Automatic Sensing and Tracking Technology by Using Global Positioning System

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Abstract

In present scenario most of the modern technology and in fast moving world number of crimes increased and insecurity is the inability to control the offence. Everyone travelling and communicated from one place to another depends on demand, typically in order to give or receive information with people and visiting many places in different situations. The main aim the research is to show the located the contacts of people, shops nearby your location based on GPS and finger print sensor. Normal contact apps in mobile appears only the contacts that have saved but in this Geo contact application the system appears the authentic contact number with location of the individuals. The systems can categories the search results based on the individuals where they shops, hospital, institutions, industry, etc. The proposed system can able to locate the contacts which have been synchronized with this application. The main feature of this app is able to deduct the location of the contact visible to your family members that have been saved number in their smart phones with actual contact member who had been using the Smart phones. The fingerprint is sensed and can be analysed the person who have been using the phone. The application secured for the women during travelling at night times and can be tracked by the concern member.

Keywords- Geo, Fingerprint, GPS.

INTRODUCTION

In recent modern technology and in fast moving world depends on the technology for communication and travelling from one place to another place without any risk. Even though technology have developed kidnapping and rape is continued. The crimes against women in 2017 the fatality rate is increased and 30% of women were raped and kidnapped as per the statistical data was given by the Indian government. Nearly 5000 women were kidnapped and raped in India. The percentage of people fatality is increased day by day even though the technology is improved. The technology should favour to the humans not for developing the modern country. The secured system is to be analysing the culprits within few hours the technology should be improved to safeguard the people who have in risk. The below figure 1 shows the crime rate against the women with fatality. The fatality rate has been raised day today by kidnapping and raping the women. The technology has been wondered in present day today and features have increased [1]. Even though the technology is increased the crime rate of the particular individual life has been risked. The system is used to reduce the fatality and secure to the all humans who have travelling in daily life. The below table describes the cases against the women especially kidnapping and raping places the first place than the other cases. The maximum crime rate for a particular rate is increased day by day even though technology has improved. The proposed system will be useful to reduce the crime rate against the kidnapping. The sensing device used to measure the finger rate for the authentic person of the family member who can locate the person and detect the

location than the conventional application [2, 3]. The conventional application contains the tracking system but only government officials had been used for detecting after the crime had happened. These systems are not to reduce the fatality rate of the today scenario and lead to increase of kidnapping or raping.

S.No	CASES	YEAR 2016	YEAR 2017
1	Dowry death	249	229
2	Rape	1156	1238
3	Attempt to rape	125	141
4	Molestation	1719	2039
5	Eve teasing	221	285
6	Kidnapping	1822	2432
7	Harassment	2995	3010
8	Acid attack	9	5
9	Women trafficking	9	15
10	Violation act	66	45

TABLE 1.shows the cases against the women crime up to 2017.

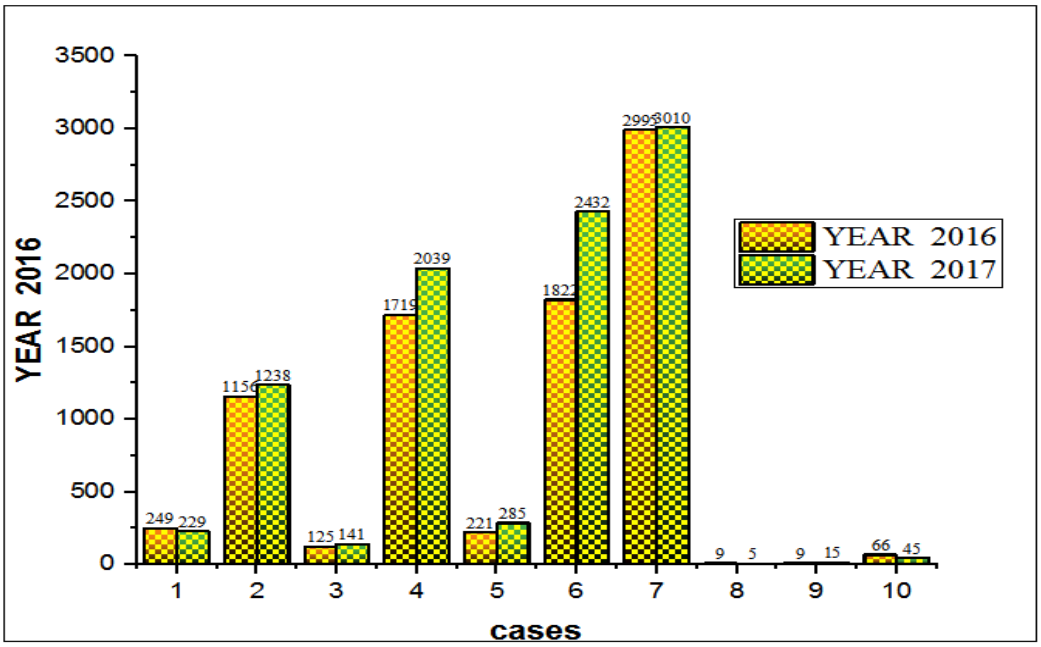

Figure. 1 Shows the Crime Rate Against the Women From 2016 To 2017.

The above figure discuss the women crime rate and shows the maximum fatality happens in India and the below figure describes the state wise crime rate against the women.

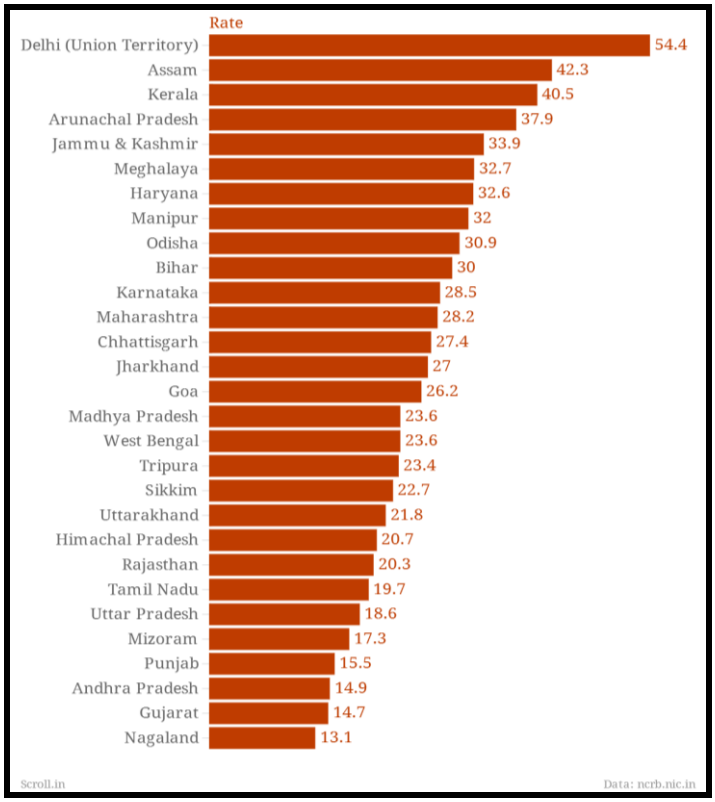

Figure. 2 Shows the State Wise Crime Rate

The above figure shows the state wise crime rate of women who have been kidnapped and raped and the state Delhi placed in first place for the crime rate .the no of states had listed above and this state have the percentage of crimes happed without secured by using conventional technology. The above crime rate can be reduced by using GEO location technology integrated with fingerprint sensor.

METHODOLOGY

The proposed system is used to secure the women from risk using this application by sensing the fingerprint sensor and GPS integrated smart phones. The communication technology with someone typically in orders to give or receive information with many people and visiting many places in different situations. The main aim of the research is to show the contacts of peoples as well using fingerprint sensor of the authentic owner of the phone location will be traced, shops nearby your location based on GPS. Normal contact apps in mobile appearing only the contacts that have saved but in this Geo contact application the system appears the contact number with authentic location of individuals. The systems can categories the search results based on shops, hospital, educations, industry, etc. The main feature of this app is able to deduct the location of the contact visible to your family members that have been saved number in their smart phones by using this application. The application used to describe the location especially closed or relative members whenever the men or women moves from one place to another place and he/she can track the location of particular person in the event of emergency situations by using GEO application. A Swipe Fingerprint Reader/Sensor requires the user drag the upper part of the finger across the sensor. The complete image is pieced together by accumulating the partial image as the finger moves across the scan area. The application will be very much support to the people who were using smart phones in day today life. The future technology will be leading this feature to be safe and secured. The project is to safeguard the women who are travelling during night times from office, company, and house, from one place to another without any hazard. The finger print sensor senses the actual owner of the phone

location and in some cases the phone will be stolen by someone and location of the actual owner cannot be traced in conventional applications. The fingerprint of authentic individuals and location will be tracked by the parents or relatives by using this application which is installed already in smart phones. In the event of hazard they can locate the authentic person and pass the message to the nearby police station for preventive measures.

