TOPIC : CHILD SAFETY MONITORING AND NOTIFICATION

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Sl.no.	Title,Author and Year	Concept	Disadvantages	Futurework
1)	Child Monitoring and Safety System Using WSN and IoT Technology by Poonkuzhlai in 2021.	The main idea of this paper is to provide better and efficient health services and security to the school children by implementing a networked information cloud through IoT so that the experts and doctors could make use of this data and provide a fast and an efficient solution.	The system accuracy is less.	The system accuracy can also be improved by increasing the trustworthiness of the device to avoid any discrepancies, as in medical and healthcare, a minute error may cost a life. In addition we can also add different zones such as bus section, along with wireless camera which ensures the safety.

2)	IoT-based Child Security Monitoring System by Lai Yi Heng in 2021.	Nowadays, crime rate associated with children keeps increasing due to which draws peoples' attention regarding child safety. , IoT is applied to propose a wearable smart band which helps parents to monitor and get known of their child's condition at anywhere and anytime even if they are not by their children side .Due to that, parents are worried for their children and perhaps, a hard challenge for them to guarantee safety of their children when they are out .To trigger the alarm and enable automatic video recording whenever the emergency button is pressed. Then, emergency notification along with real-time video will be sent to and display in the parents' mobile apps.	It has less number of features such as it enables the tracking of the child's location by temperature and pulse respiratory rate, etc.	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.
3)	Smart IOT device for child safety and tracking by M. Nandini Priyanka in 2019.	child safety and tracking is a major concern as the more number of crimes on children are reported now a days.. 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 module .The solution to this problem is to design an IoT device, which senses the child's location and environment and during emergency, it should send the alert to the parents automatically.	To implement the IoT device which ensures the complete solution for child safety problems.	The future scope of the work is to implement the IoT device which ensures the complete solution for child safety problems.
4)	IoT Based Smart Gadget for Child Safety and Tracking by N.Manjunatha in 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	It can be difficult to detect when network signal is not reachable/weak/when the smart gadget moves outside the boundary range.	This system can be further enhanced by installation of mini-camera inside smart gadget for better security so that live footage can be seen on parental phone during panic situations. The system can be modified by installation of small solar panels for charging the battery of smart gadget to gain maximum battery backup.

		keep a virtual eye on child.		
5)	Design and Development of Child Abuse Detecting System by Mariam Khan in 2019.	This research proposes a smartly designed wearable device, Child Abuse Detecting System (CADS) that provides proactive safety features. CADS is based on the Internet of Things (IoT), E-Textile, Wearable Sensors i.e., galvanic skin response (GSR) sensor, heart rate sensor and pulse oximeter and force sensitive resistor (FSR) sensors. For the real-time monitoring of the emotional and physical state of a child, readings from the sensors are sent to the IoT cloud platform. When the readings exceed the thresholds, an alert is sent through the Global System for Mobile communication (GSM). Thus, parents are timely notified about any dangerous or alarming situation along with the location of a child.	The wearable device using E-Textile specifically with three sensors (MAX30100, GSR and FSR) increased the accuracy of detecting unusual and alarming situations.	It can be extended in future by introducing smart nano-sensors. The use of nano-sensors will be feasible to integrate and may accurately detect required parameters from the body. The use of advanced machine learning algorithms can make the system precise and error-free.
6)	Child Safety Monitoring System Based on IoT by Divya Bharathi in 2019.	In this system, the collected values from every sensor like temperature sensor, pulse rate detection sensor, metal detection sensor, and the location value from GPS are used to detect the status of the child and alerts the respective guardians using GSM accordingly. It makes 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. Future scope :In our system, we automatically monitor the child in real time using Internet of Things, with the help of GPS, GSM, and Raspberry Pi.	It is difficult to monitor when there occurs any hindrance to satellite communication or any network issue.	The hinderance and network issues can be overcome by using Zigbee concept or accessing the system without internet and using high-speed server transmission.

7)	IoT Based Child Localization System by Waluno Puji Anto in 2018.	The Internet of Things System (IoT) refers to the set of devices and systems that stay interconnected with real-world sensors and actuators to the Internet. IoT includes many different systems like smart cars, wearable devices and even human implanted devices, home automation systems and lighting controls; smart phones which are increasingly being used to measure the world around them. Similarly, wireless sensor networks that measure weather, flood defences, tides ,etc.	Hackers may gain access to the system and steal personal information. Since we add so many devices to the internet, there is a risk that our information as it can be misused.	For surveillance of the child's surroundings, to get a clearer picture of the location, this wearable can also contain a camera module incorporated in it. The hardware that could be used would be a TTL serial camera. Since the major focus of this wearable project is the GSM module which is a better alternative than Bluetooth, Wi-Fi or ZigBee.
8)	Child monitoring system using IoT by G. Deepak in 2019.	The proposed system focus on developing a child monitoring .system from which we can collect the location of the child providing us with the location tracking facilities, photo capturing mechanisms, auto compliant for the nearby police stations along with a message to the nearby hospitals in an emergency. Thus enhancing the safety and security of the children efficiently and accurately. This concept also helps to avoid many threats, dangerous problems that are harmful to children's.	Hackers may gain access to the system.	The future work is that the GSM mechanizations implemented in the school belt of the children. This belt has an integrated the feature of Auto Photo Capture Activity and sending that to the parent's Emails. The complaint can be raised to the nearby police station about the child when being kidnapped. In addition to the usage of location tracking facility in the proposed system our project also provides the security with the highest accuracy and safety to overall systems being used
9)	Multi-Sensor Wearable for Child Safety by Pranjal Chowdhury in 2019.	This paper discusses about a smart wearable device like a wristband which tracks the child from time to time to ensure their safety. If any problem occurs it would alert parents through the cell phone so that they can take immediate action. This paper focus on the SMS text enabled communication. Parents can send SMS with some keywords and the device reply back. The device can detect the child's approximate location, it can detect the body temperature and the surrounding temperature, humidity and also the heartbeat of a child. For the emergency situation, the device would have some measures	Design and technical difficulties .	This research is aimed to develop a viable & portable wristband tracking system for children who are in a trouble (i. e. children who are lost or who are in a low physical condition). We can observe that on successful completion of the previous stages there can be some up gradation like • Such a device could also be further upgraded in future to support many

		like an alarm buzzer, SOS light which will notify the bystanders to help the child.		more sensors to sense the child's actual physical condition.
10)	Child Tracking System using GPS by Linda John in 2019.	The research propose a child tracking system using GSP Design and Implementation of Automatic Child Monitoring (ACM) System using Wireless Network The proposed application is developed on android platform, the basic techniques required mentioned below: 1) Geo-Fencing 2) GPS (Global Positioning System) 3) SMS (Short Messaging Services.	High battery consumption, low signal.	Child GPS Tracking System helps parents for monitor their children and ensures child's safety. Some of the best works implemented in past relies on SMS based tracking which is not helpful to get an accurate location