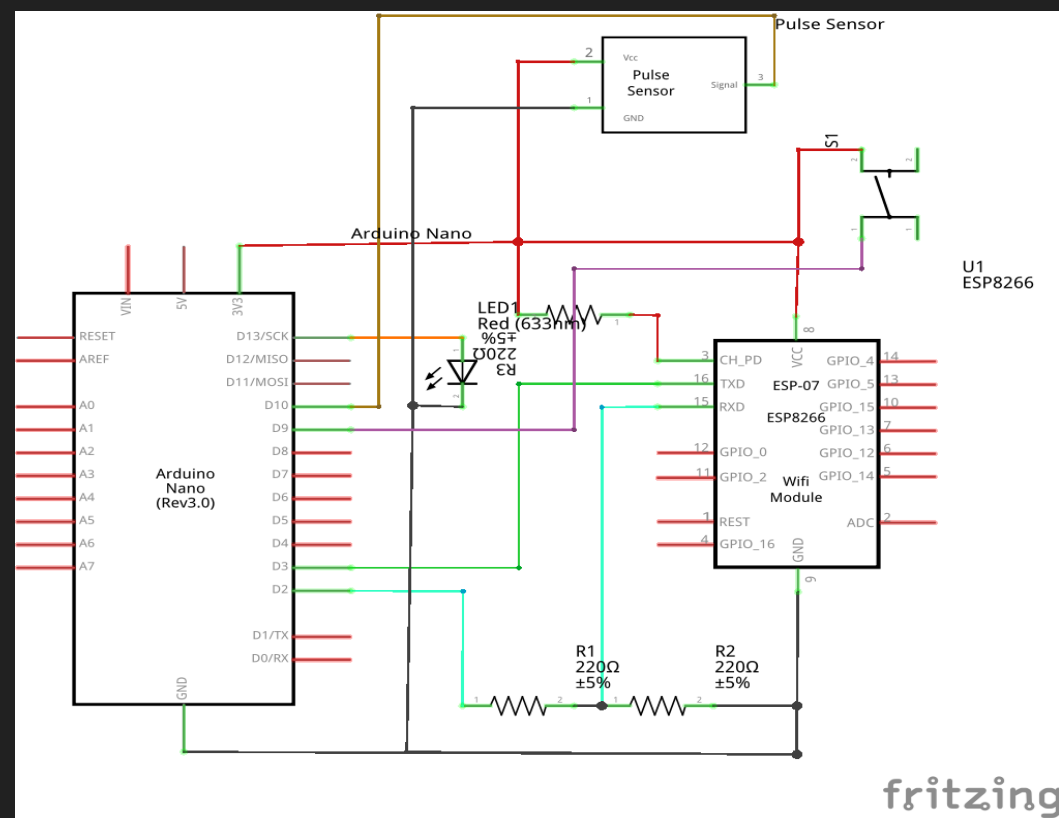
○ Improvements :

1. Compressed the proto-type into a wearable watch.
2. Containerize and scale the web-client using Docker.
3. React Native App for controlling the watch and in app notifications.

