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RFID Child Monitoring System Using IoT: A Survey

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Abstract:*Crime against children is increasing every day around the world. Student tracking is important for improving child safety. Currently, parents are worried about their children because of their breakdown or missing children. Use RFID (Radio Frequency Identification), IoT components, and sensors to implement a child surveillance system. With the help of artificial intelligence, you can detect if your child's position has changed and share your current position. It is saved and connected to GOOGLE MAPS via GPS, which is also useful for sending photos of the current situation. It is then shared with parents or guardians using the cloud sharing and link sharing features. The system is integrated with wireless and cloud technologies that incorporate the benefits of both technologies within parental controls. An additional feature is a car police complaint and warning message to nearby parents, a system developed in a prototype that monitors a child's health with the help of SPO2 and temperaturesensors*

Keywords: RFID, Cloud, Google Maps, GPS, Sensors.

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I. INTRODUCTION

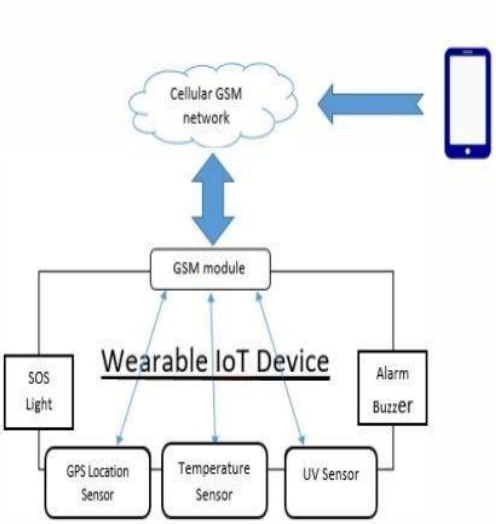
Radio frequency identity is an automated identity technique primarily based totally on storing and far off retrieval of records the usage of gadgets known as RFID tags or transponders. The generation calls for a few diploma of cooperation of an RFID reader and an RFID tag. An RFID tag is an item that may be implemented to or integrated right into a product, animal or individual for identity and monitoring functions the usage of radio waves. Some tags may be examine from some meters past the reader`s line of sight. Most RFID tags comprise at the least parts. One is an included circuitforstoring and processing records, modulating and demodulating a radio frequency signal, and different specialized functions. The 2nd is an antenna for receiving and transmitting the signal. The Child monitoring device is always required for the mother and father as crime in opposition to youngsters is growing at very excessive charge like kidnapping, harassment, even a while harsh punishment from faculty etc. Child monitoring device will tune motion in their infant everywhere out of doors their home. Also it's going to alert the mother and father if their infant is crying. In this monitoring device GPS gives remarkable abilities in finding positions that facilitates in finding lacking or misplaced youngsters out of doors of outline area. So mother and father do now no longer have want to do non-stop tracking of infant motion, device will alert the mother and father if infant is moved out of doors of described area. The device will now no longer most effective offer Location of the kid however additionally offer records whether or not infant is crying or now no longer and if infant calls for emergency assist thru the textual contentmessage.

II. RELATED WORK

[A] Child safety wearabledevice

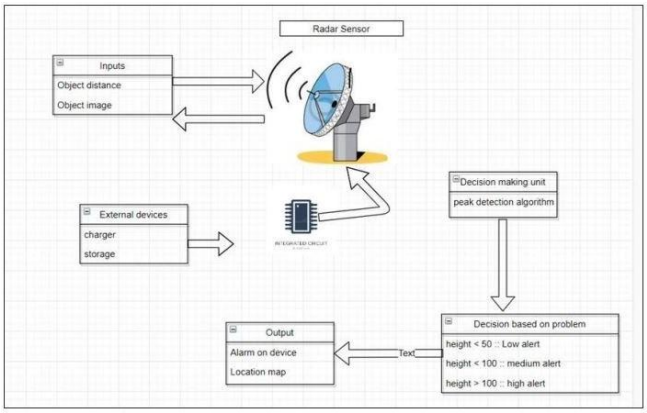
The solution proposed in this paper takes advantage of the rich features offered in Androids smart phones. The architecture of system built on two main component, GPS satellite, and GSM telephony services. Developing this project would not have been possible without studying related and existing works.

It helps in tracking the parents to locate and monitor their children. If any abnormal values are read by the sensor then an SMS is sent to the parents mobile and an MMS indicating an image captured by the serial camera is also sent. The future scope of the work is to implement the IoT device which ensures the complete solution for child safety problems. They introduced a new hybrid approach of security application of child and measure the quantity of oxygen in present time there is a drastic increase in number of kidnapping.



