

Survey on “Woman Safety and Alert System”

Snehal Bhagwat¹, Minakshi Funde², Ravindra Sonawane³ Shalaka Deore⁴,

Shubhangi Ingale⁵

¹⁻³Student, Computer Engineering, Modern Education Society's College Of Engineering, Pune

^{4,5}Guide, Computer Engineering, Modern Education Society's College Of Engineering, Pune

Abstract - Women safety becomes the topmost priority of Indian government, as considering the increasing number of crime against women. Thus, it seems necessary to take a step against the crime. In today's world, people are using smart phones a lot and hence, we are making use of smart phone for the security purpose. The unique feature of this application is to send message to the contacts which has been registered. After the button clicked on the device, the application can continuously track the location of user who is in danger. Study of crime data can help us analyze crime pattern and important hidden relations between the crimes.

Keywords: women's safety, Arduino, GSM (Global System for Mobile communication), GPS (Global Positioning System), Audio Recording, Mobile Application, location, buzzer.

1. INTRODUCTION

A woman is a symbol of love, purity, knowledge, sacrifice, etc. peace and prosperity lie in the society where a woman is happy and honored. Remembering the goddesses you bow down to in the same house where you raise your hand at the actual goddess of your home. Nowadays, women are keeping pace with men in life, unfortunately at cost of being subjected to abuse, harassment, and violence in public and even at their own houses. They cannot step out of their houses at any time, They cannot wear clothes as per their wish, nor can they even go for work in peace. This all takes away their freedom but also loses their confidence and dreams. Due to the above reasons, it is quite apparent that there is a striving need for women security in the country. In past decades, women won't step out from their houses to work, so there was more safety. But in present scenario, women want to be employed, and they want to work outside. But there is lack of safety.

One of the third of the women may suffer from violence in her lifetime. Such incidents are more common nowadays. There are many systems that have been built to provide safety for women. There cannot be a cop who always guards the women, but there can be safety measures which women can use by themselves. This paper, therefore, aims to apply the current trend in technology, IOT. The Internet of Things is an ecosystem of physical objects that are accessible through the web. It refers to the ever-growing network of physical objects that feature an IP address for internet connectivity.

According to National Crime Records Bureau, crime against women has significantly increased in recent years. We illustrate that how social development may lead to crime prevention. So we are developing the system which can be used to detect the crimes for the area where the person or user currently stands.

2. LITERATURE SURVEY

A. Women Safety Devices and Applications, July 2018[1] :

In this paper, paper involves few precautionary devices and applications in order to prevent problems faced by women. It helps the women deal with the problems faced in the past. The safety and security of a woman can never be at rest, no matter what new device is on the market or no matter how nice a new application is made, there always can be something added to it. There cannot be a cop always guarding a woman, but there can be secret safety measures with them which can be easily used at the time of threat and let the nearby people know that there is something bad happening and their support is needed. By keeping all these things in mind many safety devices have been made and few of them are discussed in this paper.

B. Smart Device for Ensuring Women Safety Using Android App, January 2018[2] :

The proposed design is used to solve the critical situation. This system can give the self-confidence to the women to face the incident which is against her safety and security. This paper attempts to deal with a community concern that has been destroying the lives of uncountable individuals and their families. A device like this improves the level of safety of women and girls. As technology is advancing, there are better means of getting on hand information about unsafe women. Since this device is smaller in size, all the women can carry it without much effort. The main purpose of the proposed system is to save the women before any intolerable incident occurs, and this is achieved through this work.

C. A Study Based On Women Security System, August 2017[3] :

Although a lot of women safety systems are already available in the market but still a more sophisticated

system is required to provide more safety and security. Thus in this paper an alternative method is proposed for women security that may serve as a better alternative to rest of the available security methods. Here the system is designed around Arduino micro-controller that uses GPS, GSM, watch, shockwave generation circuit and an accelerometer for better security.

