iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 12 **Issue:** I **Month of publication:** January 2024

DOI: https://doi.org/10.22214/ijraset.2024.57965

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 12 Issue I Jan 2024- Available at www.ijraset.com

Case Study: Role of Technology in Protecting Women against Harassment

Khan Naushin[1], Khan Tanzila[2]
Department of master's in science of information and technology, Maharashtra college of Arts, Science and Commerce, Mumbai 400 008, India

Abstract: ***The role of technology in safeguarding women against harassment is pivotal in addressing the pervasive challenges faced globally. This paper explores the multifaceted ways in which technological advancements serve as a catalyst in enhancing women's safety, empowerment, and access to resources. From mobile applications equipped with emergency features to wearable devices providing discreet distress signals, technology offers immediate assistance and a sense of security in vulnerable situations. Location-based services and crowdsourced data aid in mapping safe routes, identifying high-risk areas, and documenting incidents to inform preventive measures. Moreover, social media platforms and online support networks create spaces for awareness, resource-sharing, and community building. Artificial intelligence, blockchain technology, and educational platforms play vital roles in predicting, preventing, and educating individuals about harassment. However, challenges of accessibility, digital literacy, privacy, and inclusivity must be addressed to ensure equitable access to these technological solutions. This abstract emphasizes the imperative need to harness technology ethically and inclusively, leveraging its potential to empower women and combat harassment effectively.***

The utilization of mobile applications equipped with features such as emergency SOS buttons and real-time location tracking stands out as a cornerstone in providing immediate aid and reassurance to women in vulnerable situations. Moreover, wearable devices integrated with distress signaling capabilities offer discreet avenues for seeking help.Location-based services, powered by GPS technology, facilitate mapping safe routes and identifying high-risk areas, bolstering preventive measures. Additionally, crowdsourced data, anonymously reported incidents, and AI-driven analytics contribute to the creation of comprehensive databases that spotlight unsafe environments and patterns, thereby aiding in proactive interventions.

I. INTRODUCTION

In today's world, women safety has become a major issue in our country as women can't step out of their house at any time, especially during night. It is primarily due to fear of violence against them or being physically or sexually abused. The fear of harassment against women is not only the condition at outside but it may also happen at homes. Even in the 21st century where the technology is rapidly growing and new gadgets are being developed but still women and girls are facing problems. They often work across ethnic, religious, political, and cultural divides to promote liberty. We know that our society is all aware of importance of women safety, but it is also a duty of individual that they should be properly protected. Not only this, we must create such an environment in our society that women must feel secured outside their house even when they are alone at any time. Women are not so physically fit as compared to men so in case of a need a helping hand would be a boon for them. The integration of mobile applications equipped with emergency features has revolutionized the immediacy of response, providing women with instant access to aid and support in threatening situations. Wearable devices, designed to discreetly signal distress, offer an additional layer of security, empowering women to seek help swiftly and unobtrusively. Moreover, technology leverages data-driven insights, harnessing the power of crowdsourced information and AI analytics to identify patterns, high-risk areas, and preemptive measures against harassment. Social media platforms have evolved into robust networks, facilitating awareness, community building, and solidarity for women facing harassment.

II. BACKGROUND

In Today's scenario women are subjected to all kind of harassment frequently. Women's do not feel safe while walking on street in odd hours. The women harassment cases have increased over the years. And we all know that women safety has become the number one priority in the real-world situation. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. Many women's in developed countries still fear to go outside alone due to number of cases of violence against women.

Problems may come from any direction such as women walking on the road after the work, going to super market or many other reasons for which they go alone. People at home are not sure of their return safely. Another factor is woman die without knowing the reason as they attend excursions and industrial trips conducted by the organizations. It happens due to attacks on woman but not suicides. Many women safety awareness program have been implemented as well as many women upliftment NGO's have been created for women help and security. Hence, to make women safety safer many attempts have been made but, still a safer and secure system is needed that can ensure safety during public transport and in general.

