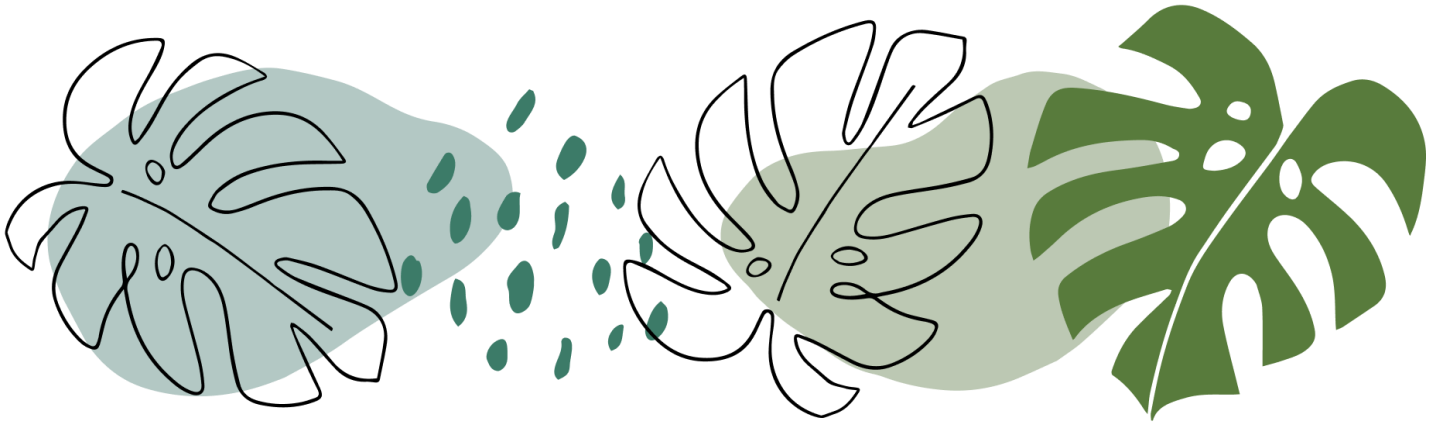

IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

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LITERATURE SURVEY

ABSTRACT:

Child Safety and Tracking Is of Utmost Importance as Children Are the Most Vulnerable. With Increasing Crime Rates Such as Child Kidnaping, Child Trafficking, Child Abuse and So On, The Need for An Advanced Smart Security System Has Become a Necessity. With This Motivation, A Self-alerting "INTELLIGENT CHILD SAFETY SYSTEM USING MACHINE LEARNING IN IOT DEVICES" Is Developed to Aid Parents to Monitor and Track Their Children in Real Time as An Alternate to Stay Beside Them. This System Is Intended as An Everyday Wearable Device on the Child, In the Form of a Wrist Band, Hand Glove, Arm Band or A Belt. The System Is Designed to Continuously Monitor the Location and Body Vitals of Children. This Electronic System Comprises of An Arduino Controller, A Raspberry-pi And Sensors to Detect the Changes in Parameters Such as Temperature, BVP (Blood Volume Pulse) And GSR (Galvanic Skin Response). The System Also Uses A GSM And GPS Module. Decision Tree Classifier Algorithm Is Used to Detect Any Distress Situation with Sensor Values as Inputs. The Location of the Victim Is Traced Using the GPS Module and Is Sent to The Registered Contact Numbers as a Text Message Using A GSM Module. The Novelty Of This Work Lies In The Autonomous decision-making Process With Increased Accuracy.

