LITERATURE SURVEY

IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

Various methodologies used are listed below:

Sunaina Nayak[1]: Attacks on children have been on the rise at an unprecedented rate in recent years, with victims finding themselves in perilous situations with little chances of contacting their families. The main goal of this project is to create a smart wearable device for children that uses advanced technology to ensure their safety. As a result, this strategy is perceived as sending an SMS from the children\'s wearable to their parents or guardians. This project employs cutting-edge technology to protect the youngster through the use of a GSM module, ensuring that the child does not feel abandoned while dealing with such social issues. An Arduino Nano, GSM, GPS, temperature sensor, heartbeat sensor, and a panic button will be included in the wearable. The heartbeat sensor detects the child\'s heart rate and delivers it to the guardian on a regular basis. If the child falls suddenly, the accelerometer detects it and alerts the parents. As a result, the parent has a sense of security.

Munaf.S[2]: The paper focuses on a smart wearable device used for children. The main benefit of this wearable compared to other wearable is that it can be used in any of smart mobile phones and does not need a very costly mobile phone and not a highly technical human. The main idea of this wearable safety system is to aid the parents in finding their child very easily. In the current scenario, there are lot of wearable that monitors the routine behavior and activities of children and also help to find the child using Wireless Fidelity (Wi-Fi) and Bluetooth services that are available on the device. But both of them seems to be an unsecured communication in between the parent and the child. Therefore, the objective of this paper is SMS (Short message service) text enabled link in between the child's wearable and the respective parent .The main idea for achieving this is Global System of Mobile Communication (GSM). The parent has to send a text message in the form of SMS using words like “Temperature”, “SOS”, “Location”, “Buzz” etc., to the wearable system. The wearable device sends an acknowledgement in the form of a text showing the location of the child and will provide the atmospheric temperature, so that the parents can have a track if the temperature does not suit the child. The next measure that can be taken is by using a SOS Light that is bright. Distress alarm buzzer present on the wearable device can also be activated by the parents through SMS text to display the SOS signal very clearly and rings an alarm which the nearby public can immediately react to the safety of the child till the parents come or they can try to reach he parents and assist in locating the child.

Bannuru Ranjeeth[3]: Child security is the foremost common issue emerging around the world. There are numerous issues to youngster security and this work primarily manages kid security from the dangers like missing, abducts. The Technical point of this task is to have an ordinary correspondence between the kid and parent through the gadget which helps in finding the area, pulse and temperature of the kid utilizing the gadget empowered with the pulse sensor, temperature sensor and GPS tracker. This gadget empowers association between the youngster and parent through the WIFI module cooperation utilizing IoT. The parent can get to the kid data intermittently by interfacing through this gadget. This makes guardians defend youngsters even in their nonattendance. The data is stored into a cloud permanently to keep the track record of old data of the children for further reference. The sensors are activated automatically when they are subjective to the miscellaneous activities.

N. Senthamilarasi[4]: The overall percentage of child abusements 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 abusements, 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 condition and aims 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 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.

Fitsum Tesfaye[5]: This paper is based on IOT (Internet of Things). As we know in present era everything is based on digital technology. Human being is going to connect each other by using mobile network. This paper proposes an SMS based solution to reduced parents insecurity and schools to track children’s in real time. Different devices are connected with a single device through. The concerned device is connected to mobile via SMS. The device can be used by stockholders to track children and get real time data. The main Advantage of the proposed system is send location by using mobile network (GSM). Here a prototype model (device) is created which is hardware based. The work comprises ARDUINO UNO as microcontroller, along with GPS and GSM module. This device will also have the facility of different status of children by measuring the speed of hand movement of children.

