

# **IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING & NOTIFICATION**

## **TEAM DETAILS:**

### **Team Leader:**

- **Yogashree MD, Department of ECE**

### **Team Members:**

- **vanmathi S, Department of ECE**
- **Vishnupriya V, Department of ECE**
- **Viswabharathi S, Department of ECE**

## **Project Info:**

### **System Required:**

RAM-Minimum 4GB Processor-Min. Configuration OS-  
Windows/Linux/MAC

### **Description:**

Child tracker helps the parents in continuously monitoring the child's location. They can simply leave their children in school or parks and create a geofence around the particular location. By continuously checking the child's location notifications will be generated if the child crosses the geofence. Notifications will be sent according to the child's location to their parents or caretakers. The entire location data will be stored in the database.

## Literature Survey:

- ✓ M Nandini Priyanka, Smart IOT Device for Child Safety and Tracking and Exploring Engineering (IJITEE) "International Journal of Innovative Technology".

Child safety and tracking is a major concern as the more number of crimes on children are reported nowadays. With this motivation, a smart IoT device for child safety and tracking is developed to help the parents to locate and monitor their children. The system is developed using LinkIt ONE board programmed in embedded C and interfaced with temperature, heartbeat, touch sensors and also GPS, GSM & digital camera modules. The novelty of the work is that the system automatically alerts the parent/caretaker by sending SMS, when immediate attention is required for the child during emergency. The parameters such as touch, temperature & heartbeat of the child are used for parametric analysis and results are plotted for the same. The above system ensures the safety and tracking of children.

- ✓ Lai Yi Heng, IoT-based Child Security Monitoring System, Asia Pacific University of Technology and Innovation, Technology Park, Bukit Jalil, Kuala Lumpur, Malaysia.

Children's involvement in crime is on the rise today, which makes people more concerned about child protection. The goal of this research is to suggest an Internet of Things-based smart band for child safety. Data collection techniques include semi-structured interviews and online questionnaires. By providing questions electronically and requiring respondents to submit their responses online, the online survey collects feedback. In a semi-structured interview, the researcher meets the respondents and poses some preset questions while posing others that were not before thought of. A smart band has been proposed to monitor children's safety based on the information obtained. Parents can take action if something goes wrong because they are aware of what is going remotely thanks to this. In the future, this device will be improved by adding features and software to create.

- ✓ Mr. Raghavendrachar S, Wearable Safety Device for Children, Published by ijraset in the year of 2022-04-13.

In recent years, attacks on children have increased at an unprecedented rate, leaving the victims in dangerous situations with little opportunities to contact their relatives. The major objective of this project is to develop a child-safe smart wearable device that makes use of cutting-edge technologies. This tactic is therefore seen as the children's wearable sending an SMS to their parents or guardians. Through the use of a GSM module, this initiative uses cutting-edge technology to protect the child, making sure that they do not feel alone as they cope with such societal difficulties. The wearable will have an Arduino Nano, GSM, GPS, temperature sensor, heartbeat sensor, and a panic button.

- ✓ Kaushik Gupta, Child Monitoring System – TAGSY, Student, Department Of Information Technology, Thakur Shyamnarayan Degree College, Mumbai, Maharashtra, India in the year of april 2022.

Today's environment is dependent entirely on technology, thus author ought to be ready to address any issue with contextually appropriate IT solutions. This concept suggests a clever Internet of Things-based gadget that can lessen parents' anxiety over knowing the whereabouts of their kids in real-time. The project's goal is to develop a system that will enable parents to monitor their kids when they aren't in their immediate care. This is accomplished by having the child wear a covert WFPS-enabled device that is linked to the parents' smartphone over a mobile network. This child monitoring device enables remote monitoring or tracking of the youngster and their activities. This mechanism has a crucial function. It keeps tabs on the kids' security.

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

In order to improve child safety during everyday transit to and from school, this paper describes a system to track pick-up and drop-off of school children. The bus unit and the school unit are the two basic components of the system. When a child enters or exits the bus, the equipment on the bus can detect it. This information is given to the school department, which determines which of the kids missed the bus or got off early and sends out an alert message in response. A web-based database-driven application that was designed for the system facilitates management and gives authorised individuals relevant information about the kids. To verify the functionality of the suggested system, a full prototype was created and put to the test.

- ✓ Prakriti Agarwal, Survey on Child Safety Wearable Device Using IoT Sensors and Cloud Computing, International Journal of Innovative Science and Research Technology, february 2020.

Due of a child's fragility and the greater prevalence of crimes against children, child safety is a key concern in any community. In order to help parents assure their children's safety, a smart wearable Internet of Things sensor network for tracking a child's environment can be created. Additionally, a method for tracking the child must be included. The fact that this wearable device can be accessible from any mobile device and doesn't require a lot of technological expertise from the user to use is a benefit of its design. This device's objective is to make it easier for a parent or guardian to find their child and ensure their well-being.

- ✓ N. Manjunatha, IoT Based Smart Gadget for Child Safety and Tracking, International Journal of Research in Engineering, Science and Management Volume-3, Issue-6, June-2020.

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.

- ✓ Dipali Badgujar, Smart and Secure IoT based Child Monitoring System, INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY.

IOT is continually improving, and at the same time, its security is improving. In this proposed system, the primary focus is on child remote monitoring. We also use radar devices and obstacle sensors to detect alerts when children enter danger zones or are approaching dangerous objects. Alerts are then sent to the caregiver via mobile device in the form of an alarm or notification. We use a basic necklace that is handed to the baby for sensing purposes, with a waterproof ultrasonic obstacle sensor installed inside of it so that the locket may inform the caregiver via a mobile device, and a solar panel for battery backup.

- ✓ Mohammad Jahangir Alam, Child tracking and hidden activities observation system through mobile app, Indonesian Journal of Electrical Engineering and Computer Science, June 2021.

Information technology is causing the world to change quickly, and everyone is working hard to keep up with this race through their employment and businesses. Nowadays, parents spend more time at work than they do at home, yet they are constantly concerned and afraid for their kids because of the misuse of technology and the law and order situation in the nation. In order to relieve their burden, parents want to be able to follow and monitor their child's whereabouts and activities from any location. But due to a variety of factors, it is not always possible for parents to personally watch over their children. This study outlines a technology that will enable parents to track their kids' whereabouts and activity using a mobile phone.

- ✓ Digambar Jadhav, Missing Person Detection System in IoT, 2017 International Conference on Computing, Communication, Control and Automation (ICCUBE).

The rate of missing persons has increased as a result of India's rapid economic expansion. India needs to pay special attention to finding the missing and recognising them in order to reduce the number of people who go missing. The Internet of Things (IoT) is a collection of mechanical, electronic, and human devices that are linked together and equipped with the ability to share data. The Internet of Things (IoT) is a network of sensors where data is transferred over a system without the need for any type of human-to-human or human-to-PC connection. We suggest an innovative IoT platform for missing person detection. The suggested structure would be implemented over the entire smart city or region. This framework allows for the identification of missing people, the transmission of live photographs of those who have been found missing.