SMART INTELLIGENCE SURVEILLANCE FOR PHYSICALLY DISABLED PERSON USING IOT

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ABSTRACT

Today in the existing universal diegesis, the ever-rising increase of issues on physically challenged person about their safety and security. Approximately one in four women and one in seven men are facing physical violence, sexual abuse, verbal or emotional abuse. The only thought in physically disabled person mind is about security and safety when they are at higher risk of assaults. This work recommends a new context to use technology for physically challenged person protection. Our paper proposes a concept which changes the way everyone thinks about physically challenged person safety and security. A day when media simulcast more of physically disabled person procurement rather than persecution, it's a feat achieved! Therefore we can't acknowledge inefficiently in emergency situations, the necessity for a device which spontaneously save the time and sense to put forward of our concept in this paper. We propound to have a gadget which is the combination of several devices, hardware which comprises of a adequate "Smart Kit" which incessant communicates with cellular phone that has approach to the cyberspace. The application is prearranged and rigged with all the necessary data which includes human actions and response to distinct circumstances.

Keywords—*Physically Challenged Person Security, Physically Violence, Sexual Abuse, Smart Kit*

I. INTRODUCTION

In today's society physically challenged person have higher risk of being abused. Person with physical disability are facing lot of physical violence. Physically challenged person have lack of relevant assistive technology. In this regard this project is a

boon which provides security to physically challenged person and also provide security for the women. This device creates awareness in the society against increasing risk to physically challenged person exploitation with the help of latest Technology. This paper emphasizes on a safety and security system that is premeditated merely to give out the aim of providing security to

physically challenged person so that they never perceive incapable while facing physical violence and social ills. An evolved system can build that can disclose the locus and health situation of physically challenged person that will permit us to take gesture based on automated gadgets like body temperature sensor, GPS, GSM, Electrocardiograph. To detect the real time circumstances of the person in emergency situations we can make use of multiple sensors.

A. PROBLEM STATEMENT

This project is contemplated uniquely to give out the concept of catering security to physically challenged person while facing physical violence and social challenges. Indeed, in this modernized society where the cutting-edge technology is expeditiously growing and a new advanced gadgets were evolved but still visually, vocally, audibly challenged person are facing problems. This device will stand guard over them and can decrease threat and bring aid when they need .The main aim of this device is to notify the registered number of the susceptible person present location.

B. OBJECTIVES

1.The aim of equipping security and safety to physically challenged person so that never perceive incapable while facing physical violence, verbal or emotional abuse**.**

2.The goal is to give security and safety to women so that they never feel inconsistent while facing social difficulties.

II. LITERATURE SURVEY

[1].Kavitha Sharma, Annand More M. paper entitled “Physically Challenged Person” security is a condemnatory issue in present world and it’s very much necessary for each individual to be facing over similar issue. This document reports a GPS and GSM based “Physically Challenged Person Security System” that provides the composition of GPS device as a well as give warn and messages with an emergency button trigger [1]. At any time if someone is in difficult, they may not have much time, all that key need to do is pressing the volume key. Our system provides an accomplishable, cost-effective solution to problem detection.

[2]Mr. Mageshkumar.S, Mr. Rajkumar.M this project give an alert systems for problem solving using common commercially available electronic devices to both detect the problem and alert control. We use an Android form smart phone with a coherent tri-axial accelerometer. Data from the accelerometer is decided with several threshold based algorithms and set data to control a problem. The threshold is compatible found on user provided parameters such as: weight, height and level of activity [2]. The algorithm change to particular movements that a phone against to similar systems which need users to generate accelerometers to their chest or trunk. If an issue is identified a notification is raised requiring the user’s response. If the user does not respond, the system notify pre-determined social contents with an informative message through SMS. If a contact replays the system take out an audible declaration, spontaneously connects, and allow the speakerphone.

[3] Bashkir Kamal Baishva this paper introduces mobile phone immersed with android based emergency warn button and medical tools – a mobile phone can help us with numerous functions of security applications and medical tools.

