Parent Hook - A Child Tracking System Based on Cloud Url

Sayantan Kar, Adapa Chathurya, Pepakayala Kalyani, Rapaka Rahul, Mamidala Chandini Ramalakshmi, Pantham Lalitha

Department of Computer Science and Engineering, Pragati Engineering College (A), Surampalem (East Godavari) A.P,India.

ABSTRACT

Child kidnapping, missing child and child harassment are the world-wide problem related child safety. The children of age group 4 to 8 years are innocent and subject to kidnapping in frequent cases . Parents are always worried regarding their children's security mainly when they visit crowded public places and travel in widely physically located places. Number of applications is being developed to guard children in every manner. This paper introduces a Parent - Hook product which is designed for child tracking if the child is lost. The Parent-Hook is a safety band without the sensor or any chip harmful for the children can be put on the whist of the children . This band is easy to carry which is made of soft cotton webbing with parent contact information with QR Code and Cloud URL.

1. INTRODUCTION

In India the population is very high and occupy 2nd rank in the list of countries by population. Recently, all over the world, crimes against children are increasing at higher rates and many cases of missing children are reported. Parents are always worried about the possibility of kidnapping their children. Now a days, in many families both parents are working outside for their job. Due to this no one is with their child who can keep him or her under their observation. The security of a child could be identified as the greatest concern for public security agencies. These agencies need to improve their system with the help of modern technologies. Technology must be blended to help the parents for their concerns regarding their child. The smart cities paradigm clearly takes into account the needs of providing a more favorable environment for children living and learning, but focusing on this aspect it has also to deal with challenges due to cities complex environments, for example : many construction sites, a large number of running vehicles, crowd meeting places and complex urbanized localities. Such environment is indeed lacking in safety conditions for children. Children are curious, active and unaware about dangers in surroundings. Mobile technology plays an increasingly dominant role in human life .It aids for better communication, in obtaining more accurate and quickness in the field of emergency services. Hence a smart phone has become the basic need of citizens. This project focuses on one of such important initiatives in the form of a very useful service using "A Child Tracking System ".Today smart phones are the basic need of the users today, these smart phones, providing lots of features which make our life so simple and easier. This

project is focused on a child tracking product name as Parent-Hook. Different systems related to this project is explained in section 2.The proposed architecture of the system is focused in Section 3.Methodology is suggested in Section 4. Finally, Section 5 presents the results and related discussion.

2. LITERATURE SURVEY

" Bus Safety System for School Children Using RFID and SIM900 GSM MODEM",

Millions of children need to commute between homes to school every day. Safer transportation of school children has been a critical issue as it is often observed that, kids find themselves locked in the school bus at the bus stop after going to school, they miss the bus, or ride the wrong bus with no way to track them. This project intends to find yet another solution to solve this problem by developing a bus safety system that will control the entry and exit of students from the buses through an energy efficient methodology. The proposed system will control the entry and exit of students to and from the bus using RFID (Radio Frequency Identification) and GSM technologies to ensure the entering and exiting of all students to and from the school bus in a safer manner. The process, does not require any additional action by the student and drivers. The system will do all the process and allow the student to be tracked while entering and leaving the bus. If the bus journey is successful from the source to destination, it will send an SMS to the management to inform its departure and arrival.

Smart Tracking System for School Buses Using Passive RFID Technology to Enhance Child Safety

Millions of children need to be moved from home to school and vice versa every day. For parents, obtaining a safe transport for their children is a critical issue. Many children find themselves locked in a school bus in the bus parking lot after falling asleep on their way to school, miss the bus, step into the wrong bus, or leave at the wrong station with no method to track them. This research tested the applicability of radio frequency identification (RFID) technology in tracking and monitoring children during their trip to and from school-on-school busses. The child safety system developed in this research utilized the passive RFID tracking technology due to its efficient tracking capabilities, low cost, and easy maintenance. To explore the technical feasibility of the proposed system, a set of tests were performed in the lab and with the public. These experiments showed that the RFID tags were effective and stable enough to be used for successfully tracking and monitoring children using the bus. When asked to give their feedback of the solution through a questionnaire, more than 95% of the parents see that such a solution will take their anxiety and worry away and will provide them a tool to track their kids during commuting to and from their schools

"Design **and implementation of a children safety system based on IOT technologies**",

In this paper a system for increasing children safety is proposed. The focus is on the daily route from home to school and vice versa, assuming the use of school buses. IoT paradigm is exploited together NL with different localization techniques i.e., RFID and GPS, in order to design a solution for parents willing to make certain of their child's following the main steps to school or home, i.e., taking the school bus and entering school or leaving school and entering the school bus. In this paper the applicability of RFID technology efficient tracking capabilities is tested in children's tracking and monitoring during their trip to and from school-by-school buses. The proposed solution is discussed in terms of technologies and architecture and the first prototype is presented. Finally, a test phase is planned to verify the correct operation of the system.

