Women Safety Gadget-Safety First

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Abstract:- **Women have experienced all aspects of life, from grandeur and respect during the Vedic period to denial and servitude during the post-Vedic period. They even fought for the modern-day struggle for equality, acknowledgment, and existence. Violence, physical abuse, denial of the right to life, subordination, and neglect have all been perpetrated against women. Eve-teasing, molestation, sexual assault, and rape are examples of abuses that are frequently referred to as sexual harassment or sexual misbehaviour.**

The evidence is all around us; women's voices are increasingly being heard in Parliament, the courts, and on the streets. From the beginning, India's Constitution granted women equal rights to males. Unfortunately, owing to illiteracy and restrictive traditions, most women in this country are uninformed of their rights. In India, there have been around 32000 murders, 19,000 rapes, 7500 dowry deaths, and 36500 molestation instances registered against women, and these are the approximate numbers, which are rising by the day. And these are only the incidents that have been recorded; most rapes and molestation crimes go unreported owing to the risk of losing family reputation in the society.

I. INTRODUCTION

In today's world, with the rise of new technologies based on the Internet of Things, Machine learning that have come up, various attempts and measures can be implemented to ensure the safety of women. So we came up with the idea of conducting a survey among women to know more about the problems they face and what solution would they prefer towards it. Numerous young ladies are working in corporate even in night shifts. There is consistently a sensation of uncertainty among the functioning ladies. The proposed gadget is more similar to a wellbeing framework in the event of an emergency.

This gadget can be fitted in a blazer[2]. It is not difficult to convey this gadget with more highlights and capacities. The crisis press button is held to one of the buttons of the garments.

We took a survey among more than 100 women across India, where we asked a few questions regarding women's safety, what time of the day do they feel unsafe, did they ever face eve-teasing/molestation, would they like to have an app or an IOT device for their safety and much more. After the results of the survey, we concluded that most of the women had faced molestation and most of them were in favor of having an application or a portable IOT device that they can carry during their travel. So, we came up with our problem statement where we aim to solve the major issues faced by the majority of women.
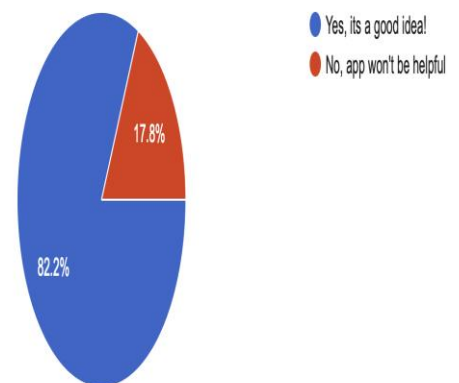
Fig. 1: Percentage of people voted for an women safety app

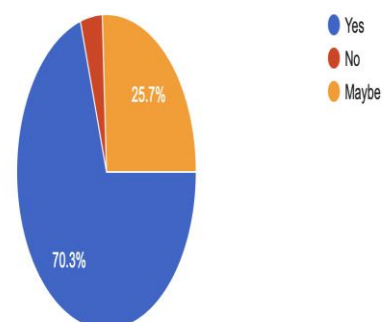Fig. 2: Percentage of people voted for an women safety IOT device

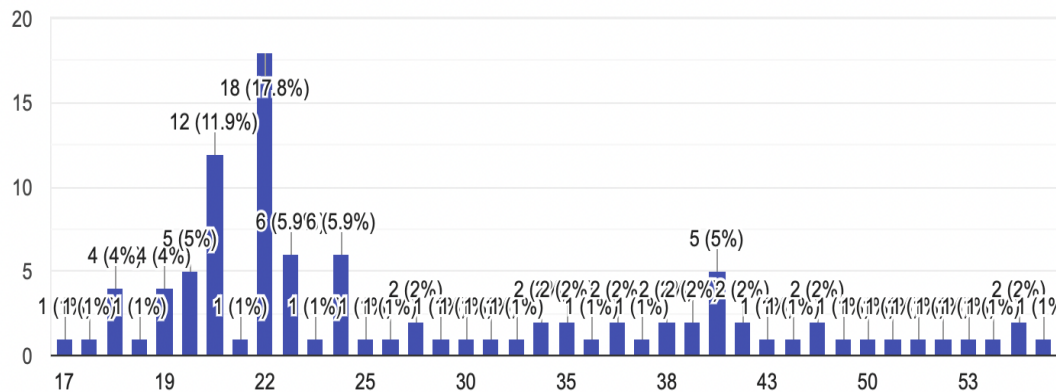## Your age (confidential, it won't be shared)