Architecture

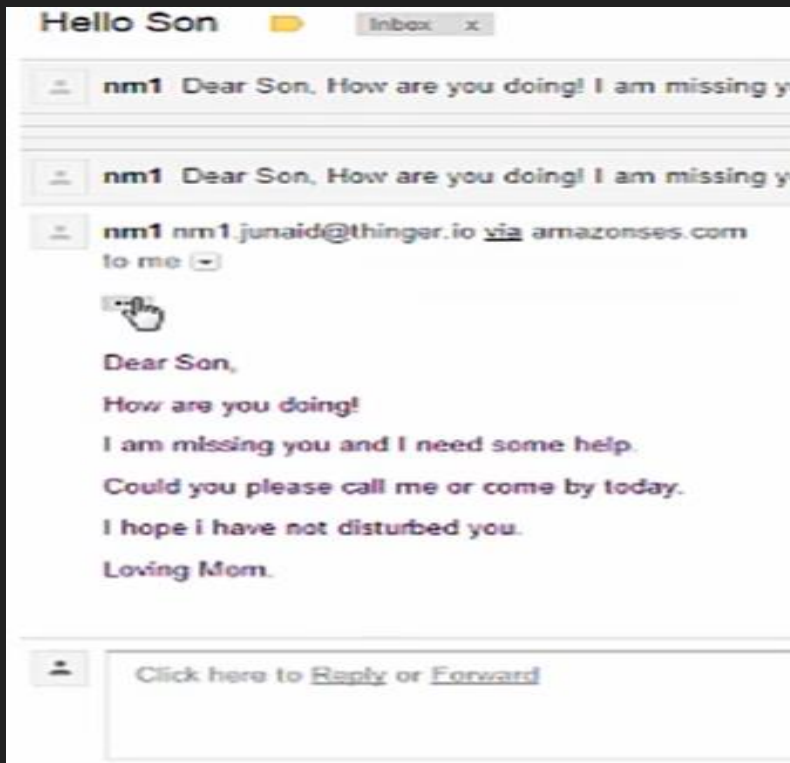


A. Circuit Diagram



B. Wireframe Diagram

Output

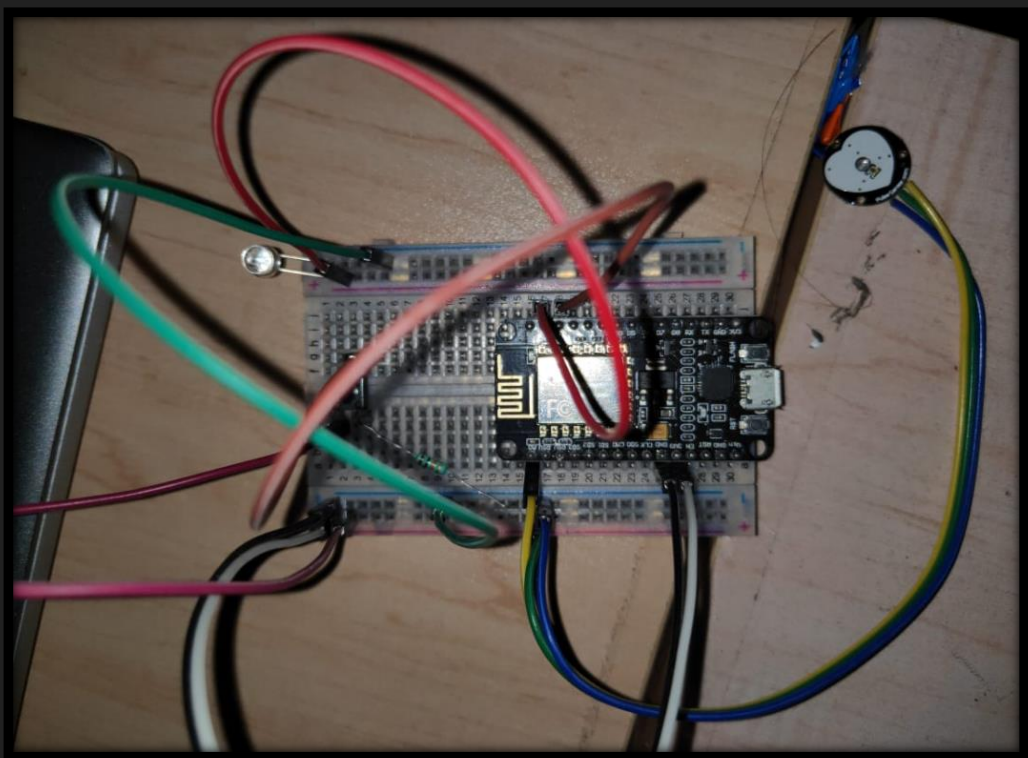


A. The watch sends out an email to the dependent's address, so as to alert him/her that they are in distress and need immediate assistance.



