

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

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### **Paper 1: Smart IOT Device for Child Safety and Tracking**

Child safety and tracking is a major concern as the 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 an 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.

### **Paper 2: Child Safety Monitoring System Based on IoT**

The overall percentage of child abuse cases filed nowadays in the world is about 80%, out of which 74% are girl children and the rest are boys. For every 40 seconds, a child goes missing in this world. Children are the backbone of one's nation, if the future of children was affected, it would impact the entire growth of that nation. Due to the abuse cases, the emotional and mental stability of the children gets affected which in turn ruins their career and future. These innocent children are not responsible for what happens to them. So, parents are responsible for taking care of their own children. But, due to economic conditions and the aim to focus on their child's future and career, parents are forced to crave for money. Hence, it becomes difficult to cling on to their children all the time. In our system, we provide an environment where this problem can be resolved in an efficient manner. It allows parents to easily monitor their children in real time just like staying beside them as well as focusing on their own career without any manual intervention.

### **Paper 3: IoT-based Child Security Monitoring System**

Nowadays, the crime rate associated with children keeps increasing due to which draws people's attention regarding child safety. This research is conducted to propose a child security smart band utilizing IoT technology. Online questionnaires and semi-structured interviews are methodologies used to collect data. The online questionnaire gains feedback by sending questions electronically, where answers need to be submitted online. In the semi structured interview, researchers meet and ask respondents some predetermined questions while others being asked are not planned in advance. Through information obtained, a smart

band has been proposed to monitor the safety of children. By this, parents know what is happening remotely and can take actions if something goes wrong. The future improvements of this device will be adding functions and software to make it works like a phone such as messaging, gallery, Google, YouTube, meanwhile, adding more child security features so that child safety is guaranteed.

#### **Paper 4: IOT Based Smart Gadget for Child Safety and Tracking**

This paper is mainly streamed towards child safety solutions by developing a gadget which can be tracked via its GPS locations and also a panic button on gadget is provided to alert the parent via GSM module calling for help. Parental android app is developed to manage and track the device anytime. Smart gadget device is always connected to parental phone which can receive and make phone calls and also receive SMS on gadget via GSM module, also a wireless technology is implemented on device which is useful to bound the device within a region of monitoring range, if device is moving out of monitoring range then an alert will be triggered on binding gadget, this helps 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 by hand or not using contact switch and alert the parent as soon as it is unplugged.