One Stop Solution System for Women Empowermet

[1]DR. Priyanka Halle, [2]Siddhesh Arote, [3]Vaibhav Wagh, [4]Rushikesh Takras
[2,3,4] *Undergrad. Student, Dept. of Information Technology & Science, Lonavala, Maharashtra*
[1]*Assistant Prof SKN Sinhgad Institute of Technology & Science, Lonavala, Maharashtra*

Abstract: Sexual harassment against women has increased in recent years and morewomen are affected. Whether it is an underdeveloped country or a developed country, the situation is very serious. Therefore, it has a major impact on women empowerment and income growth in the country. In this project, we are developing an Android app and IoT gadget that can make women's mobility better. Women can getinstant and better security support by pressing the e mergency button on the device. The device can track the user's location instantly and contact the nearest police staton and volunteers in case of an emergency. With the tool, users can also find nearysafe areas. The tool can also work in offline and online modes. Even without intert service, users can continue to use the device to get free help and reach the nearest police stati on. The gadget has Bluetooth, GPS, GSM, Arduino Nano and other components.The combina tion of all these features makes this device economical and easy to use.

Index Terms - Women's Safety, Emergency Call Systems, GPS Activation, SOS Messages, Legal Authorization, Violence Against Women, Legal Information, Support Services, Health care, Cancer, Health, Health, Healthcare, Pregnancy, Prevention, Customer authentication, account setup, password recovery start over, user experience (UX), user base design.

I. INTRODUCTION

In today's challenging environment, women often lack services and support and face serious challenges in health, safety, and support. To solve these problems, we propose to create a "one stop solution for women's empowerment" - a complete software platform that combines essential services in a single, easy use interface. The system will include health information, diages, appointments and virtual consultations to meet women's health needs. In addition, it will prov ide victims with a secure way to register incidents, links to counselling and legal services and emergency help calls with emergency help buttons, helpline, and geotagging. Our project use modern technology using Node.js on the backend and React Native on the frontend. Its goalar to increase accessibility, protect user privacy, and provide Realtime information management i n a fast paced development environment. The program aimto strengthen relationshipsbyprovid ing women with the tools and support they needto improve their safety, health, and wellbeing.

II. LITERATURE SURVEY

1. Title of the article: Women empowerment for development in India
Authors: T. Radhu, Dr. V. Kumar, R. Thiyagarajan and A. Priyadharshini
Abstract: India is a developing country and its people are eager to achieve full development by 2020. There are many hurdles that women have to overcome to succed.
However, women are still employed in many sectors like military, engineering and medicine. Women need to be empowered so that all women in the country can meet the standards.

2. Article title: Empowering women engineers through networking
Author: M. Ileana Ruiz-Cantisani, Rebecca M. Garc§ä±a-Garcâ'ä±a and Vianney Lara-Prieto
Abstract: – The objectives of the National Initiative for Women in Engineering and Science (MIC)was launched in 2007. This program, which was launched in March 2019, aims to mon itor and raise awareness on gender equality, equal opportunities and women's power. The prog ram is coordinated by a group of experts whose aim is to collaborate, support and enhance eff orts to create a greater impact on our academic community. This report describes the efforts of the Communications Commission to support women engineers through communication.

3: Solutions for women's safety through smart bracelets and CWS applications
Authors: Tasnuva Tasneem, Al Mamun Mizan and A. Z. M. Tahmidul Kabir
Main topic: Nowadays, sexual harassment against women is increasing and it affects women more. Both underdeveloped and developing countries are facing adverse conditions. Therefore it has a great impact on the economic development of the country as well as

the empowerment of women. In this project, we are developing an Android application and IoT gadget that can improve women's mobility. Women can activate the emergency key on the device to get first aid. In case of an emergency the device can instantly report the user's location to the nearest police station and volunteers. With the help of this tool, users can also find the location of the safest area.