B. The prototype of the wearable panic alarm watch.

Circuit Design




Components Used :-

- LED
- Resistor 10 k Ω
- Pulse Sensor
- Jumper Wires
- ESP8266 Node MCU
- Breadboard Small

Design of the WebApp


- To analyze the alerts and to provide an easy interface for users we have developed a WebApp using JavaScript Frameworks.
- The WebApp does has the following features :
 1. Allows the user to login and create an account
 2. Provides each user with an unique ID for recognition.
 3. Displays the time and date of each alert that is triggered and differentiates between a manual alert and automatic alert.
 4. Provides directions to the location where the alert was triggered.
 5. Sends an e-mail to the dependents and the registered e-mail with the location and time of the alert triggered.
- The working of the app can be found on this clickable link - [Panic Alarm WebApp](#)

Panic Alarm WebApp

 **PANIC ALARM**

**Get alerted if danger
sneezes near your parents
or kids**


Let's sign you in



☐ Remember me [Forgot password](#)


Log In


Don't have an account yet? [Join Now](#)


 **PANIC ALARM** © Presidency University - PanicAlarm IOT Project by Group 2 section 6CSE10


The login page of the WebApp that allows users to login or create a new account.


Alerts Dashboard

 PANIC ALARM

Hello , Shaqi Kar 

 Status


 Settings


 Help



Alert ID

To be able to receive email alerts and connect the PanicAlarm Watch with the dashboard, you need to add the below unique alert id to your watch. If you don't know how to add the alert id to the watch, see this tutorial.


609517ef99ab764998753


 Don't Share this Alert ID with anyone.


 Alerts


 Online  Refresh


7, May, 2021


 Panic Alert 4:06 PM
Automatic Alert

 Automatically Triggered Alert
Occured 1 Times, Last Occurance @ 4:06 PM

This alert was triggered from 127.0.0.1
Location: Bangalore Urban  Get Directions

 Panic Alert 4:06 PM
Push Button Alert

 Manually Triggered Alert
Occured 1 Times, Last Occurance @ 4:06 PM

This alert was triggered from 127.0.0.1
Location: Bangalore Urban  Get Directions

For smooth functioning, you can delete the alerts you have seen 

Alerts Dashboard that appears when a user logs into their account and displays the triggers.

Alert ID

Alert ID

To be able to receive email alerts and connect the PanicAlarm Watch with the dashboard, you need to add the below unique alert id to your watch. If you don't know how to add the alert id to the watch, see this tutorial.


609517ef99ab764998753

ⓘ Don't Share this Alert ID with anyone.


An alert ID pane that has an unique ID for each user and is expected to be confidential.