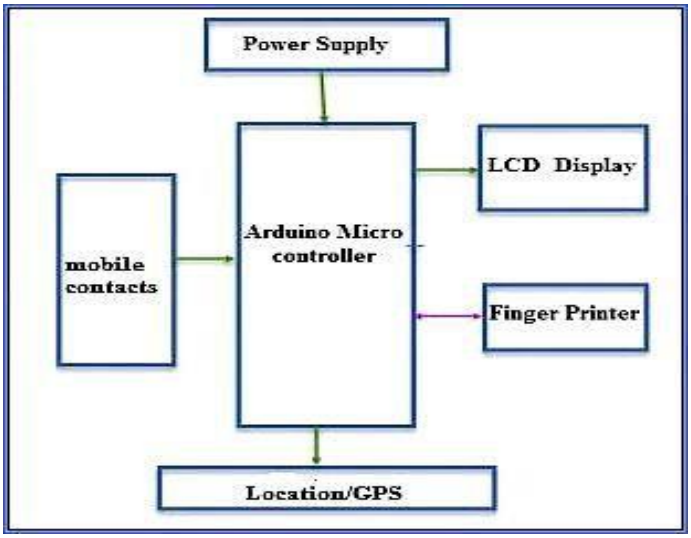

Figure. 3 Shows the Layout of Geo Integrated Fingerprint Sensor

CONTROL SYSTEM

The control system consists of fingerprint sensor which is connected to the ardunio UNO, mobile contacts will synchronized the global positioning system is connected with the tracking system by connecting with GEO technology. The specification for the control system is ardunio Uno board, DNC-white wires, VCC-red wire, TX-blue wire, RX-green wire, GND-black wire, 5v supply and it also works in 3.3v and installing adafruit finger print sensor. Enrol the fingerprint up to 127 authentic members and it can be tracked for particular family members only. There are two modes to activate the navigation system whenever the issue. The tracking system which is connected generally with the navigation system to locate the contact number by using conventional technology. The fingerprint analyser is sensed by using the scanner which is used by smart phones. The smart phone consists of capacitive sensor type and optical sensor type. The swipe type finger reader is used for dynamic movement of the fingers can be analysed and sensed. Thermal sensor and pressure sensor also used for the sensing the finger and accuracy of the sensing is less than the swipe type.

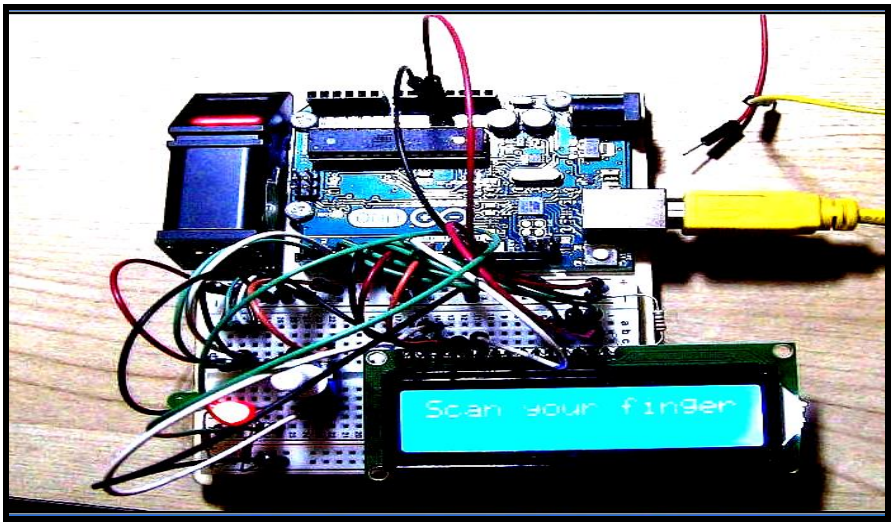

Figure.4 Location detecting control circuit

In this proposed system the application consists of fingerprint sensor to sense the actual he/she authentic finger print of the phone. Like optical scanners, capacitive fingerprint scanners generate an image of the ridges and valleys that make up a fingerprint. But instead of sensing the print using light, the capacitors use electrical current. The sensor is made up of one or more semiconductor chips containing an array of tiny cells. Optical sensors take an image of the fingerprint are the most common sensor today. The two main categories of fingerprint matching techniques are minutiae-based matching and pattern matching. Pattern matching simply compares two images to see how similar they are and in Apple and Samsung are both reportedly preparing ultrasonic fingerprint sensors for in-display integration in smart phones. The report refers to the Samsung technology as Fingerprint on Display and says it provides increased accuracy and durability. Pros of a Swipe Fingerprint Reader/Sensor is Smaller imaging array, Cheaper - It requires a smaller IC chip, which significantly reduces the overall sensor cost and Swiping motion reduces contamination buildup on the sensor, which is particularly a problem for optical sensor. Like optical scanners, capacitive fingerprint scanners generate an image of the ridges and valleys that make up a fingerprint. But instead of sensing the print using light, the capacitors use electrical current. The sensor is made up of one or more semiconductor chips containing an array of tiny cells. Fingerprint scanners are security systems of biometrics. They are used to unlock doors and in other security applications. Every fingerprint is different from any other in the world. Because there are countless combinations, fingerprints are much used for identification.Finger print sensor module is the easy way to sense the authentic finger and it is easy to make fingerprint collection, registration and comparison.

CONCLUSION

The proposed system is used to detect the location of the smart phone users by using GEO and navigation system by using mobile application. The mobile application consists of authentic person fingerprint using the smart phone is analyzed and detects the authentic person's location by using this feature. The research is carried out not only the detecting location and it used to sense the authentic person fingerprint using the Smartphone. The crime rate of the kidnapping and rapping will be reduced by using this application. The main research is used to reduce the fatality of the people and to secure the women who were travelling alone.

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