4.Title: Women in Engineering: Perspectives and Challenges in Algharbia District, UAE The socioeconomic, supporting infrastructure and society is driven by engineering. It plays a significant role in creativity and the rise and fall of civilization. The connection between scientific research and its subsequent applications and human needs and quality of life is possible through the efforts of engineers. Providing equal knowledge and opportunities to women and men contributes to the advancement of the scientific community, improves economic outcomes and increases the growth of the country. The global challenge is to enable more women to pursue STEM (Science, Technology, Engineering and Mathematics) degrees.

5.Title: Women-Only Open Space Environment
Author: Vanna Singh
Abstract: A female student of Dhaka University was sexually assaulted on a major road in Dh aka.
The woman took a bus to her friend's house. She went to Kurmitola at 7pm.When she was accidentally brutally raped and tortured by a mad man. She lost consciousness at 10pm and found herself alone [2].On 26 January of the same year, a female SSC candidate was abducted and tortured. The incident took place in Talakanda upazila of Mymensingh.

III .PROBLEM STATEMENT

Despite progress in many areas, women still face significant challenges to empowerment, safet y, and health. These problems are often exacerbated by a lack of reliable, comprehensive, and easily accessible information. Many women struggle to access health services and important information, are unable to report abuse or violence, and may not seek timely help in emergencies. Seeking help through traditional channels can be risky, ineffective, or difficult to obtain, especially in disadvantaged are as. These disparate support models fail to meet women's need, negatively impacting their health and quality of life. A comprehensive, user friendly platform improve women's access to health, violence reporting and support, and emergency services is urgently needed to enhance women's empowerment, health, and safety.

IV. METHODOLOGY

1.Identification and definition of the problem:
There are fundamental problems in women's empowerment, safety and health. These include lack of access to health information and reliable services, domestic violence and violence; many victims refuse to come forward due to stigma and the associated lack of support; lack of trust in emergency services and social services. A unified platform is urgently needed to address these problems. The "One Stop Solution for Women's Empowerment" called for a safe, anonymous process for addressing violence, including access to shelters, support groups, and legal services. Create emergency response, including, Women's safety, health, and empowerment by providing comprehensive, user friendly information that addresses women's needs in a simple way.

2. Research Needs:
Conduct Research: Conduct surveys, interviews, and focus groups with women from diverse backgrounds to better understand women's unique needs and impact health, safety, and empowerment. Consult with stakeholders: Consult with emergency services, women's advocacy groups, legal and medical professionals for specific needs and feelings. Requirements: Gather information and create a comprehensive document detailing the required functionality, features, and user stories.

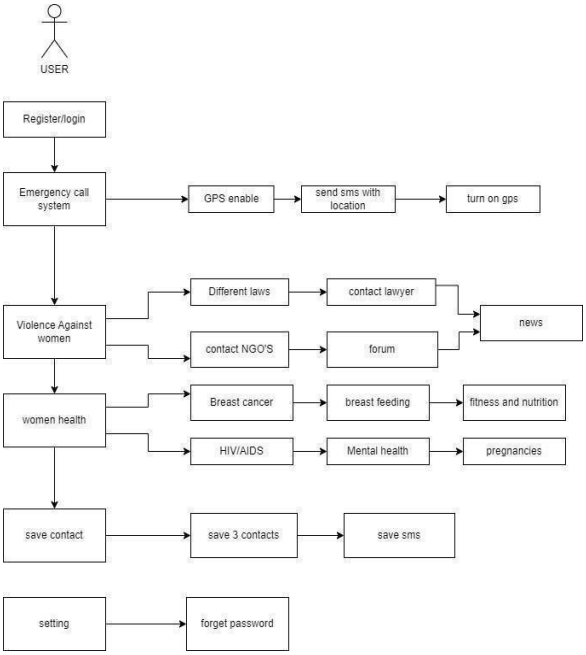
3.Design:
Wireframes and Mockups: Create wireframes and mock ups of your app's user interface (UI) for an intuitive and user-friendly design.
System Architecture: Design the system architecture, considering API endpoints, database architecture, and integration points with external services.
User Experience (UX) Design:
Focuses on the overall user experience to ensure engagement and efficient navigation.