[4] Thus, this embedded system will act like a self-doctor which can support us as medical equipment. Usually the mobile phone can be treat as a modern medical tool kit including all the facilities we can accept and also it can use as for managing or investigating the daily regular diseases. The application diseases. The application like home security system considered here can be include with mobile phones is to use every people who always have an uncertainty of

their belongings being safe in the house in their absence. Most of the mobile devices that are producing today in the market are android based. Taking this into mind the applications highly dominant across different mobile devices and different users.

III. METHODOLOGY

The whole execution is carried out on an Arduino Uno along built in microcontroller unit, which is a heart of this proposed system. The project mainly comprises collection of hardware as shown in figure 1 and Live streaming independent camera as shown in figure 2. The system also consists of compact device which can be used like a band by physically disabled person.

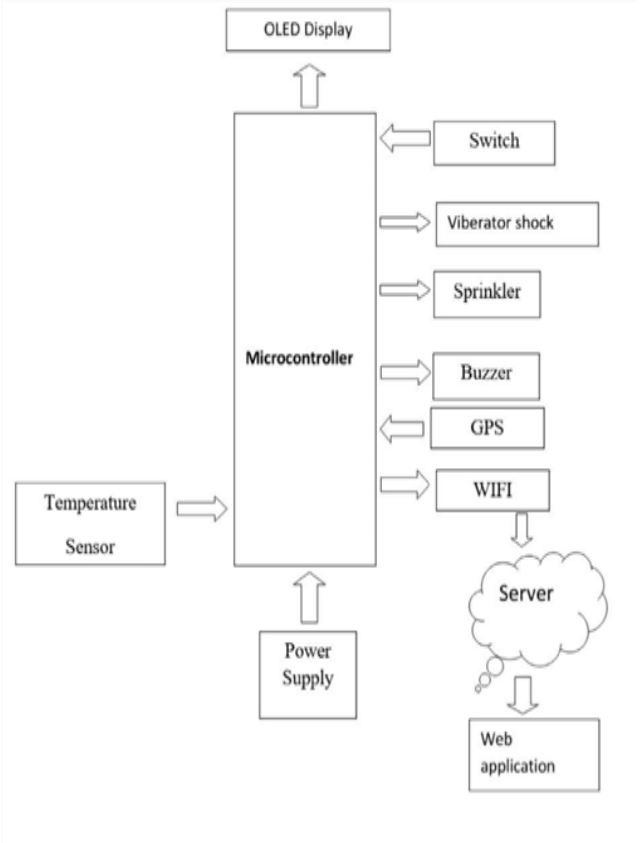

Figure1: Block diagram of proposed system.

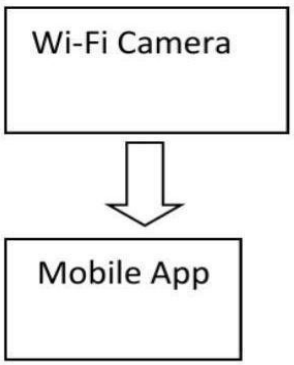

Figure 2: Live Streaming Independent Camera.

The Arduino uno can be activated through the outer power supply or with an USB connection. Outer Power supply can come further from battery or AC to DC adapter. The panel can use an outer supply of 5 to 20 volts. The temperature of physically disabled is measured using temperature sensor, it converts the input data into electronic data. Then sends the live location of endangered person to nearby web application center through GPS and GSM. The Arduino compiler deliver as the freeware implementation tool. The apparatus is initially combined to the Arduino Compiler via Arduino cable. The program is reported in C programming language is run and executed. It's then checked twice for any issues. The device is glutted in and connected to the power supply if there are no problems. Whenever physically challenged persons come into some critical condition or physical violence then simply, they need to press a button provided on the top of the device. As and when that person does the thing, a vessel having the sprinkler sprays harmful chemical will be sprayed on to the face of offender and concurrently a pre-recorded message will be sent via Wi-Fi to the near web application centers regarding the circumstance along with the location via GPS of the area where the physically challenged person is facing the problem. The vibrator shock unit produces shock to the attacker and buzzer with beep sound will be actuated so that the attentiveness of that and come for help for physically challenged person immediately.

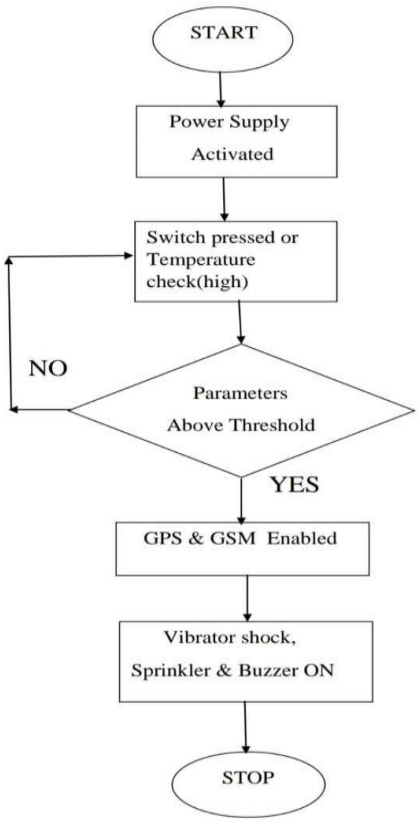

Figure 3: Flow diagram of Smart Intelligence Surveillance for physically disabled person.

IV. HARDWARE REQUIREMENTS:

- Arduino Uno
- Buzzer.
- Push Button Switch.
- GPS.
- Wi-Fi Camera.
- Vibrator Shock Unit.
- Sprinkler Container.
- Wi-Fi Node MCU.
- LCD Display.

V. SOFTWARE REQUIREMENTS:

- Arduino IDE.
- Adafruit IO.

VI. ADVANTAGES:

- It is secure and easy to use.
- Device is portable.
- Uses of Sophisticated component and device has high accuracy.
- It helps physically challenged persons be calm, understanding, flexible, and mind control, be more Responsive than reactive, more observant, and achieve cognitive awareness.

VII. DISADVANTAGES

- Battery is always required.
- Internet connection must be there.

VIII. APPLICATIONS

- It can be used by physically disabled person.
- It can be used by teenage girls, old age people.
- Applicable for Monitoring all hazard and threats.
- The system can be adopted to give security for physically disabled person. Immature teenagers can get benefitted by this.
- It is very much useful for the working women during transportation in cabs/busses who having a night shift.
- For the pick and drop company vehicles.

IX. RESULT

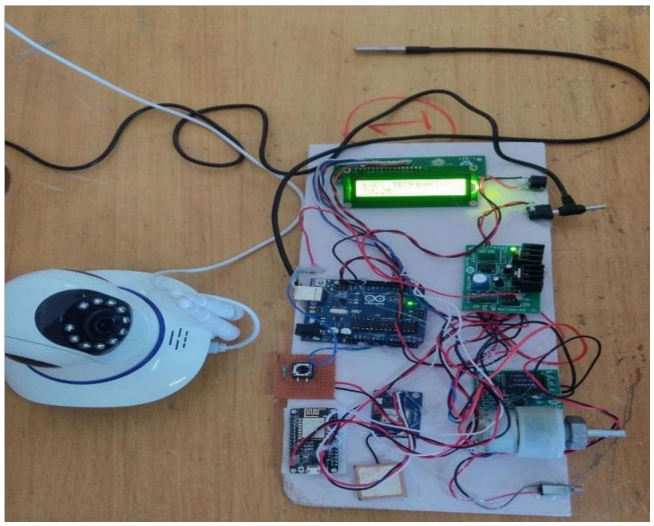

Figure 4: Circuit Setup.

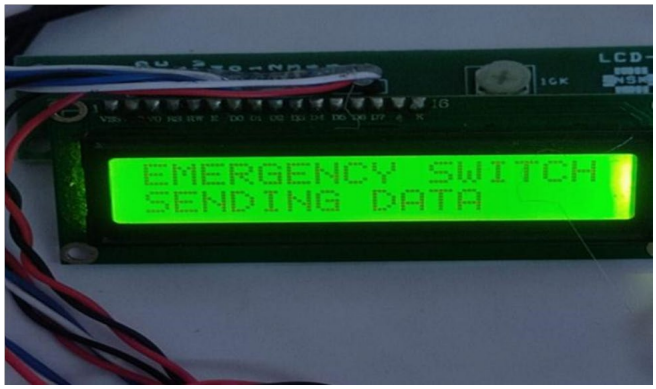

Figure 5: When Push Button is pressed the Emergency Data is sent to Arduino.

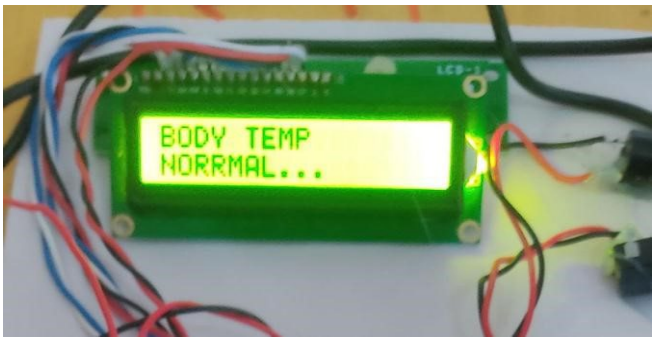

Figure 6: LCD display showing Temperature of Normal Person.

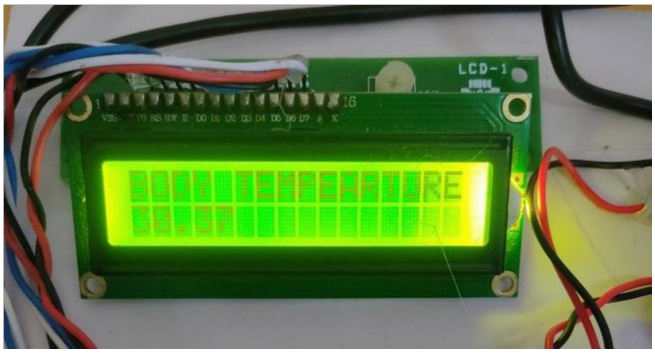

Figure 7: LCD display showing Temperature of Abused Person.

Figure 8: Vibrator Shock

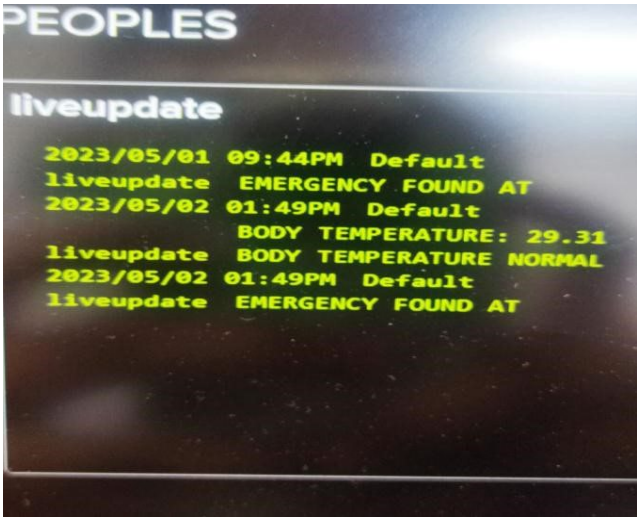

Figure 9: Adafruit IO Dashboard Displays the Live Location of Abused Person and Body Temperature.

VIII. CONCLUSION

Our project idea takes part in pivotal role towards establishing safety to the physically disabled person in the fastest procedure automatically. The suggested design will deal with condemning issues faced by physically disabled person in the recent past and will assist them through technologically accent gadgets. The camera is provided to capture images and document live video. Our project concept enlarges on the idea of conspiring a system that will make each and every place, hour safer for physically disabled person with a single tab of a button, this technology bring alert to local police station, web application centers, close contacts, and people in and around the offence spot. The Arduino ATMEGA is rigged out with a camera and microphone. We can use this to record audio and photographs of people who are in difficult situation, and then trail those details using the GPS and GSM modules. The proposed concept will address noteworthy challenges that physically disabled person has experienced in the recent past and will provide technical solutions to these problems. This technology has the capability to alleviate the worry that every physically disabled person in the country has about their safety and security. The request of the day is to be defend and safeguard. The aim of this project is to design and set up a device that is

so compact that it can give out as a personal security system.

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