IJRASET

International Journal For Research in
Applied Science and Engineering Technology

INTERNATIONAL JOURNAL
FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

www.ijraset.com

Call: ⓒ08813907089 | E-mail ID: ijraset@gmail.com

Monitoring and Prevention of Child Abuse Using IoT

Mrs. P. Chithra[1], Aarthi S[2], Anitha K[3], Angammal R[4], Abinaya D[5]

[1]Assistant Professor, Department of Electronics and Communication Engineering, Agni College of Technology ,Thalambur

[2, 3, 4, 5]Department of Electronics and Communication Engineering, Agni College of Technology, Chennai, India

Abstract: The word future has a similar meaning to the word children. Today's children are tomorrow's youngsters, and it is vital to preserve their dreams and lives for the future, as Dr. A.P.J. Abdul Kalam said, "Youngsters are the future pillars of one's nation." As a result, every parent should look after their own children. Without allowing them to descend into the abyss of abuse. In today's age of digital technology and global computing, everyone is connected to one another in a variety of ways. In today's global computing environment, child and female harassment, chain snatchings, kidnappings, sexual harassments, eve teasing, and other forms of abuse are on the rise, making people feel more scared and powerless.
Keywords: Child abuse , Process of abuse , Digital technology, safety

I. INTRODUCTION

Abuse is a criminal act. Child abuse is a far more serious and punishable act. Criminals are jeopardising not only a child's childhood, but also their productive and attractive adult life. Some children are intelligent enough to flee and avoid becoming victims, while others, despite their intelligence, are powerless. Various people can react to the same scenario in different ways. Abuse has different consequences on two children depending on their physical, psychological, and emotional condition. Recently, child abuse has become a global issue. Every country in the globe has a large number of child abuse cases. It motivates the majority of countries around the world to develop their own private organizations to address the issue of child abuse. They create a child abuse policy while running their business. The presence of technology has recently transformed the way people carry out activities. In the suggested system, GSM, GPS, and a NODE MCU ARDUINO UNO are used. The real-time value is detected using the sensors.

II. OBSERVATION OF THE STUDY

The study of physiological information in conjunction with body posture achieves this goal. Breath and heartbeat are the physiological signs that are studied. Wirelessly transferring sensor data to an open source Cloud Platform allows for real-time data monitoring.

III. LITERATURE SURVEY

Title 1: RFID-based System for School Children Transportation Safety Enhancement
Author: Anwaar Al-Lawati, Asma Al-Belushi
Description: The system is divided into two parts: a bus system and a school system. The system detects when a youngster boards or exits the bus via the bus unit. This information is sent to the school district, which determines which students did not board or exit the bus and sends out an alert message. The system is managed by a web-based database-driven application that delivers useful information about the youngsters to authorized personnel. To validate the system's functionality, a complete prototype of the proposed system was created and tested. The findings indicate that the technology has the potential to improve daily transportation safety

Title 2: Design and Development of an IOT based wearable device for the Safety and Security of women and girl children
Author: Anand Jatti, Madhvi Kannan,P Vijayalakshmi
Description: Analysis of physiological signals in concert with body position is used to attain the goal. Galvanic skin resistance and body temperature are the physiological signals studied. The raw accelerometer data from a triple axis accelerometer is used to estimate body position. Following the acquisition of raw data, activity recognition is performed using a customized machine learning algorithm. Wirelessly transferring sensor data to an open source Cloud Platform allows for real-time data monitoring. The data is analyzed in MATLAB at the same time. This equipment is set up to continuously monitor the subject's vital signs and to intervene if a dangerous scenario arises. It accomplishes this by detecting changes in the monitored signals, and then taking appropriate action by sending notifications/alerts to selected personnel.

Title 3: Child Safety Wearable Device

Author: Akash Moodbidri, Hamid Shahnasser

Description: The main advantage of this wearable over others is that it can be used with any cellphone and does not require an expensive smartphone or someone who is particularly tech adept to use. The goal of this device is to make it easier for parents to locate their children. There are various wearables on the market right now that can track a child's daily activity and also aid locate the child using the device's Wi-Fi and Bluetooth capabilities. However, Wi-Fi and Bluetooth appear to be unreliable communication channels between parents and children. Because the environment for GSM mobile communication is nearly everywhere, the objective of this work is to have an SMS text enabled communication medium between the child's wearable and the parent. The parent can send a text with specific keywords like "LOCATION" "TEMPERATURE" "UV" "SOS" "BUZZ," etc., and the wearable device will respond with a text containing the child's real-time accurate location, which when tapped will provide directions to the child's location on Google Maps, as well as the surrounding temperature and UV radiation index so that the parents can keep track if the child is in danger.

Title 4: Smart Intelligent System for Women and Child Security

Author: Sunil K Punjabi, Suvarna Chaure

Description: The women's and children's security system, which enables for fast replies to any harassment in public areas, societies, and so on. Women are subjected to unethical physical harassment all throughout the world, and children should never be left unattended at a social gathering or outside the home. Both issues are addressed by our project. A pressure switch will be built into a portable device. When an assailant is going to attack the woman/child or detects any insecurity from a stranger, he or she can squeeze or compress the gadget to apply pressure. Instantly, the pressure sensor detects this pressure, and a standard SMS with the victim's location is sent to their parents/guardians' cell phone numbers stored in the device during purchase, followed by a standard SMS with the victim's location sent to their parents/guardians' cell phone numbers stored in the device during purchase, followed by a standard SMS with the victim's location sent to their call parents/guardians' cell phone numbers stored in the device

IV. EXISTING SYSTEM

1) In recent decades, cable-based systems, RF transceivers, walkie-talkies, Zig-Bee, and GSM-based tracking systems have been the most widely utilized approaches for child tracking..
2) However, all of these systems suffered from one or more issues, such as high installation costs, signal loss, high noise, and bulkiness.
3) As a result, a portable, low-cost, wireless tracking device with excellent dependability is urgently needed to protect the child's precious life.

A. Limitations Of Existing System
1) Lack of Immediate medical attention
2) Not get exact geographical location
3) Inability of continuous communication with Parents during emergency condition.

V. PROPOSED SYSTEM

1) Our proposed system is an IOT-based child recue system. This paper focuses on the important issue of how people surrounding a missing child can assist the youngster and play a crucial role in the child's safety and health monitoring until they are reunited with their parents.
2) With the use of a heartbeat and breathing sensor, we can monitor a child's health characteristics using this device. The Arduino UNO Microcontroller is the platform on which this project will run. The Wi-Fi connection is handled by the Node MCU.
3) In some systems, a force sensor is also utilized. Additionally, extra modules were used to convey the current location.
4) The child's present location is tracked via GPS, and latitude and longitude values, as well as health parameters, are monitored in the server.
5) GSM Module also used in these system to send the Alert message.
6) Finally we can design child rescue application using android studio and we are monitored such values in both server and application.

A. *Advantages of the Proposed System*
1) Fast Response
2) Efficient way to alert

## VI. PROPOSED SYSTEM BLOCK DIAGRAM
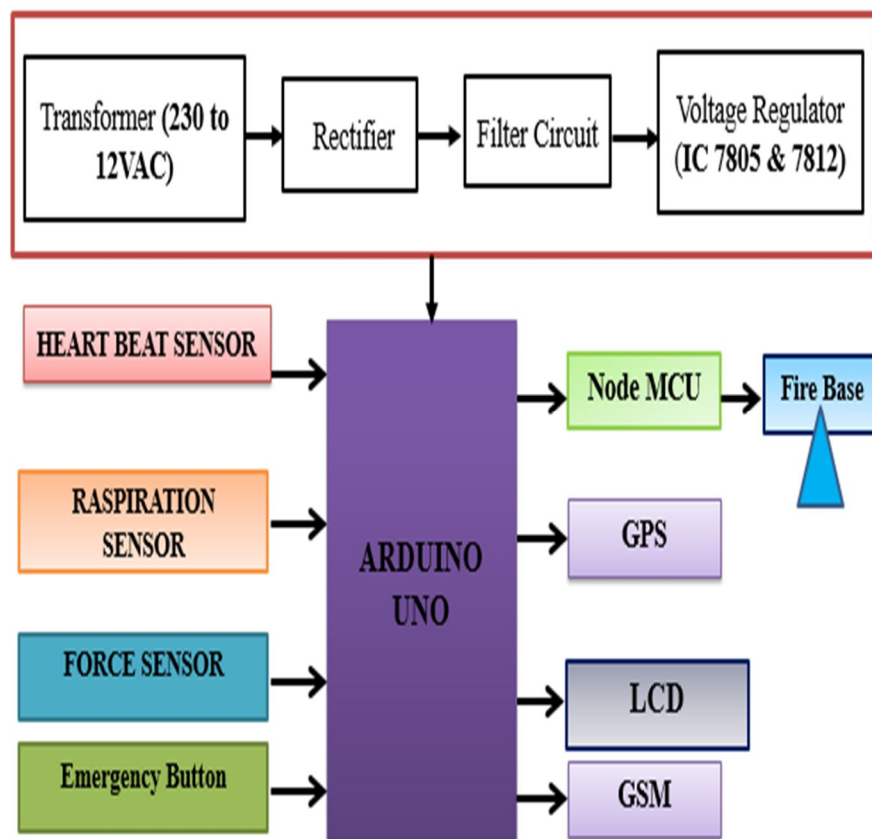
A. *Hardware System Requirements*
1) Microcontroller (Arduino UNO)
2) Electrolytic capacitor 25v
3) Electrolytic capacitor 6V
4) Polyester capacitor
5) 7805 regulator IC
6) LCD 16*2 pin
7) Heartbeat sensor
8) Respiration Sensor
9) Node MCU Module
10) GPS Module
11) GSM Module
12) Push Button