D. WOMEN TRACKING DEVICE USING

CONCEPT OF “INTERNET OF THINGS”, february 2016[4]:

The goal of this paper is to implement prototype tracker device using GSM and GPS, based on Internet of Things. In our system we use the woman safety module for the purpose of security. Here we are using Android application as an interaction module.

E. “Smart Security Solution for the women based on IOT”[5] :

This paper, presents ShiftRoute, a new LPPM specially designed for map services on smartphones. ShiftRoute enables smartphone users to query a route between two endpoints on the map, without revealing any meaningful location information. Specifically, we design a protocol to allow a mobile client to retrieve point of interests (POIs) close to the original endpoints, and an algorithm that selects shifted endpoints from these POIs, that achieves the privacy property of Geo-Indistinguishability. Experimental results show that ShiftRoute strikes a good tradeoff between location privacy and service usability.

F. Abhaya: An android App for the safety of women,December 2015[6] :

It sends a message to the registered contacts that includes location URL and calls on the first registered contact. It sends the message continuously to the rtered contacts for every five minutes until the “stop” button in the application is clicked.To develop a system for android users for keeping trackthrough several applications. This application uses GPS for identifying the location of the person in trouble and the system can be divided into two modules:

1. First module can be the victim’s phone i.e the root device which uses 3G/2G data connection for tracking the location of the victim through GPS.
2. Second module can be the mobile phone of registered contacts either police or friends or family members which receives the message containing URL of location of victim that is sent from the root device.

G. Smart security solution for women based on IOT march 2016[7] :

This paper focuses on a security system that is designed merely to serve the purpose of providing security to women so that they never feel helpless while facing such social challenges. An advanced system can be built that can detect the location and health condition of person that will enable us to take action accordingly based on electronic gadgets like GPS receiver, body temperature sensor [1], GSM, Pulse rate sensor.

H. SMARISA: A Raspberry pi based smart women safety using IOT,july 2018[8] :

It is a portable device for women safety. It comprises of hardware components such as Raspberry Pi

Zero, Raspberry Pi camera, buzzer and button to activate the services. It is activated by the victim by clicking the

button. Upon clicking, the current location of the victim is fetched and the camera captures the image of the attacker which are then sent to police or predefined emergency contact numbers via the victim’s smart phone.

I. Suspects Registry — For Women[9] :

This one also tracks location. Hitting the panic alarm notifies emergency contacts of latest location along with a minute's recording of it. The “Record Any Incident” feature uploads image to the app's Facebook page.The idea is to store information remotely.

J. Safetipin[10] :

This safety app provides users with features like GPS tracking, directions to safe locations and pins showing safe and unsafe areas on the map.Apart from the basic SOS feature of contacting the user’s friends and family in emergency situations and letting them track the users, the app has a number of other features.

K. Crime analysis and prediction using data mining,August 2014[11] :

For doing this we have to analyse the criminal backgrounds and criminal records for collecting the maximum criminal data. So the maximum details of each criminals is collected from criminal records. i.e. when crimes like burglary occurs in a certain place then from reports like FIR we get the offender details and their modus operandi(mode of operation). After getting these details we can know about the criminals with these behaviour.

L. Raksha — Women Safety Alert[12] :

The Raksha app is designed to ensure that women stay safe always.The app comes equipped with a button, which will send alerts to your loved ones with your location in a situation of distress.You can select the contacts, which will be able to see your location.Moreover,

if the app is switched off and is not working then also you will be able to send alerts by simply pressing the volume key for three seconds. This system sends location alert to emergency contacts even without switching on the app by pressing volume button. Can also dial 100 and sends SMS where there is no mobile internet.

M. SmartShehar Woman Safety Shield Protection[13] :

Allows you to take a picture. Hit the emergency button and the picture along with the location will go to a pre-decided list of emergency contacts. Don't worry if you lose the phone before sending — the app will automatically send the information within a few seconds.

The "Walk With Me" feature will allow those on your list to track your movements in real time.

