IOT Based Safety Gadget for Child Safety Monitoring and Notification

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LITERATURE SURVEY:

M Nandini Priyanka Published on "International Journal of Innovative Technology". As more crimes against children are reported nowadays, child safety and tracking is a major concern. With this motivation, a smart IoT device for child safety and tracking has been developed is designed to assist parents in locating and monitoring their children. The system is built with the LinkIt ONE board programmed in embedded C and linked to a temperature sensor heartbeat, touch sensors, GPS, GSM, and digital camera modules. The work is unique in that the system automatically When an emergency situation arises, the parent/caretaker is notified via SMS. During an emergency, the child requires immediate attention. The parameters such as the child's touch, temperature, and heartbeat are used for parametric analysis, and the results are plotted same. The system described above ensures safety and tracking.

Lai Yi Heng published on "3 rd. International Conference". Nowadays, the crime rate associated with children is increasing, which draws people's attention to child safety. This study is being carried out in order to propose a child security smart band that makes use of IoT technology. Data collection methodologies include online questionnaires and semi-structured interviews. The online questionnaire collects feedback by sending questions electronically and requiring answers to be submitted online. In a semi-structured interview, the researcher meets with respondents and asks them predetermined questions, while other questions are not planned in advance. A smart band has been proposed to monitor the safety of children based on the information obtained. This allows parents to monitor what is going on remotely and take action if something goes wrong. This device's future enhancements will include the addition of functions and software to make it more useful.

N. Manjunatha published on "International Journal of Research in Engineering, Science and Management ".This paper is primarily focused on child safety solutions by developing a gadget that can be tracked via its GPS locations, as well as a panic button on the gadget that can alert the parent via GSM module calling for help. The parental android app was created to manage and track the device at all times. Smart gadget device is always connected to parental phone, which can receive and make phone calls as well as receive SMS on gadget via GSM module. A wireless technology is also implemented on device, which is useful to bind the device within a region of monitoring range, if device moves out of monitoring range, an alert will be triggered on binding gadget, which helps you keep a virtual eye on child. On-device health monitoring system Checking for parameters such as heart rate/pulse rate and temperature is included and can be tracked via the parental app. The gadget

also monitors whether it is plugged in or not using a contact switch and notifies the parent if it is unplugged.

Mr. Raghavendrachar S published on “Ijraset Journal For Research in Applied Science and Engineering Technology”. Attacks on children have increased at an unprecedented rate in recent years, leaving victims in perilous situations with few options for contacting their families. The primary goal of this project is to develop a smart wearable device for children that uses advanced technology to keep them safe. As a result, this strategy is perceived as sending an SMS to the children's parents or guardians from their wearable. This project uses cutting-edge technology to protect the child by utilising a GSM module, ensuring that the child does not feel abandoned while dealing with such social issues. The wearable will include an Arduino Nano, GSM, GPS, temperature sensor, heartbeat sensor, and a panic button. The heartbeat sensor continuously monitors the child's heart rate and sends it to the guardian. The accelerometer detects and alerts the parents if the child falls unexpectedly. As a result, the parent feels more secure.

P.Poonkuzhlai published a paper in which the paper contains, the design and implementation of a portable IOT-based safety and health monitoring system for children using a sensor embedded health monitoring device for safety and emergency services is presented in this paper. It is well known that technological advancements are accelerating. However, technology adoption in various sectors is extremely low. We all know that people of different ages face different challenges. However, children's security is extremely low. A large number of cases involving child safety have been reported. Nowadays, schools and parents are very concerned about their children's transportation to and from school and other places. As a result, ensuring the safety and monitoring of schoolchildren is extremely difficult. This project introduces an IOT-based embedded system that is used in this project. As a result, we propose a system that continuously monitors the child's parameters as well as their location for safety purposes. The system includes an intelligent child tracking and monitoring system.