III. LITERATURE SURVEY

Many paper had this common gap where the call and message cannot be sent because of low connectivity and inability to transmit signals in network-less areas which eventually leaves the user with no option to communicate while in other paper the message is only sent to police, who further decides the action based on the legitimacy of the call. Some application needs to be initiated manually, which may alert the attacker. In some geolocation is used to get the location of the one in need, which one cannot get if they choose not to share with the application. While one had a gap where the message is sent every 5 minutes, unless and until the user presses the stop button.

Many paper had this common gap where the call and message cannot be sent because of low connectivity and inability to transmit signals in network-less areas which eventually leaves the user with no option to communicate while in other paper the message is only sent to police, who further decides the action based on the legitimacy of the call. Some application needs to be initiated manually, which may alert the attacker. In some geolocation is used to get the location of the one in need, which one cannot get if they choose not to share with the application. While one had a gap where the message is sent every 5 minutes, unless and until the user presses the stop button.

IV. PROPOSED APPLICATION

In future we can proposed a mobile application which can consists following features.

1) *Emergency SOS Button:* A prominent feature that, when activated, immediately contacts emergency services or a set of pre-selected contacts with the user's location.
2) *Location Tracking:* Real-time location sharing with trusted contacts or authorities can be crucial in emergencies.
3) *Safety Tips and Resources:* Providing educational content on recognizing and dealing with different types of harassment, along with information about local support services and helplines.
4) *Safe Routes:* Integration with maps to suggest safer routes or areas based on reported incidents and user feedback.
5) *Community Reporting:* A feature allowing users to report harassment incidents anonymously, contributing to a larger database that helps in identifying high-risk areas.
6) *Audio/Video Recording:* Capability to discreetly record audio or video of an incident, which can serve as evidence.
7) *Quick Messaging:* A quick way to send predefined distress signals or messages to contacts in case of danger.
8) *Safe Companion:* Virtual companion feature allowing a trusted contact to virtually track the user's movements in real-time.
9) *Legal Aid and Support:* Access to legal advice, information about rights, and the ability to connect with legal aid organizations.

Remember, security and privacy should be paramount in such an app. Data encryption, user consent for tracking, and secure storage of information are critical considerations.

Building partnerships with local law enforcement, NGOs, and community organizations could also enhance the app's effectiveness and outreach. Regular updates, user feedback mechanisms, and community engagement will be essential for continual improvement.

