V.S.B.ENGINEERING COLLEGE, KARUR

Department of Information Technology

IBM NALAIYA THIRAN

LITERATURE SURVEY

TITLE : IOT Based Safety Gadget for Child Safety Monitoring and Notification application

DOMAIN NAME : Internet of things

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ABSTRACT 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 a contact switch and alert the parent as soon as it is unplugged.

INTRODUCTION

The internet of things (IoT) refers to the set of devices and system that stay interconnected with real-world sensor and to the internet. During years' Child safety is under threat and it is very important to provide a technology-based solution which will help them under panic situations and monitor them using a smart gadget. The proposed system is equipped with GSM and GPS modules for sending and receiving call and SMS between safety gadget and parental phone, the proposed system also consists of Wi-Fi module used to implement IoT and send all the monitoring parameters to the cloud for android app monitoring on parental phone. Android application can be used to track the current location of safety gadget using its location coordinates on parental phone android app and also via SMS request from parent phone to safety gadget. Panic alert system is used during panic situations and automatic SMS alert and phone call is triggered from safety gadget to the parental phone seeking for help and also monitored for plug and unplug from hand, as soon the gadget is unplugged from hand a SMS is triggered to parental phone and the alert parameter is also updated to the cloud. Heart-

beats, temperature is monitored and the values are updated to cloud continuously for parent app monitoring. Boundary monitoring system is implemented on safety gadget with the help of BEACON technology, as soon as the safety gadget moves far away from the binding gadget an alert is provided to parent on binding gadget. the system is used to monitor the health parameters and also used for location tracking during necessary situations in safety concern. 2. ice's battery gives short life-time.

LITERATURE SURVEY

The author describes [1],a crime rate associated with children keeps increasing due to which draws peoples' attention regarding child safety. This research is conducted to propose a child security smart band utilizing IoT technology. Online questionnaire and semi-structured interview are methodologies used to collect data. The online questionnaire gains feedbacks by sending questions electronically, where answers need to be submitted online. In the semi structured interview, researcher meets and asks respondents some predetermined questions while other being asked are not planned in advanced. Through information obtained, a smart band have been proposed to monitor the safety of children. By this, parents know what is happening remotely and can take actions if something goes wrong. The future improvements of this device will be adding functions and software to make it works like a phone such as messaging, gallery, Google, YouTube, meanwhile, adding more child security features so that child safety is guaranteed.

The author describes[2],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.

The author describes[3],This paper presents the design and implementation of a portable IOT-based safety and health monitoring system for children through a sensor embedded health monitoring device for safety and emergency services. It is known that the technological advancements are increasing at a faster pace. But the utilization of technologies in various sectors is very low. We know that people of different age group faces different difficulties. But the security for children‟s is very low. There is lot of cases registered regarding child safety. Nowadays, the schools and the parents are very much worried about their school children‟s for school transport and other places. So, the safety and monitoring the school children is very much difficult. In this project we are introducing the IOT based embedded system is used in this project. So we propose a system to continuously monitor the parameters of the child and also their location for safety purpose. The system provides smart child tracking and monitoring system.

The author describes[4], Proposes a Ultrasensitive Temperature Sensor with Fell Fiber Optic Fabry–Perot Interferometers dependent on Vernier Impact. Temperature is a physical parameter that is most every now and again estimated as it is constantly identified with human action. The demands of temperature sensors have increased in the fields of biochemical engineering, medicine and so on. The temperature sensor proposed uses Vernier effect combined with cavity media to produce ultra high

temperature sensing and amplification. The proposed sensor is minimized in configuration, requires simple manufacture, is savvy and can be bundled as a minor test for remote detecting. Papers [10][11][12] are very similar, yet the objectives and methodologies differ greatly.

[1]Arun Francis G, Janani I, Kavya S and Ramiyadevi K. Child Safety Wearable Device Using Raspberry Pi. Waffen-UND Kostumkunde Journal. 11(2). 2020. pp.135-137.

[2]Arun Francis G, Janani I, Kavya S and Ramiyadevi K. Child Safety Wearable Device Using Raspberry Pi. Waffen-UND Kostumkunde Journal. 11(2). 2020. pp.135-137.

[3] A. Helen, Kalaiselvi V.K.G, M. Fathima Fathila and R. Rijwana. A smart watch for women security based on iot concept 'watch me', International Conference on Computing and Communications Technologies (ICCCT). 2017.

[4] Child Safety Wearable Device: Gopinadh Jonnadula, Bhanu Prasad Davu, Hari Kishore Kandula, Vinod Donepudi, Sivaiah Etukuri, ."Child Safety Wearable Device", 2018,Volume 6, Issue II, International Journal for Research in Applied Science and Engineering Technology (IJRASET) ISSN : 2321