LITERATURE REVIEW

Safety gadget for child safety monitoring & notification

PAPER 1:

TITLE: Design of wearable device for child safety

AUTHOR NAME: M Benisha , R Thandaiha Prabu

PUBLICATION YEAR:2021

DESCRIPTION:

Attacks on children are on the rise at a never-before-seen rate, and the victims are often kept in perilous situations without access to family members. The main concept in this research project is the development of cutting-edge technology that provides "Smart Child Safety" for kids. In order to make parents and guardians aware of this strategy, children's wear devices are used to send an SMS. The current system has no way to supervise children, which might cause them a lot of difficulties. It also has no safeguards in place to keep kids from misbehaving. Additionally, there is no automatic equipment to protect the infant; all work must be done by hand. As a result, the intended approach will be far more successful than the victims' assistance methods currently in use. Additionally, it doesn't require any manual labour. In order to prevent the children from feeling abandoned when dealing with such societal issues, this study suggests a cutting-edge solution for kid protection employing GSM. Using the Arduino UNO, GSM, sensors, MEMS, temperature, and panic button via IOT, the issues here became overwhelming. Heartbeat Sensor uses the GSM to save contacts in this situation to send an emergency message at the best rate for children. In the modern world, such an approach is genuinely beneficial for youngsters. As a result, this gives the kids security and secures the parents' feelings.

PAPER 2:

TITLE: IoT Based Smart Gadget for Child Safety and Tracking

AUTHOR NAME: N. Manjunatha, H. M. Jayashree , N. Komal , K. Nayana

PUBLICATION YEAR:2020

DESCRIPTION:

This study focuses on designing a device that can track a child's whereabouts using GPS, as well as having a panic button that can warn the parent by using a GSM module to call for help. Android parental software is created to control and track the device at any time. Smart gadget device is always linked to parental phone, which can receive and make calls as well as send and receive SMS on gadget via GSM module. Wireless technology is also implemented on device, which is useful to bind the gadget within a region of monitoring range; if gadget moves out of monitoring range, alert will be triggered on binding gadget, helping you keep a virtual eye on child. Health monitoring system on gadget checking for parameters like heart beat/pulse rate and temperature is included which can be monitored on parental app. Gadget also monitors whether it is plugged on hand or not using contact switch and alert the parent as soon as it is unplugged.

PAPER 3:

TITLE: Safety Device for Children Using IoT and Deep Learning Techniques

AUTHOR NAME: Rajalakshmi. S, Angel Deborah. S, Soundarya. G, Varshitha.V, Shyam Sundhar. K

PUBLICATION YEAR:2021

DESCRIPTION:

In the modern era, children's safety and security are a serious issue. The kids aren't old enough to look after themselves. We are unable to constantly watch over the kids at the playground, school, and other outdoor areas. In this essay, we talk about the idea of a connected child safety device. By enabling the parent to find the child and see their surroundings, this technology aims to ensure the youngster's safety. The temperature and movement of the infant can be monitored using this device. The GSM mobile communication module automatically sends a text message to the parent via SMS if any issue continues. The device also has an alert buzzer and an emergency light. The motion of the child is detected using the accelerometer and

vibration sensors. The camera is used to document the child's surroundings. Convolutional neural networks (CNN) are used to process the captured image and forecast the background, such as a playground, railroad station, beach, road, or school. The GPS module is used to record the device's current location, which can be used to find it if a child goes missing. Therefore, in today's world, this technology offers a child a sense of security.

PAPER 4:

TITLE: Securing the kids: Geofencing and child wearables

AUTHOR NAME: James N Gilmore

PUBLICATION YEAR: 2019

DESCRIPTION:

This article offers a critical evaluation of the Jiobit child wearable location monitoring system, which enables parents to keep an eye on how their children navigate their surroundings. I specifically highlight the Jiobit's integration of geofencing features, which let users programme "fences" on a paired smartphone application and receive notifications when a Jiobit wearer enters and leaves the "fenced" areas, to show how the device's operations are a part of a cultural politics that values the tracking of kids through a variety of technological and infrastructural processes. The device and its smartphone app were examined for artifice, and the company's marketing materials were also looked at. I show how the concept of "securitization" is used to persuade parents to give this device some of the responsibility of keeping an eye on their kids. This artifactual analysis is combined with a discursive analysis of the company's policy documents, which openly admit Jiobit's limitations as a security system while also describing the ways in which the data extraction is stored for an indefinite amount of time and, in some cases, disclosed to outside parties. Through this case study of Jiobit, I make the case that critical analyses of wearable technologies should pay attention to the ways that their manufacturers promise "security" and the ways that "security" serves as an excuse for ongoing data collection.

PAPER 5:

TITLE: Child Tracking System using GPS

AUTHOR NAME: Linda John Aiswaria S M Nourin Fathima K H

PUBLICATION YEAR: 2019

DESCRIPTION:

Children's safety is very poorly protected in the current environment. This model puts parents who are concerned about the safety of their children at ease. Using our system, we can give tracking at all times. This essay suggests a system using an Android phone and a smart watch to ensure children's safety both inside and outside of the school's walls. Parent will receive an SMS containing the current location. The geofence might be fixed by the principal or a higher authority. This application ensures that the child's present location is monitored and shared with the parents, along with the distance from the child's present location to the school. When there are no internet services, SMS services still function. By communicating the child's current location to the parents without their knowledge, Google Maps assists the parents. The parent's phone will receive a notification when the child steps beyond the fence, and it will quickly compute their distance from the school. When they enter a risk zone, the map will show the locations of the closest police station. In this application, administrators can designate their own Geo-reference boundaries. To display a location on a map, this application uses the Google Maps API.

PAPER 6:

TITLE: Securing the kids: Geofencing and child wearables

AUTHOR NAME: T. Bhanu Priya , Dr. T. VP. Sundararajan2

PUBLICATION YEAR: 2018

DESCRIPTION:

The Internet of Things is a network made up of several physical objects, including machinery, cars, electronic components, software, sensors, actuators, etc. It primarily enables these devices to link these objects effectively and intelligently in order to gather the data and communicate it in a purposeful manner. In the year 1999, Kevin Ashton initially used the term "IOT." The architecture of the existing network can be sensed and connected to remotely using Internet of Things (IOT) associates. Due to the convergence of numerous technologies, such as ubiquitous wireless communication, real-time analytics, sensors, embedded systems, etc., the important IOT vision has evolved. It is a technology that makes it possible to sense or control items remotely using a network architecture that already has many devices attached to it. The Activity Tracker-equipped kids are continuously under observation thanks to GSM and IOT monitoring. The system has sensors that are connected to the processor and continuously sense important signals like heart rate, temperature, etc. Therefore, parents may receive a warning if such dangerous scenarios happen. Each child's safety distance can be set by the parent, and if it is crossed, the system will sound an alarm for the parent as well as the child. Unfortunately, when a youngster enters a prohibited area—say let's a school zone—due to harassment, the system immediately notifies the parents and the closest police station of the situation's development.