"Student Tracking System Using GSM and GPS Technology", Women are an equal soul of men by comprises men in her name itself but really, they are treated equal among men. There is a broad gap in between past and present centuries. Women are treated poorly on past centuries by getting huge works, asking more dowries and even killing female infant but in present century these has been reduced and crimes are increased more in numbers against women like abducted, murdered, raped and harassed in various ways. This assessment is on women's tracking system which helps them in their safety and security. Although there are n numbers of tracking devices still crimes against women are in an increasing rate. These crimes have to be reduced in an effective way of implementing versatile tracking system by combining various technologies into a single integrated unit.

"Locating Friends and Family Using Mobile Phones with Global Positioning System (GPS)"

This paper presents a mobile application based on providing location-based services (LBS) using Global Positioning System (GPS) as a location provider. The main objective of this work is to design and implement a client server system that helps users to locate their family members and receive alerts when friends are nearby. The mobile application was implemented using J2ME where the most recent APIs and other older APIs were combined together in order to make the application reliable on all types of mobiles. The server was implemented using PHP since PHP guarantees that the server would not be overloaded. The type of the database used in the system was MySQL. The average location accuracy of the application is about couple of meters.

3. SYSTEM ANALYSIS
A. EXISTING SYSTEM

Priti et al. has implemented the system for Student Kidnapping prevention using GSM, GPS and Cell phone technology. This system is useful to track, monitor and stop the Kidnapping of students too. Bader et al. uses J2ME applications to provide Location Based Services (LBS) on mobile. The LBS service in this application use Global Positioning System (GPS) as its location provider. Client server system is developed to find the location of family members and alerts are received when family members/ friends are nearby. Php is used for server implementation and MySQL is used for databases. Loganathan et al. has developed a system including geo-fencing campus, a child module and a parent module which focuses on the cases where the children are kidnapped. This project includes a geo-fencing campus, a child module and a parent module. A sensor is used for detecting the child's emotions and child cries. A microcontroller ATMEGA 162 is used with a Global system for mobile communication and Global positioning system module. This helps one to hack and find the child movements. A model is proposed by Gupta et al. for child safety. This model allows its users to track the location of them children on their smart phones. The model also allows children to send a quick message if they feel some threat to their safety. They even can send their current location via Short Message services. Android platform is used for validation of the proposed system. Nandini et al. has developed a smart IoT device for child safety and tracking is developed to

help the parents to locate and monitor their children. The proposed system automatically alerts the parents by sending SMS when emergency help is required for the children. The parameters such as touch, temperature and heartbeat of the child are used for parametric analysis and results are plotted for the same. The above system ensures the safety and tracking of children

B. PROPOSED SYSTEM

The base of the child tracking system is the Parent-Hook, which is made up of a modern satin wristband with two adjusters to make them adjustable to your wrist. You can have engraved names, initial, short message or any saying up to 20 characters. This is a wonderful personalized gift for Kids or someone your satin wristband love is a great personalized gift for everyone who loves Cloth Label with color. This band is not only used for children's but also for the aged people.