V. CONCLUSION

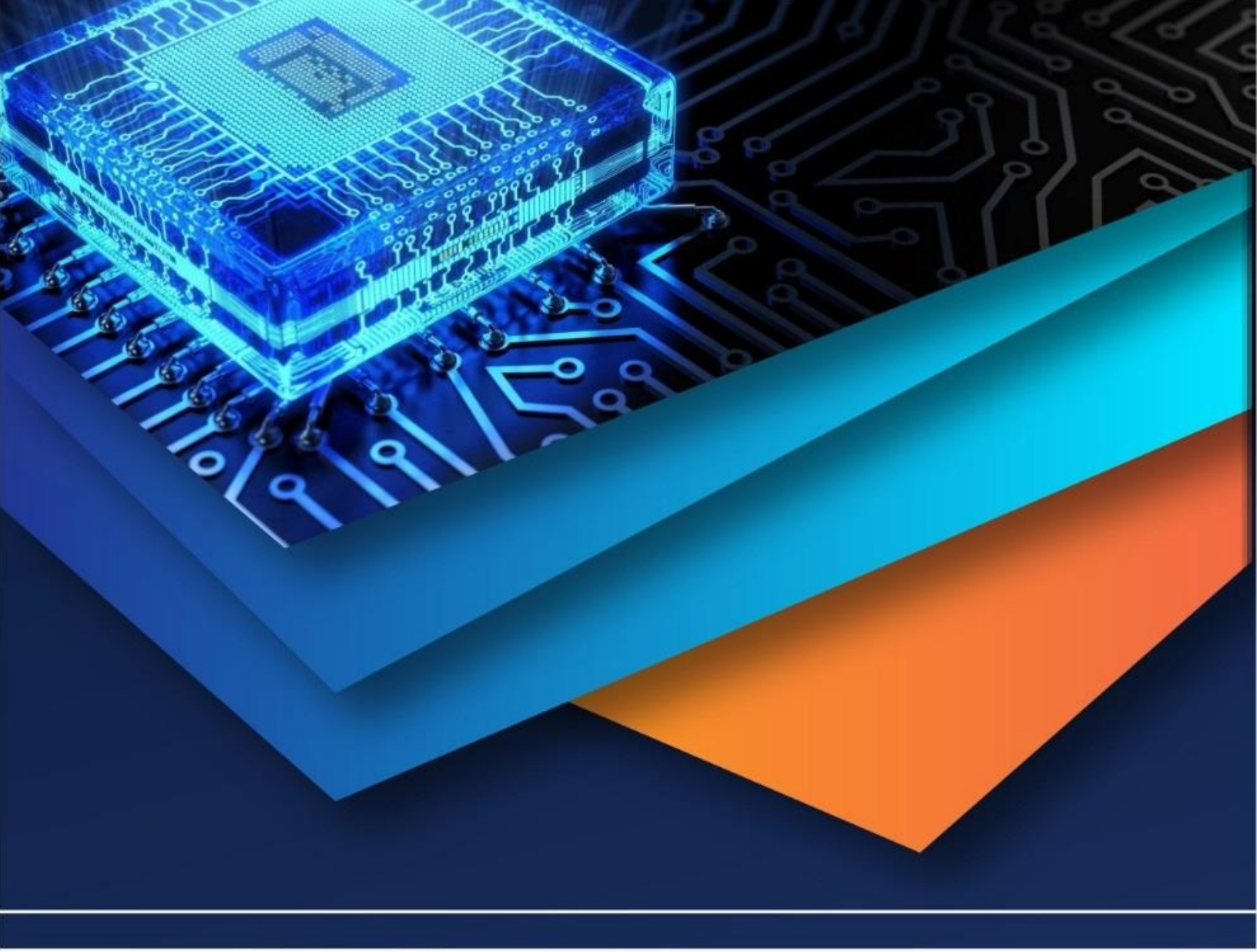
The evolution of technology has emerged as a formidable ally in the ongoing battle to protect women against harassment. Across various fronts, from mobile applications to AI-driven solutions, technology has presented a diverse arsenal of tools that empower women, enhance their safety, and amplify their voices.

Mobile applications equipped with emergency features serve as immediate lifelines, providing swift assistance and reassurance in distressing situations. Wearable devices, discreet and responsive, offer an additional layer of security, allowing women to signal for help discreetly.

The integration of GPS and location-based services has redefined safety measures by mapping safer routes and identifying areas of potential risk. Simultaneously, the amalgamation of crowdsourced data and AI-powered analytics has generated comprehensive databases that spotlight unsafe environments, fostering proactive interventions.