Biswajit Das prepared his article on the topic “IoT Based Notification System Using Android App”. A smart notification system for a door sensor, motion detector, fire alarm, and doorbell is presented here using Raspberry Pi (RPi) and the Pushover app. The project detects an event and sends notifications to your smartphone via various sensors. A magnetic reed switch for a door or window, a PIR sensor for motion detection, and an NTC thermistor for fire alarm are among the sensors used in this project. Security is becoming increasingly important. Sensors in IoT-enabled home security solutions like this one collect and share data from multiple edge devices. If an attacker gains malicious access to these smart systems, the underlying functional logic of control systems can alert the owner. A variety of features are available with connected home security systems. Connected home security systems include a plethora of features such as door and window sensors, motion detectors, and fire alarms, all of which are linked via the Cloud to a mobile device or the Web.

Dr. Bhawna Suri published on” International Conference on Computing, Communication and Automation (ICCCA2017)”. With the implementation of cloud connectivity to security devices, the Internet of Things (IoT) is governing the era of modern security systems. IoT has been a focus of research in recent years. With the help of IoT, security systems were efficiently implemented. The Internet of Things (IoT) keeps security devices connected and provides a stable interconnection between them. In emergency situations, our proposed system combines the features of an Alert System and IoT to provide a less expensive and smarter alert system. It employs Radio Frequency

(RF) detectors to detect the distinct combination of RF signals emitted by commonly available RF transmitters. With the help of the Raspberry Pi, signals are processed and alerts are generated. This will be less expensive and simpler to implement system.

S. Gnanapriya published a paper.In this paper, a new system for protecting two-wheelers from theft is proposed. This system is an attempt to create an advanced vehicle security system that can prevent theft and pinpoint the exact location of the vehicle. The vehicle's safety is extremely important. As a result, the system is built with GPS and GSM technology. Preventive measures such as ignition cut-off and fuel theft detection are installed in the vehicle, which is controlled by a GSM mobile phone. This system is accessible via a mobile application. Using the command received from the application, the system goes live, and all sensors are activated. The sensors constantly monitor the vehicle, and any change in readings sends an alert to the user application via GSM. There is an emergency button on the phone that sends information about the stolen vehicle to the police database.

With the rapid advancements in sensors and embedded systems, automated technology is assisting us and making our lives easier in every way. The Internet of Things (IoT) is a new emerging technology in the automation field that provides a communication paradigm for devices in all areas of life, such as military, healthcare, and so on, via the internet. Everyone's life is so hectic in today's competitive world that no one has time for anything. To make the busy life easier, an IOT-based reminding tool is proposed, which assists him/her in managing their time effectively for picking up objects such as remotes, mobile phones, keys, and so on.This paper proposes an IOT-based smart object picker for the elderly and people with disabilities. This proposed model is divided into two parts. The first is an object picker device, and the second is an object sensor board. To sense or pick the desired object, the user sends control signals or input data commands to the object sensor board via the internet or a mobile-based Android app. An arduino board is used as a sensor board, which is connected to objects such as keys or remote controls and responds to the object picker with a led light or buzzer sound. The developed system can also be used to remotely monitor home appliances using internet-connected devices from anywhere and at any time.

P. Nandhini published on “International journal of advanced research”. From birth to death, children and women play critical roles in our society. Crime against children and women has risen dramatically in recent years. They are dealing with numerous insecurity issues. We hear more about women's misfortunes than their accomplishments. One of the most heinous violations of human rights is the trafficking of women and children. However, estimating the scale of the phenomenon is difficult because trafficking is closely linked to child labour, bonded labour, child marriage, kidnapping and abduction, and prostitution, even though these phenomena can exist independently of trafficking. In such situations, they are helpless and have no way of protecting themselves or informing family members, neighbours, or the police station, and they feel handicapped. To address such issues, several apps and smart security systems, such as an armband, bracelet, jacket, smart toy, smart watch, and wristband, are being implemented for both children and women. This survey paper examines various techniques and systems proposed by various researchers, as well as the benefits and drawbacks of those systems. We proposed a new system based on IOT to overcome the shortcomings of existing systems.