N. Women Safety Power July 2018[14]:

This idea is to design a system which shall make every place and hour safer for women again. This system shall geotag and send SOS alert to the nearest police station, close contacts and also alert people in and around the venue of the crime, everything just at a click of a button. The idea is to make up for the time it takes police to arrive at the location.

O. Circle of 6[15] :

To use Circle of 6 lets the user has to add six trusted friends to add to their 'circle'. After which, if they find themselves in a risky situation, they can use Circle of 6 to automatically send their circle a pre-programmed SMS alert message, with their exact location. Circle of 6 can also be used to call two pre-programmed national hotlines or local emergency numbers in critical situations.

3. CONCLUSION

The developed model will help to reduce crimes and will help the crime detection in many ways that is from arresting the criminals to reducing the crimes by carrying out various necessary measures. Android system is developed for controlling the crimes in our society, We are using KNN algorithm for finding nearest location so any necessary action will be taken by user and police stations. The product is built as lab prototype to show how the real world can implement this into their day to day life to take any precautions. The main objectives are to provide security and taking proper precautions. The main objectives are to provide security and taking proper precautions to avoid the incident which can harm our society values.

4. REFERENCES

- [1] **Women Safety Devices and Applications**, July 2018
- [2] P. Berkhin, **Survey of clustering data mining techniques**, In: Accrue Software, 2003.
- [3] W. Li, **Modified k-means clustering algorithm**, **IEEE Congress on Image and Signal Processing**, pp. 616- 621, 2006.
- [4] D.T Pham, S. Otri, A. A.fty, M. Mahmuddin, and H. Al-Jabbouli, **Data clustering using the Bees algorithm, proceedings of 40th CRIP International Manufacturing Systems Seminar**, 2006.
- [5] J. Han, and M. Kamber, **Data mining: concepts and techniques**, 2nd Edition, Morgan Kaufmann Publisher, 2001.
- [6] Mugdha Sharma, **Z-crime: A data mining tool for the detection of suspicious criminal activity based on decision tree**, **IEEE**, 2014, ISBN:978-1-4799-4674-7/14
- [7] Shiju Sathyadeven, Deven M.S, Surya Gangadharan. S, **Crime Analysis and prediction using data mining**, **IEEE**, 2014
- [8] S. Joshi, and B. Nigam, — **Categorizing the document using multi class classification in data mining**,|| **International Conference on Computational Intelligence and Communication Systems**, 2011.
- [9] T. Phyu, — **Survey of classification techniques in data mining**,|| **Proceedings of the International Multi Conference of Engineers and Computer Scientists Vol. IIMECS 2009**, March 18 - 20, 2009, Hong Kong.
- [10] S.B. Kim, H.C. Rim, D.S. Yook, and H.S. Lim, — **Effective Methods for Improving Naive Bayes Text Classifiers**,|| **In Proceeding of the 7th Pacific Rim International Conference on Artificial Intelligence**, Vol.2417, 2002.
- [11] S. Sindhiya, and S. Gunasundari, — **A survey on Genetic algorithm based feature selection for disease diagnosis system**,|| **IEEE International Conference on Computer Communication and Systems (ICCCS)**, Feb 20-21, 2014, Chermali, INDIA.
- [12] L. Ding et al., — **PerpSearch: an integrated crime detection system**,|| 2009 IEEE 161-163 ISI 2009, June 8-11, 2009, Richardson, TX, USA.
- [13] S. Sathyadevan, and S. Gangadharan, — **Crime analysis and prediction using data mining**,|| **IEEE** 2014
- [14] **"Raksha- women safety alert"**, "Bharatsweva.com, [Online]. Available:
<https://play.google.com/store/apps/details?id=com.porta.perfect.sosapphl=en>.

[Accessed august 25 2019].

[15] "Shake to Alert," [Online]. Available:
<https://www.shake2alert.co.za/>. [Accessed

25 august 2019].

[16] "I go safely app," [Online]. Available:
<http://www.igosafely.com/>. [Accessed 25 august 2019].