Alerts Display Pane


7, May, 2021




Panic Alert 4:06 PM
Automatic Alert




Automatically Triggered Alert
Occured 1 Times, Last Occurance @ 4:06 PM




This alert was triggered from 127.0.0.1
Location: Bangalore Urban

 Get Directions


A. An alert that was generated automatically based on the monitoring.




Panic Alert 4:06 PM
Push Button Alert



Manually Triggered Alert
Occured 1 Times, Last Occurance @ 4:06 PM

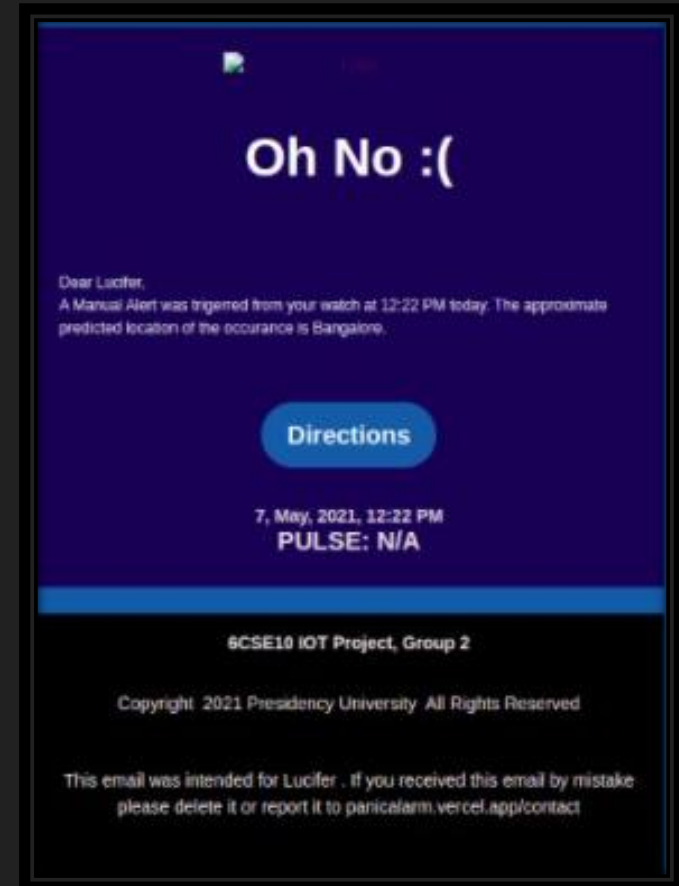
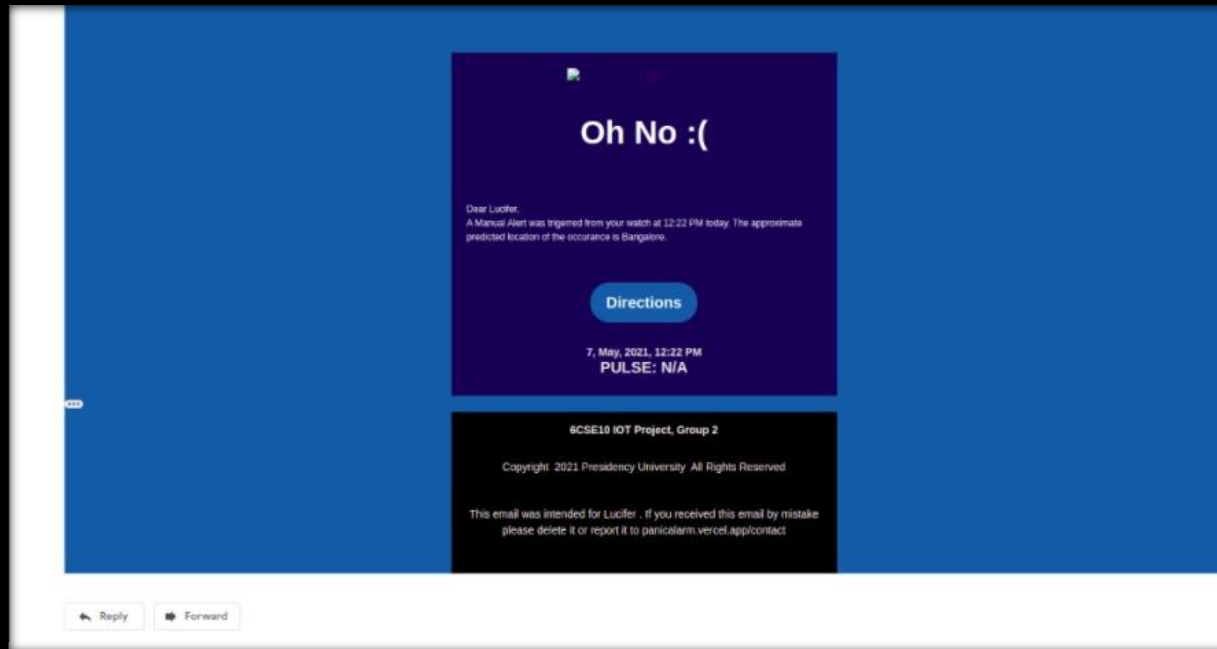


This alert was triggered from 127.0.0.1
Location: Bangalore Urban

 Get Directions

B. An alert that was generated when a person triggered the push button.

Alert E-mail



Screenshot of the e-mail as sent by the panic alarm when the alert was triggered.

Thank You.

A Mini – Project By :-

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