REFERENCES

[1] https://ieeexplore.ieee.org/document/8285555(Sharifa Rania Mahmud,Jannatul Maowa,Ferry Wahyu Wibowo ."Women Empowerment: One Stop Solution for Women" Published in IEEE 2017)
[2] https://ieeexplore.ieee.org/document/7443652(Ravi Sekhar Yarrabothu,Bramarambika Thota ."ABHAYA: AN ANDROID APP FOR THE SAFETY OF WOMEN" .Published in IEEE 2015)
[3] https://ieeexplore.ieee.org/document/8537376(Shivani Ahir, Smit Kapadia, Prof. Jigar Chauhan, Prof. Nidhi Sanghavi ,"The Personal Stun- A Smart Device For Women's Safety." Published in IEEE 2018)
[4] https://ieeexplore.ieee.org/document/8284348 (Saumya Pandey, Nikita Jain, Aditi Bhardwaj, Dr. Gagandeep Kaur, Vimal Kumar "Reach360:A Comprehensive Safety Solution."Published in IEEE 2017)
[5] https://ieeexplore.ieee.org/document/9158134 (A. Z. M. Tahmidul Kabir,Al Mamun Mizan,Tasnuva Tasneem ."Safety Solution For Women Using Smart Band And CWSApp" Published in IEEE 2020)
[6] https://ieeexplore.ieee.org/document/9137772 (Atharva Deshmukh,Sourab Banka,Sean Bruno Dcruz ."Safety App: Crime Prediction Using GIS".Published in IEEE 2020)
[7] https://ieeexplore.ieee.org/document/9182243(Adithya Anand, Nishanth S, Vamsi Krishna P, Krishna SR and Anjali T ."Ally - A Crowdsourced Distress Signal App".Published in IEEE 2020)
[8] https://ieeexplore.ieee.org/document/9214128)Ashwin Kumar U,Adityan B ."A Mobile-based personal safety app to detect well-lit streets for safe night-time travel".Published in: IEEE 2020)
[9] https://ieeexplore.ieee.org/document/7913204 (Moni Arora, Nisha Kaushik,Tanya Jain, Baljeet Kaur, Pooja Vashisth "HumSafar: An Android App enabling a Safer Way to Travel".Published in IEEE 2016)
[10] https://ieeexplore.ieee.org/document/9087188 (Vinay Mishra,Nilesh Shivankar,Sanam Gadpayle ."WOMEN'S SAFETY SYSTEM BY VOICE RECOGNITION".Published in IEEE 2020)
[11] https://ieeexplore.ieee.org/document/7519391 (Nandita Viswanath, Naga Vaishnavi Pakyala, Dr. G. Muneeswari ."Smart Foot Device for Women Safety".Published in IEEE 2016)
[12] https://ieeexplore.ieee.org/document/8074261 (Dantu Sai Prashanth, Gautam Patel, Dr. B.Bharathi ."Research and development of a mobile basedwomen safety application with real-time databaseand data-stream network".Published in IEEE 2017)
[13] https://ieeexplore.ieee.org/document/7373171 (Dhruv Chand, Sunil Nayak, Karthik S. Bhat,Shivani Parikh, Yuvraj Singh, Amita Ajith Kamath ."A Mobile Application for Women's Safety: WoSApp".Published in IEEE 2015)
[14] https://ieeexplore.ieee.org/document/9068024 (Rabbina Ridan Khandoker, Shahreen Khondaker, Fatiha-Tus-Sazia, Fernaz Narin Nur, Shaheena Sultana ."LIFECRAFT: AN ANDROID BASED APPLICATION SYSTEM FOR WOMEN SAFETY"Published in IEEE 2019)
[15] https://ieeexplore.ieee.org/document/7784986 (Shaik Mazhar Hussain,Shaikh Azeemuddin Nizamuddin, Rolito Asuncion, Chandrashekar Ramaiah, Ajay Vikram Singh "Prototype of an Intelligent System based on RFID and GPS Technologies for Women Safety".Published in IEEE 2016)
[16] https://ieeexplore.ieee.org/document/7274962 (Glenson Toney, Dr. Fathima Jabeen, Puneeth S "Design and Implementation of Safety Armband for Women and Children using ARM7".Published in IEEE 2015)
[17] https://ieeexplore.ieee.org/document/8697863(Priya Chaudhari, Ramkumar Kamte, Kartik Kunder, Ann Jose, Sweedle Machado"Street Smart': Safe Street App for Women usingAugmented Reality"Published in IEEE 2018)
[18] https://ieeexplore.ieee.org/document/8697626 (Shrutika Tayade, Rutuja Burde, Sayali Patil, Mrs.Jayashree B. Kulkarrni, Gauri Mungase"'Chal' : Digital Citizen". Published in: IEEE 2018)
[19] https://ieeexplore.ieee.org/document/8657489] (Nasima Ferdous Tripti, Abrar Farhad, Wasim Iqbal, Hasan U. Zaman"SaveMe: A Crime Deterrent Personal Safety AndroidApp with a Bluetooth Connected Hardware Switch". Published in IEEE 2018)
[20] https://ieeexplore.ieee.org/document/8923204 (Vinesh Sharma.Yati Tomar,D.Vydeki "'Smart shoe for women safety". Published in IEEE 2019)



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY