

IoT Based Safety Gadget for Child Safety Monitoring and Notification

INTRODUCTION:

The main aim of this project is to provide safety to child using smart IT wearable gadget and android application. The Internet of Things System (IoT) refers to set of devices and systems that stay interconnected with real-world sensors and actuators to the Internet. The motivation for this wearable comes from the increasing need for safety for little children in current times as there could be scenarios of the child getting lost in the major crowded areas. The proposed system focuses on the key aspect that the lost child can be helped by the people around the child and can play a significant role in the child's safety until reunited with the parents. In this project we use SMS as the mode of communication between the parent and child's wearable device.

LITERATURE REVIEW:

[1] Authors: M Nandini Priyanka, S Murugan, K. N. H. Srinivas, T. D. S. Sarveswararao, E. Kusuma Kumari.

Title: Smart IoT Device for Child Safety and Tracking.

Published in: 2019 IEEE.

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] Authors: Akash Moodbidri, Hamid Shahnasser

Title: Child safety wearable device.

Published in: 2017 IEEE.

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.

[3] Authors: Aditi Gupta, Vibhor Harit.

Title: Child Safety & Tracking Management System by using GPS.

Published in: 2016 IEEE.

This paper 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] Authors: Dheeraj Sunehera, Pottabhatini Laxmi Priya.

Title: Children Location Monitoring on Google Maps Using GPS and GSM.

Published in: 2016 IEEE.

This paper 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.

REFERENCES:

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[4] Dheeraj Sunehera, Pottabhatini Laxmi Priya, 'Children Location Monitoring on Google Maps Using GPS and GSM,' 2016 IEEE 6th International Conference on Advanced Computing.

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CONCLUSION:

Throughout the research, it is clearly explained the IoT concept, child safety issues and the need of using child security system. Some previous studies have been included for designing the IoT-based child security smart band. It assists parents to monitor their children remotely. In case situations happen, notifications will be sent to parents so that actions can be taken. Through this, child safety can be ensured and crime rate will be reduced. However, the proposed device is not robust enough and does not contain sufficient functions to operates like a mobile phone. Hence, the future enchantments will be adding more features, software, applications, hardware to make the proposed system capable of working more intelligently, meanwhile guarantee the safety of children.