4.Development:
Create a development environment: Create a development environment that includes continuous integration and continuous delivery (CI/CD) pipelines, test models, and control systems (like Git).Backend development: Use Express.js and Node.js to create backend services and implement the necessary reporting tools, emergency calls, and data

processing APIs. Frontend development: Use React Native to develop the frontend while integrating the back -end services to ensure cross-compatibility for iOS and Android.
Integration: Securely exchange data by integrating with other APIs, such as Twilio for messaging, Google Maps API for geotagging, and Healthcare API.

5.Deployment:
Cloud deployment: Move backend services to a cloud platform(like AWS or Google Cloud) for scalability and reliability.
Submit to the App Store: Publish your mobile app to the App Store (iOS) and Google Play store (Android), ensuring it complies with platform guidelines. Monitoring and analytics: Set upmonitoring and analytics tools to track user engagement, app performance, and usage.

IV.SYSTEM ARCHITECTURE



V. CONCLUSION

When a user launches the app for the first time, they will be required to create a new account or sign in using their existing credentials. After successful authentication, users will be grante d access to various changes to meet women's safety, health and legal requirements. The easy to use emergency call feature allows users to send SOS messages for preset emergency contact and GPS assistance for accurate location tracking. If GPS is not used, the user will be prompted to turn on GPS to ensure accurate location information. In a section dedicated to preventing violence against women, users can find helpful resources including links to groups and legal experts, information about the law, a forum, and news updates that raise awareness and get t hem involved. The discussions are ongoing. The app empowers women by providing more health information on topics such as breast cancer, fitness, mental health, and pregnancy. Users can also efficiently manage their contacts by saving prewritten messages and emergency contacts for quick reference in case of emergency. Account settings provide users with the freedom and security to set preferences and perform password resets when necessary, providing the user experience and experience in the program.

VII. REFERENCES

[1] Halle, P. and Shiyamala, S. (2019) "Architectural Integration for Wireless Communication Security in terms of integrity for Advanced Metering Infrastructure-Survey Paper", Asian Journal For Convergence In Technology (AJCT) ISSN -2350-1146. Available at: https://asianssr.org/index.php/ajct/article/view/771

[2] Halle, P. and Shiyamala, S. (2019) "Secure Routing through Refining Reliability for WSN against DoS Attacks using AODSD2V2 Algorithm for AMI," International Journal of Innovative Technology and Exploring Engineering. Blue Eyes Intelligence Engineering and Sciences Engineering and Sciences Publication - BEIESP. https://doi.org/10.35940/ijitee.I8178.0881019(Scopus)

[3] Halle, P.D., Shiyamala, S.and Rohokale, Dr.V.M. (2020) "Secure Directionfinding Protocols and QoS for WSN for Diverse Applications-A Review," International Journal of Future Generation Communication and Networking, Vol. 13 No. 3 (2020) Available at: https://sersc.org/journals/index.php/IJFGCN/article/view/26983. (Web of Science)

[4] Halle, P.D. and Shiyamala, S. (2020) "Trust and Cryptography Centered Privileged Routing Providing Reliability for WSN Considering Dos Attack Designed for AMI of Smart Grid," International Journal of Innovative Technology and Exploring Engineering. Blue Eyes

Intelligence Engineering and Sciences Engineering and Sciences Publication-BEIESP. doi:10.3594 0/ijitee.b7449.019320.

[5] Halle, P.D. and Shiyamala, S. (2021) Ami and its wireless communication security aspects with QOS: A Review, SpringerLink. Springer Singapore.Available at: https://link.springer.com/chapter/10.1007/978-981-15-5029-4_1 (Scopus: Conference Proceeding Book Chapter)

[6] Halle, P.D. and Shiyamala, S. (2022) "Secure advance metering infrastructure protocol for smart grid power system enabled by the internet of things," Microprocessors and Microsystems, 95, p. 104708. Available at: https://doi.org/10.1016/j.micpro.2022.104708(SCI)

[7] Halle, P.D. and Shiyamala, S. (2022) "Internet of things enabled secure advanced metering infrastructure protocol for smart grid power system" SN Computer Science. (Scopus under review