4. SYSTEM DESIGN
SYSTEM ARCHITECTURE

Below diagram depicts the whole system architecture of Data sharing and personalized analysis model for 5g-smart diabetes.
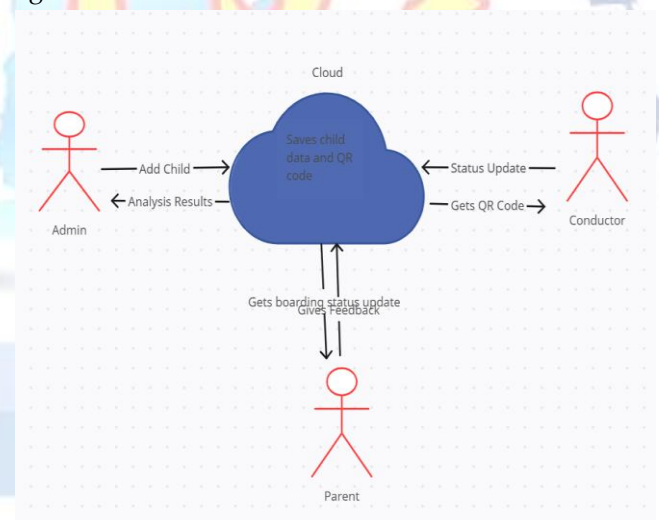
5. SYSTEM IMPLEMENTATION
MODULES

There are 3 modules:

- Admin
- Conductor
- Parent

Admin: -

- Login
- Student Management Portal
  - Add New Student

- • Manage Student
- Bus Delay Update
- Feedback Analysis
- Sentiment Analysis
- Logout

Conductor: -
- Login
- Home School Scan
- Boarding Status
- School Home Scan
- Drop Status
- Logout

Parent: -
- Login
- My Profile
- Change Password
- Board Status
- Drop Status
- Track
- Notification
- Feedback
- Logout.

6. SYSTEM REQUIREMENTS

Operating System	Windows 10/11
Development Software	Python 3.10
Programming Language	Python
Domain	Machine Learning
Integrated Development Environment (IDE)	Visual Studio Code
Front End Technologies	HTML5, CSS3, Java Script
Back End Technologies or Framework	Django
Database Language	SQL
Database (RDBMS)	MySQL
Database Software	WAMP or XAMPP Server
Web Server or Deployment Server	Django Application Development Server
Design/Modelling	Rational Rose

7. CONCLUSION AND FUTURE WORK

Many sites are being developed to upload the information of finding a lost child. For this we need to remove the entire traditional database and use the JSON file that will allow us to link up the information available on other sites. The information available on other sites could be matched with the data of a lost child to generate alerts that could be received by respective parties. For security purposes we will use a user defined data encryption and tagging system. The future enhancement will be done to overcome various issues like auto calling to responsible persons if the system detects that the child is lost. The symptoms reflected by the bodies of the lost child and the person who is around him could be sensed by the technological updates in the "Parent-Hook" product.

Conflict of interest statement

Authors declare that they do not have any conflict of interest.

REFERENCES

[1] IndiaPopulation: HTTPs://www.worldometers.info/world-population/india-population, Accessed July 2020

[2] Unprecedented rise in cases of sexual abuse of schoolchildren: http://indianexpress.com/ article/cities /pune/ unprecedented-rise-in-cases-of-sexual-abuse-of-schoolchildren, Accessed July 2020

[3] Maryam Said Al-Ismaili, Ali Al-Mahruqi and Jayavrinda Vrindavanam, "Bus Safety System for School Children Using RFID and SIM900 GSM MODEM", International Journal of Latest Trends in Engineering and Technology (IJLTET)

[4] Khaled Shaaban, Abdelmoula Bekkali, Elyes Ben Hamida and Abdullah Kadri "Smart Tracking System for School Buses Using Passive RFID Technology to Enhance Child Safety," Journal of Traffic and Logistics Engineering, Vol. 1, No. 2, pp. 191-196, December 2013. doi: 10.12720/jtle.1.2.191-196

[5] Leonardo D'Errico, Fabio Franchi, Fabio Graziosi, Claudia Rinaldi and Francesco Tarquini, "Design and implementation of a children safety system based on IoT technologies", 2nd IEEE International Multidisciplinary Conference on Computer and Energy Science", 12-14 July 2017

[6] Priti Jadhav, Kajal Ingale, Shifa Asari and Prof. Kalidas Bhawale, "Student Tracking System Using GSM and GPS Technology", International Journal of Innovative Research

in Computer and Communication Engineering, Vol. 5, Issue 3, March 2017.

[7] Ghaith Bader Al-Suwaidi and Mohamed Jamal Zemerly, "Locating Friends and Family Using Mobile Phones with Global Positioning System (GPS)", IEEE Explore, 2009

[8] M. Loganathan, Aswathi Dileep and K. Kamatchi, "Child Tracking System Based on GSM", International Journal of Innovative Research in Science, Engineering and Technology, Volume 4, Special Issue 4, April 2015