[B] SmartandSecureIOTBasedChild MonitoringSystem

IOT is obtaining upgraded day by day at the same time its security is additionally upgraded. during this planned system, we have a tendency to are in the main specializing in child remote watching system also we are mistreatment the discover ion and ranging radiolocation measuring instrument| measuring system measuring device} devices also as obstacle sensors which is able to detect the alert when the kid enters the zone as an alternative, he/she is approaching towards harmful object then alert are given to the caretaker through the mobile using an alarm or notification. For sensing purpose, we are using Waterproof unhearable Obstacle detector that are placed within the straightforward case that's given to the babyinorder that case can provide aware of the caretaker through the mobile and for battery backup we have a tendency to are mistreatment solar array through that the energy will get keep within the care taker's shoes and this energy are addicted to the steps coated by the care taker. In this planned system a general methodology for fast peak detection is employed for depth/height measurement. First, the signals curve is equal divided and most and minima values in every segmentation are collected. The continual maximum and minima values are removed and every one pretend peaks are merged within the case of making certain true peaks remained. Experimental results showed that: compared with ancient methodologies, the planned method is additional correct and quicker in peak detection, and appropriate for a spread of waveforms. Keywords-: web of Things (IOT); peak detection algorithmic rule for sign detection mistreatment measuring device sensors algorithm. Introduction Among the large applications enabled by the IOT(Internet of Things), good and secure watching system may be a significantly vital one. IOT is obtaining upgrading day by day at the same time its security is additionally important. As IOT is that the huge construct it includes many varieties of subtopics within which we have a tendency to are acting on the little project named as "Smart and Secure IOT primarily based kid watching System". Main motive of this project is to unravel the issues of baby guardian and also secure the baby from coming into the zone. As before long because the baby enters the danger zone the guardian are notified through the assorted strategies either by SMS system or via the warning buzzers. Warning buzzers are divided in 3 types in step with the danger round-faced by the baby. Warning buzzers are also of various colored LED's. once the baby is close to the zone it'll alert the guardian by blinking with red diode and if the baby is way far away from the danger zone then yellow LED will blink similarly when baby is in intermediate of the danger zone inexperienced LED will specify the guardian. This project includes measuring device sensors, Wi-Fi module, image processing,temperaturesensors and show device. For in operation purpose we have a tendency to are connecting our device to the baby and alerts also as notifications are given to the guardians displaydevice



[C] The role of children in the design of new technology, Behavior and Information Technology

It represents a tracking system that can detect different dangers surrounding multiple children and seeks to reduce the limitations found in current systems. The designed system consists of two modules. Parent module and child module. When a child safety lock violation is detected, a specific sensor in the child module will generate a signal. This signal is sent from these sensors to the controller and through the transmitter to the higher level modules. This will make the necessary decisions and begin the steps to handle the violation. The parent can configure the system to operate indoors or outdoors, and depending on this choice, the parent module can calculate the distance between each child and its parent at any time. The Global Positioning System is used to calculate the outdoor distance, and the amplitude of the change in the RF signal is used to calculate the indoordistance.

[D] Research on Mobile Location Service Design Based onAndroid

This paper introduces the architecture and component models of Android and analyzes the anatomy of an Android application including the functions of Activity, Intent Receiver, Service, Content Provider, etc. supported Android, the look method of a location-based mobile service is then presented. the look example shows that it's really easy to implement self-location, to draw the driving trace, to perform queries, and to flexibly control the real-time map on Android. The Open Handset Alliance released the Google Android SDK on November 12, 2007 [1]. The conception of the Android platform is attracting more and more programmers in the mobile computing field. Android may be a package of software for mobile devices, including an OS, middle-ware, and core applications. The Android SDK provides powerful tools and APIs necessary to develop applications on the Android platform using the Java programing language. Android platform is of open system architecture, with versatile development and debugging environment, but also supports a spread of scalable user experiences, which has optimized graphics systems, rich media support, and a very powerful browser. It enables the reuse and replacement of components and efficient database support and supports various wireless communication means. It uses a Dalvik virtual machine heavily optimized for mobile devices. Android also supports GPS, Video Camera, compass, and 3d-accelerometer and provides rich APIs for map and site functions. Users can flexibly access, control, and process the free Google map and implement location-based mobile service in their mobile systems at an occasionalcost.

III. CONCLUSION

The developed device implements the use of a real- time system. When the student presses the SOS button, GPS coordinates and an emergency image will be sent to the app specified by the parent. Feedback messages sent to parents are an additional benefit, so they can receive SMS even when they are offline.

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