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Case Study: Role of Technology in Protecting Women against Harassment

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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.

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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.

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