101 responses

Fig. 3: Graph showing the range of people ages whose response has been recorded

Place where you currently stay
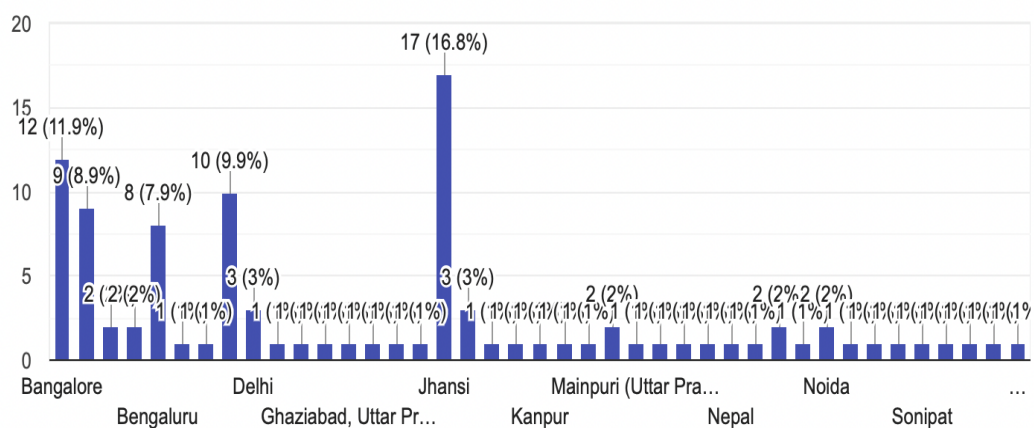
101 responses

Fig. 4: Graph indicating that the survey was conducted all over the country

II. BACKGROUND/LITERATURE REVIEW

After going through numerous research papers we have come across that safety of women is very much important as women's are becoming more and more independent these days and are traveling to the work at late nights which is not safe.Earlier people used to treat women like goddess but now they are being exploited each day in some or other place in the world.

All technical papers surveyed gave us a first view on this challenging interplay between computer technology and girl safety.
After interacting with women of age group ranging from 17 to 60 years of age and from different places our survey concluded that, most of the women prefer an IOT device and android application which would be available 24*7 and easy to use.

In recent years, there is an increase in the rate of crime against women which can be reduced using devices based on Iot.In today's time, every parent's mind will be thinking about safety of their girl child as there's always an increase on women harassments nowadays[5].In ancient times there was no device to alert or monitor which creates many problems.Hence an IOT device will help to alert ,capture images which can be used as evidence in future and also help to send location to our loved ones and also nearby police stations.

The survey also led us to study that there were very few or none women today who used an application or any iot device for their safety.

One of the applications built for this purpose was My Safety Pin Mobile Phone Application: Case of E-participation Platform for Women Safety in India. As we went through the paper there were certain limitations that restrained the use of this application such as, the app was unable to track the right location, non functioning of the app in certain locations of India and inconvenient user interface.

III. A STUDY ON SEXUAL HARASSMENT ON WOMEN IN INDIA

This research paper has been published in the International Journal of Current Advanced Research in February 2018. The paper has been divided into parts as follows.

A. Sexual harassment: forms and faces

a) Eve-teasing

In India, eve teasing, or public sexual harassment of women, has become a widespread occurrence. They can deal with it exclusively or in gatherings. It might be as simple as making a remark to a woman or even touching or brushing up against her. It could be that it is following her and stalking her.[2]

In the 1960s, the idea of eve-teasing became popular across the country. However, in many Indian metropolises, Eve teasing has become a major problem. This threat has afflicted or continues to afflict many Indian women. Women are subject to eve teasing everywhere, whether it's on public transportation, in public areas, shopping malls, streets, or at work.[14]

b) Molestation

Molestation, also referred to as 'sexual abuse' or 'sexual assault,' is another kind of violence against women. It is the act of a guy imposing sexual conduct on a woman. Molestation is the sexual exploitation of a kid or a woman for sexual enjoyment by an adult or a masculine person.[14]

Though persons who are victims or witnesses of crimes have an obligation to report them, doing so is difficult since most people believe that such situations should not be reported due to societal pressure and the fear of giving the victim a bad name.[14]

c) Rape

Rape is more than just a physical assault; it often destroys the victim's entire psyche. A murderer destroys the victim's physical body; a rapist damages the hapless woman's spirit. Section 375 of the Indian Penal Code, 1860, defines the crime of rape. Rape incidents have been on the rise in recent years at an alarming rate. In India, the number of rape incidents has increased in recent years[14]. This threat affects women of all ages and backgrounds. Even young females as young as two years old are vulnerable to such horrible atrocities. According to the World Health Organization, a woman in India is raped every 54 minutes.[14]

B. Law relating to sexual harassment

The Indian Law managing offenses of lewd behavior has been given under the Indian Penal Code, 1860. The Code characterizes the ideas of Rape, Stalking, Assault, and so on however it doesn't characterize the word eve-prodding or attack. The Indian Law managing offenses of inappropriate behavior has been given under the Indian Penal Code, 1860.

The important arrangements which have been remembered for this examination paper are those connecting with assault (Section 375 and 376) and shocking the unobtrusiveness of a lady (Section 509, 294 and 354). Likewise, an examination of the new Criminal Law (Amendment) Act, 2013 has additionally been remembered for the study.[1]

The law consolidates rigid disciplines in Section 376 for assault, assault, just as corrosive assaults. It has likewise made exceptional arrangements to recommend disciplines for the offense of assault where the offense of assault causes passing, or leaves the casualty in a vegetative state. It likewise endorses grave disciplines for rehashed guilty parties of the wrongdoing of assault. Aside from these actions, the public authority and the courts set out a few strategies and rules for guaranteeing ladies security in the country.[14]

C. Causes of sexual harassment against women

There is a male-dominated society in India. The patriarchal order of society, in which male members are regarded superior to female members, is the main reason for women being subjected to such barbaric acts and violations of their right to a dignified life[14]. The mindset and upbringing of men is also a big reason why men do not respect the modesty and decency of women.

