

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

## **INTRODUCTION**

The Internet of things (IoT) refers to the set of devices and system that stay interconnected with real-world sensor and to the internet. During years' Child safety is under threat and it is very important to provide a technology-based solution which will help them under panic situations and monitor them using a smart gadget. The proposed system is equipped with GSM and GPS modules for sending and receiving call and SMS between safety gadget and parental phone, the proposed system also consists of Wi-Fi module used to implement IoT and send all the monitoring parameters to the cloud for android app monitoring on parental phone. Android application can be used to track the current location of safety gadget using its location coordinates on parental phone android app and also via SMS request from parent phone to safety gadget. Panic alert system is used during panic situations and automatic SMS alert and phone call is triggered from safety gadget to the parental phone seeking for help and also monitored for plug and unplug from hand, as soon the gadget is unplugged from hand a SMS is triggered to parental phone and the alert parameter is also updated to the cloud.

## **LITERATURE REVIEW**

[1] The system is developed using Link-It 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.

**Advantages:** The parameters such as touch, temperature & heartbeat of the child are used for parametric analysis and results are plotted for the same.

**Disadvantages:** To implement the IoT device which ensures the complete solution for child safety problems.

[2] The purpose of this device is to help the parents to locate their children with ease. At the moment there are many wearable's in the market which helps to track the daily activity of children and also helps to find the child using Wi-Fi and Bluetooth services present on the device.

**Advantages:** This wearable over other wearable is that it can be used in any phone and it is not necessary that an expensive smartphone is required and doesn't want to be very tech savvy individual to operate.

**Disadvantages:** As, this device's battery gives short life-time. High power efficient model will have to be used which can be capable of giving the battery life for a longer time.

**Algorithm:** Machine learning algorithm.

[3] This method proposed a model for child safety through smart phones that provides the option to track the location of their children as well as in case of emergency children is able to send a quick message and its current location via Short Message services.

**Advantages:** The advantages of smart phones which offers rich features like Google maps, GPS, SMS etc.

**Disadvantages:** This system is unable to sense human behavior of child.

[4] This method provides an Android based solution for the parents to track their children in real time. Different devices are connected with a single device through channels of internet. The concerned device is connected to server via internet. The device can be used by parents to track their children in real time or for women safety. The proposed solution takes the location services provided by GSM module. It allows the parents to get their child's current-location via SMS.

**Advantages:** A child tracking system using android terminal and hoc networks.

**Disadvantages:** This device cannot be used in rural areas.

[5] This is proposed for youngster security and following, created to assist guardians with observing and find their kids. This framework is constructed utilizing LinkIt ONE board that is encoded in implanted C language and is likewise interfaced with different sensors, an advanced camera, GSM and GPS functionalities. The framework is intended to consequently alarm the watchman/parent by sending SMS when quick consideration is required during a crisis.

**Advantages:** Tracking of missing kids can be made easily. Short response time and high accuracy.

**Disadvantages :** Gadgets release a form of radiation referred to as Electro Magnetic Frequency (EMF), which has been cited as a form of carcinogen—a substance capable of causing cancer in living tissue. High Cost but once it is implemented the expenses can be reduced.

**Algorithm :** k nearest neighbour, artificial neural network, support vector machine, and kernel Fisher discriminant.

## REFERENCES

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