B. *Software Requirements*
1) EMBEDDED C
2) Arduino IDE

VII. RESULT OF THE STUDY

The result of the system of the proposed system and the design is shown below
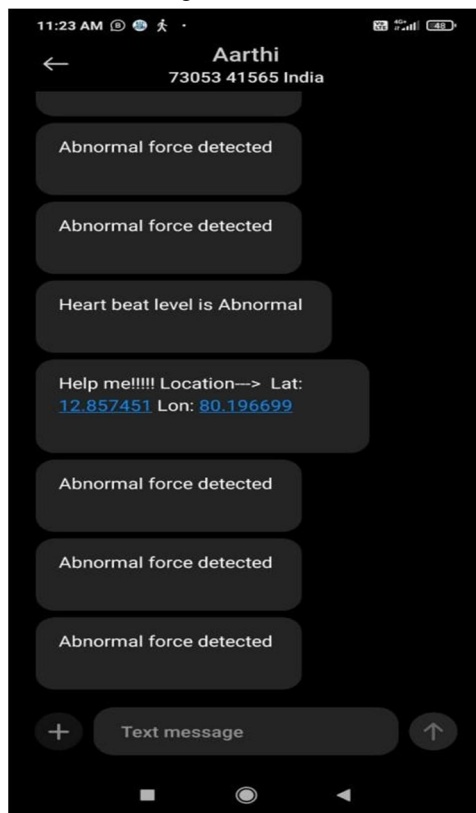
(a) Output Of The Proposed System

(b) Desighn Of Proposed System

VIII. CONCLUSION

As a result, in light of the importance of our future, our project makes it simple for parents to track and visually monitor their children on a frequent basis, allowing them to assure their children's safety and lowering the rate of child abuse events. With the use of GPS, GSM, and Arduino UNO, we can automatically monitor the youngster in real time utilising the Internet of Things. To keep track of the system, it needs network access and GPS.

REFERENCES

[1] J.E.Garcia,R.A.Torres, "Telehealth mobile system ", IEEE Conference publication on Pan American Health Care Exchanges, May 4,2013.

[2] R. Nicc [2] Nitin P. Jain, Preeti N. Jain,and Trupti P. Agarkar, "An Embedded, GSM based, Multiparameter, Real time Patient Monitoring System and Control", IEEE Conference publication in World Congress on Information and Communication Technologies,Nov 2,2013.

[3] Baker Mohammad, HazemElgabra, ReemAshour, and Hani Saleh, "Portable Wireless Biomedical Temperature Monitoring System", IEEE international conference publication on innovations in information technology (IIT), 19 March 2013.

[4] " RFID-based System for School Children Transportation Safety Enhancement ", Proceedings of the 8th IEEE GCC Conference and Exhibition, Muscat, Oman, 1-4 February 2015.

[5] Dr. R. Kamalraj, " A Hybrid Model on Child Security and Activities Monitoring System using IoT", IEEE Xplore Compliant Part Number: CFP18N67-ART; ISBN:978-1-5386-2456-2.

[6] Pooja.K.Biradar1, Prof S.B.Jamge2," An Innovative Monitoring Application for Child Safety", DOI:10.15680/IJIRSET.2015.0409

INTERNATIONAL JOURNAL
FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 ◎ (24*7 Support on Whatsapp)