Another key reason why men are thought to be stronger than women is due to biological characteristics and societal expectations that women are delicate and weak[3]. They are easy targets for abusers because they lack physical strength and the capacity to defend themselves. Because they lack power, are in more vulnerable and insecure positions, lack self-confidence, or have been conditioned to suffer in silence, women are far more likely than males to be victims of sexual harassment. Shyness, softness in voice and conduct, reliance on parents and brothers, and other characteristics have all contributed to the widespread belief that women are unable to defend themselves.[14]

D. Impact on Women and Society

When a woman is subjected to sexual abuse and harassment in the form of eve-teasing, molestation, or more serious forms such as rape, she experiences shock and trauma that is difficult to understand. A victim is socially isolated and morally degraded, and her dignity and character are forever tarnished. The mental suffering is severe, and the mental anguish is excruciating.[14]

IV. PROPOSED SOLUTION/ APPROACH FOR SOLVING THE PROBLEM

There have been several steps taken by the government in order to safeguard women. But these laws and steps do not prove to be very safe. Technologies like deep learning, image processing, internet of things and machine learning technology can be efficiently used to develop a solution in this regard. As surveyed, it is necessary to build an application along with an IOT device for women safety. We have divided our solution into two parts, one is an Android application on women safety and other one is IOT devices on women safety.

A. I.Android application

Every mobile phone firm has been producing smartphones and feature phones for the past few years. And as the computational capacity of those mobile phones grows, so does the number of smart mobile applications. Most people in advanced economies, such as the United States and Europe, can't imagine leaving the house without a cell phone. Not just in rich countries, but also in developing ones, mobile applications are rapidly increasing in popularity[11]. So our proposed solution includes building a mobile application.

According to the surveys made by us, the android application was considered very much necessary by the women for their safety. There are very few applications built for this cause, and there are certain limitations for each of these applications. Also we noticed that most of the women are unaware of the existing application [7]. Another surveyed paper built the application including the panic button and data flow of the applications was discussed. The paper proposed an application which is able to send SMS and make emergency calls. The limitations in the applications were the minimal features[8]. The major problem with the mobile applications is they come to no use without the phone location. So we have tried to integrate an IOT device with the application[9]. Also the applications built have very limited facilities [10]. We have tried to integrate the maximum required for the women in terms of her safety and requirements.

Our solution includes building an application which is able to send the location to the selected contacts, a discussion forum for putting forward the difficulties faced by them. The project will be optimized in terms of location detection, convenient user interface and working of the app in all the locations.

B. IOT devices

Internet of Things (IoT) gadgets have become increasingly significant in our lives over the last few years. Smart Home (e.g. smart lamps), Wearables (e.g. smart watches), Autonomous vehicles, Smart Cities, and Smart Retail are some of the most regularly utilized IOT technologies in our daily lives.

Many IOT devices have been proposed for the purpose of women's safety, but they all have drawbacks, such as the device being non-portable, monitoring being time consuming[4], and all existing systems requiring GPRS service to function properly, so they cannot be used in an emergency if there is no internet connectivity. The majority of today's systems require internet access, which is a problem because not all women have access to the internet all of the time[5]. As a result, the devices should be activated through manual methods such as pressing a button to produce a siren sound to call out for help[12], which will be relayed to a server cloud, where the data will be forwarded to the local police station. Because at times like these, first help can be delivered by people around us, so an alarming system in an IOT device will be beneficial. Following the alarm, the IOT device will send the location to a nearby police station as well as to the specified contents for supplementary assistance. When the gadget is triggered, it begins gathering photos and recording speech that can subsequently be used as evidence. When the emergency button is pressed, the GPS tracking feature tracks the user's current location[13]. In the event that the emergency button cannot be hit, the gadget can be triggered using voice input.A voice keyword needs to be registered with the system[6]. As a result, an IOT gadget with all of these functions assists in protecting the safety of women around the world.

V. CONCLUSION

According to a poll conducted in India, 53% of working women do not feel safe - women who work the night shift (Bangalore-56 percent , Chennai-28 percent , Hyderabad-35 percent , Mumbai-26 percent). In India, 86 percent of working women are women, and in Delhi, Mumbai, Hyderabad, Kolkata, and Pune, women face more obstacles than in other cities. As a result, the project's major purpose is to ensure that every woman in our society feels safe and protected. We can tackle the problems to some extent by implementing a real-time application and hardware. With more research and creativity, this project could be turned into a small wearable gadget such as a watch or a pendant.With additional examination and advancement, this task can be carried out in various areas of safety and surveillance.The framework can play out the continuous checking of wanted region and identify the brutality with a decent exactness.

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