Akash Moodbidri[6]: This paper discusses the concept of a smart wearable device for little children. The major advantage of this wearable over other wearable is that it can be used in any cellphone and doesn't necessarily require an expensive smartphone and not a very tech savvy individual to operate. The purpose of this device is to help parents locate their children

with ease. At the moment there are many wearables in the market which help track the daily activity of children and also help find the child using Wi-Fi and Bluetooth services present on the device. But Wi-Fi and Bluetooth appear to be an unreliable medium of communication between the parent and child. Therefore, the focus of this paper is to have an SMS text enabled communication medium between the child's wearable and the parent as the environment for GSM mobile communication is almost present everywhere. The parent can send a text with specific keywords such as “LOCATION” “TEMPERATURE” “UV” “SOS” “BUZZ”, etc., the wearable device will reply back with a text containing the real time accurate location of the child which upon tapping will provide directions to the child's location on google maps app and will also provide the surrounding temperature, UV radiation index so that the parents can keep track if the temperature or UV radiation is not suitable for the child. The prime motivation behind this paper is that we know how important technology is in our lives but it can sometimes can't be trusted, and we always need to have a secondary measure at hand. The secondary measure used in this project is the people present in the surrounding of the child who could instantly react for the child's safety till the parents arrive or they could contact the parents and help locate them. The secondary measure implemented was using a bright SOS Light and distress alarm buzzer present on the wearable device which when activated by the parents via SMS text should display the SOS signal brightly and sound an alarm which a bystander can easily spot as a sign of distress. Hence this paper aims at providing parents with a sense of security for their child in today's time.

P. Nandhini[7]: In today’s world child and women are less secure and have many issues regarding their security purpose. They have to undergo among various difficult situations and have to prove themselves every time in all critical conditions. So, for their security and safety purpose government has provided security through rules and regulation to the society. Although there are many existing systems for security purpose need of advanced smart security system is increased. In order to overcome such problems smart security system for child and women is implemented. This paper describes about safe and secured electronic system for child which comprises of an Arduino controller and sensors such as temperature LM35, flex sensor, MEMS accelerometer, pulse rate sensor, sound sensor. A buzzer, LCD, GSM and GPS are used in this project. When the child is in threat, and the offender hand touches the touch sensor which is fixed in the bad touching places of a girl child, the device senses the body parameters like heartbeat rate, change in temperature, the movement of victim by flex sensor, MEMS accelerometer and the voice of the victim is sensed by sound sensor. When the sensor crosses the threshold limit the device gets activated and traces the location of the victim using the GPS module. By using the GSM module, the victim’s location is sent to the registered contact number.

V .Lavanya[8]: The objective of this project is to safeguard the child from threads. Now a days the safety measures of children has been reduced in huge number. Thus the violence against children increasing day by day. Not only kids even women are also abused both physically and mentally. We are taking small step towards violence against the kids. Our project mainly focus on sensing the children's Temperature and Heartbeat. By monitoring the activities the state of the child is analyzed. By using GSM, if child reaches the critical state then the latitude and longitude of that particular location is sent as an alert message to the parents. In this system, it has a MEMS sensor which is used to detect the abnormal vibration and it is controlled by NodeMCU micro controller.

HM Sabaa Fathima[9]: This project discusses the concept of a smart wearable device for little children. The major pros of this wearable over other wearable is that it can be used in any cellphone and doesn't necessarily require an expensive smartphone and not a very tech savvy individual to operate. The purpose of this device is to help the parents to locate their child with ease. At the moment there are many wearables in the market which help track the daily activity of children and also help find the child using Wi-Fi and Bluetooth services present on the device. But Wi-Fi (Wireless Fidelity) and Bluetooth appear to be an unreliable medium of communication between the parent and child. Therefore, the focus of this project is to have an SMS text enabled communication medium between the child's wearable and the parent as the environment for GSM mobile communication. The parent can send a text as SMS with specific keywords such as "LOCATION", "TEMPERATURE", "SOS", "BUZZ", etc., to the wearable device. The device will replay back with a text containing the real time accurate location of the child and will also provide the surrounding temperature, so that the parents can keep track if the temperature not suitable for the child. The secondary measure implemented was using a bright SOS Light and distress alarm buzzer present on the wearable device which can be activated by the parents via SMS text to display the SOS signal brightly and sound an alarm which a bystander can instantly react for the child's safety till the parents arrive or they could contact the parents and help locate them. Hence this project aims at providing parents with a sense of security for their child in today's time.

Ushashi Chowdhury[10]: 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 like an alarm buzzer, SOS light which will notify the bystanders to help the child. So this paper is all about the safety and security of a child to help them to recover from any type of difficulty.

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