

# **IoT Based Safety Gadget for Child Safety Monitoring and Notification**

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## **LITERATURE SURVEY**

### **1. Design of Wearable Device for Child Safety**

The key idea planned in this research work is an advanced technology that offers “Smart Child Safety” for the children. Therefore, the awareness of this method is to send an SMS from children’s wear tool to their parent or guardian. In the prevailing structure, there is no monitoring method for child, it should create many problems for them and the no protection mechanism to protect the child from the misbehavior. In addition, there is no aware device for the child’s protection; it must be completed by hand only. Thus, the planned method will be highly effective when compared to the other existing techniques in helping the victims. Moreover, it doesn’t need any manual operation. This paper recommends a newfangled technology for child protection by using GSM so that the children will not feel abandoned while facing such social problems. The problems overawed here using Arduino UNO, GSM, sensors, MEMS, temperature and panic button by using IOT. In such case, Heartbeat Sensor track the best rate for children and sends the emergency message by using the GSM to save contacts. Such method is actually supportive for children in today’s world. Hence, this provides a security to the children and secures the feeling of parents.

### **2. Smart Child Safety Wearable Device**

Child security is the foremost common issue emerging around the world. There are numerous issues to youngster security and this work primarily manages kid security from the dangers like missing, abducts. The Technical point of this task is to have an ordinary correspondence between the kid and parent through the gadget which helps in finding the area, pulse and temperature of the kid utilizing the gadget empowered with the pulse sensor, temperature sensor and GPS tracker. This gadget empowers association between the youngster and parent through the WIFI module cooperation utilizing IoT. The parent can get to the kid data intermittently by interfacing through this gadget. This makes guardians defend youngsters even in their nonattendance. The data is stored into a cloud permanently to keep the track record of old data of the children for further reference. The sensors are activated automatically when they are subjective to the miscellaneous activities.

### **3. Intelligent Child Safety System using Machine Learning in IoT Devices**

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.

### **4. A Hybrid Model on Child Security and Activities Monitoring System using IoT**

In real world, the children safety is a huge question mark in everyone's mind. Parents always expect their children should live in a secured place where they can spend their time and mind without any problem. But, typically half of them are facing so many issues. This issue can be monitored by using IoT components and sensors to check in the child environment whether people with unaccepted behavior are moving. If children close with them, then the system has to give an alert message that someone stands with the child. By tracing the locations of the children, the parents can able locate where the problem is and how they can help the child from such issues. The Alcohol and Smoke Gas Sensor are recommended along with Blood Pressure sensor to check whether the child in any abnormal conditions. By measuring the different input data and taking appropriate decisions may help the people to save the children.