1.STUDY ON WEARABLE DEVICES FOR THE SAFETY AND SECURITY OF A GIRL

Name of the Author: P. NANDHINI

JOURNAL PUBLISHED:

International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2320-5407

OBJECTIVE OF THE PROJECT:

- **In today's world women are less secure and have many issues regarding their security purpose. This paper describes about safe and secured electronic system for women which comprises of an Arduino controller and sensors such as t temperature LM35, flex sensor, MEMS accelerometer, pulse rate sensor, sound sensor. A buzzer, LCD, GSM and GPS are used in this project. When the woman is in threat, the device senses the body parameters like heartbeat rate, change in temperature, the movement of victim by flex sensor, MEMS accelerometer and the voice of the victim is sensed by sound sensor. When the sensor crosses the threshold limit the device gets activated and traces the location of the victim using the GPS module. By using the GSM module, the victim's location is sent to the registered contact number.**

2.CHILD WEARABLE SAFETY MONTORING DEVICES:

NAME OF THE AUTHOR:

Asghar Pasha, Bi Bi Khatija, M.Shaista Tarannum, K. R. Harris,

Nida Sayedi, Aseema Sultana.

JOURNAL PUBLISHED:

International Journal of Research in Engineering, Science and Management Volume-2, Issue-5.

OBJECTIVE OF THE PROJECT:

- **In this busy world parents have no much time to take care of their babies and women have no much time to take care about themselves so, the world is moving towards smart technology through internet of things. In our project we are implementing and developing adults and child security using IoT. Here, we mainly concentrate on temperature, heartbeat, crying, alerting guardians through smart phone using Iot with the help of raspberry Pi. All Iot sensors have analogue ports and they give output as Analog. In order to interface analog values to raspberry**

Pi Analog to Digital conversion is used. Analog to Digital is a modulation and demodulation process. The different sensors used are Temperature sensor, Heartbeat sensor, Accelerometer and sound sensor. Temperature sensor give values in terms of voltage to IC as 0.35 etc. Heartbeat sensor gives values in terms of pulse PIC microcontroller act as a counter to count Heartbeat rate. Sound sensor gives analog values. Some threshold is set whenever the external value crosses the threshold. It will detect as child / women is crying. Accelerometer detects position depending on the coordinates. It gives result in form of X, Y and Z values. All these values from various sensors are analog values, they cannot be interfaced directly with Raspberry pi. So, Analog to Digital microcontroller is used i.e., PIC 16F877A that converts analogue values to digital form. All these values from various sensors are sent to PIC microcontroller that does all A-D conversions. Finally, the converted values/information are sent by serial communication by single wire to Raspberry pi3. Raspberry pi3 collects all data from PIC controller and upload it to server. Server used is thing speak cloud. That could be used to monitor health and safety of child/women. The device has two modes. Child mode and women mode. One can easily set the mode to 0 or 1. 0 is child mode and 1 is women mode. The system has lithium-ion battery which is used for power supply with minimum discharge rate. It also has pi camera that is used to capture image of the people in front or the situation. There is an emergency switch which can be pressed manually either by child or women. When an emergency switch is pressed buzzer is activated which is used to alert nearby people so that they can come to the child/women rescue. Depending on the conditions set parents/guardian are notified via SMS and e-mail. SMS through Twilio could be sent along with details of temperature. Heartbeat rate and position of the ward. Email is also sent simultaneously along with the images and other data. Location is also sent in both SMS and e-mail with longitude and latitude values to parent/guardian.

3.INTELLIGENT CHILD SAFETY SYSTEM USING MACHINE LEARNING IN IOT DEVICES

AUTHORS:

Aparajith Srinivasan, Abirami S, Divya N

PUBLISHED YEAR: 2020

OBJECTIVE OF THE PROJECT:

An intelligent system designed with an Arduino, Raspberry Pi and sensors to detect changes in parameters like temperature and GSR (Galvanic skin response). It makes use of autonomous decision-making process to improve accuracy.

4.CHILD SAFETY WEARABLE DEVICE

AUTHORS

Akash Moodbidri, Hamid Shahnasser

PUBLISHED YEAR: 2017

OBJECTIVE OF THE PROJECT:

A GSM based two-way communication system, with the ability to track the exact location of the child via google maps. Also contains - SOS Light & a distress alarm to seek help from bystanders

THANKING YOU!!!!!!