Literature Survey

Design of Wearable Device for Child Safety

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Year: 2021

Now-a-days attacks on children are increasing at an unprecedented rate and the victims are in dangerous conditions, where they are not allowed to contact the family members. 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 fromchildren'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.

IoT Based Smart Gadget for Child Safety and Tracking

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Year: 2020

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 hand or not using contact switch and alert the parent as soon as it is unplugged. This research demonstrates Smart IoT device for child safety and tracking, to help the parents to locate and monitor their children.

Safety Device for Children Using IoT

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Year:2020

The safety and security of children is a major problem in the current era. The children are too young to take care of themselves. We cannot monitor the children at all times in school, play area, and outside place. In this paper, we discuss the concept of child safety device based on Internet of things. The aim of this device is to provide safety to the child by allowing the parent to locate the child and view their surroundings. This device can be used to monitor the temperature and motion of the child. If any problem persists, the GSM mobile communication module automatically sends a text message to the parent as SMS. The other features of the device are emergency light and alarm buzzer which are activated when the button is pressed by the child in a distress situation to seek the attention of the bystanders. The accelerometer and vibration sensors are used to detect the motion of the child. The camera is used to capture the environment of the child. The image taken is processed using convolutional neural network (CNN) which predicts the background like play area, railway station, beach, road, or classroom. The GPS module is used to record current location of the device which is used to track the device if the child is missing. Hence, this device provides a security cover to the child in today's time.

Securing the kids: Geofencing and child wearables

Author: James N Gilmore

YEAR: 2019

This article provides a critical analysis of the child wearable Jiobit, a locational tracking device that is designed to allow parents to monitor how children move through space. Emphasizing the device's incorporation of geofencing features, which allow users to program 'fences' on a paired smartphone application and receive notifications when a Jiobit wearer enters and leaves the 'fenced' areas, I demonstrate how the operations of this device are part of a cultural politics that values the tracking of children through a variety of technological and infrastructural processes. Through an artifactual analysis of the device itself and its smartphone application, as well as an examination of the company's promotional language, I demonstrate how the logic of 'securitization' is used to encourage parents to delegate some of the work of monitoring children to this device. This artifactual analysis is paired with a discursive analysis of the company's policy documents, which readily acknowledge Jiobit's inability to serve as a fully reliable security system, while also detailing the ways in which the extraction of data is stored indefinitely and, in some cases, disclosed to third parties. Through this case study of Jiobit, I argue for critical studies of wearable technologies to attend to the ways in which their producers promise 'security' and the ways in which 'security' acts as an alibi for continuous data collection.

A Smart Child Pocket Monitoring and Protection System

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Year: 2020

The advancements in Internet of things (IoT) technology is quickly transforming the world into a smart network of interoperable devices. Traditional devices are becoming ubiquitous, pervasive, connected, and wearable IoT gadgets. The purpose of this investigation is to develop a smart Child Pocket Monitoring and Protection System (ChildPOPS). ChildPOPS provides a touch of advanced lifestyle by automatically monitoring infant's health conditions, promoting safe living, and providing an easy-to-deploy system and a user-friendly interface. An IoT Development Model is used to design, represent, and analyze the system through a set of submodels. The main challenges that the proposed system addresses include supporting accurate physiological parameter measurements, remote sensing, and correct detection. This chapter includes studying challenges, such as accurately using the device and the training needed by the users—as related to the adoption of such a modern tool by the target human subjects. The proposed system is supported by two mobile monitoring devices at the child and parent, or caregiver, sides, sensors, wireless communication nodes, control processors, Internet access, and a supporting server. ChildPOPS enables a ubiquitous access using tablets and smartphones through a mobile application or a web browser. This chapter includes studying the effectiveness of adding smart bands, at the child and parents' sides, to enable accurate monitoring.