SOFTWARE REQUIREMENTS SPECIFICATION

SAFEHAVEN: Women Safety and Wellness Application

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1.INTRODUCTION

The application promotes a healthy lifestyle by enabling consultation with experts, providing health related articles, and support groups.
Personal safety features will help provide peace of mind, immediate communication, and access to help in emergency. As per the 5th round of the National Family Health Survey (NFHS-5), 30% of women in India between the ages of 15-49 have experienced physical, sexual, or domestic violence. A health survey states that 92% of Indian women know that feminine health affects emotion and mental well-being, yet they are hesitant to seek help.

1.1 PURPOSE

The main purpose of the Project is to build a mobile application using Flutter. It will help provide location tracking using Flutter Google Map API, awareness of the crime rate of an area with the help of AI using Support Vector Machine algorithm. Helpline facility to help contact nearest public utility area during emergency. Voice recognition using Google Speech API can help recognize some critical situation which requires immediate aid. Wellness related area provides details of medical experts to help, articles from national daily or a general article and support groups to connect with other application users which includes sharing text messages.
The application aims to create comfort and safety and discourage violence. To mitigate physical and mental harm that may have adverse effect on the individual. Provides balance of physical, emotional, mental, and spiritual well-being. Helps to create a safer, healthier community for everyone.

1.2 INTENDED AUDIENCE

The intended audience for SafeHaven includes women from all walks of life, above the age of 13.

1.3 INTENDED USE

The intended use includes GPS tracking, voice recognition and sending alert messages during wrong route or unsafe place travelled by clicking on the ‘Track me’ button. Red alerts which include pressing emergency button, or shaking phone and can be triggered while using the application .24/7 active support helpline by clicking on the respective

button. Crime rate detection of the surrounding area. Information of medical professionals about mastery on their field and contact information. Support group which allows exchange of text messages among respective groups.

1.4 PRODUCT SCOPE

The scope of SafeHaven includes direct contact with helpline facilities during emergency. Tracking of location while travelling and corresponding send alert messages when in a life-threatening situation. To detect certain voice patterns including word ‘HELP’ that would send alerts to necessary contacts. Will render help from medical experts for emotion and mental well-being. Articles from national daily can help keep an up-to-date knowledge of current situation across the country.

1.5 DEFINITIONS AND ACRONYMS

1.5.1 Definitions

API is a set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service.

AI is the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

GPS is an accurate worldwide navigational and surveying facility based on the reception of signals from an array of orbiting satellites.

Flutter is an open-source UI software development kit created by Google.

1.5.2 Acronyms

API– Application Program Interface

AI– Artificial Intelligence

GPS- Global Positioning System

UI- User Interface

2. OVERALL DESCRIPTION

2.1 USER NEEDS

- Safety: Users need to feel safe when they are out and about and want an application that can provide them with a sense of security in case of emergencies or threats.

- Awareness: Users want to be aware of potential dangers in their surroundings, including areas with high crime rates or unsafe neighborhoods.

- Education: Users want to learn about self-defense techniques and safety tips to protect themselves in dangerous situations.

- Support: Users want access to mental health resources and support groups, to help them cope with the psychological effects of violence or harassment.

- Community: Users want to connect with other users in their community and provide support to one another, creating a sense of solidarity and empowerment.

- Privacy: Users want an application that respects their privacy and does not share their personal information with unauthorized parties.

- Empowerment: Users want an application that empowers them to take control of their safety and wellness, providing them with the tools and resources they need to stay safe and healthy.

- Feedback: Users want to provide feedback and suggestions for future updates and improvements, to help the application continue to meet their evolving needs over time.

2.2 ASSUMPTIONS AND DEPENDENCIES

- Network Connectivity: The application assumes that users have access to a reliable internet connection, as it relies on real-time location tracking and emergency alert systems.

- Mobile Device: The application assumes that users have a compatible mobile device with sufficient storage space and processing power to run the application.

- Emergency Services: The application depends on emergency services to respond quickly to distress signals and provide timely assistance to users in case of emergencies.

- User Input: The application assumes that users will provide accurate and up-to-date information, such as emergency contact details and location data, to ensure that the application functions correctly.

- User Behavior: The application depends on users to follow safety protocols and use the application responsibly, including reporting emergencies promptly and not misusing the application's features.

- User Engagement: The application assumes that users will engage with the application regularly and take advantage of its features, such as self-defense techniques and mental health resources, to improve their safety and wellness.

- Data Privacy: The application depends on users trusting that their personal information is kept private and secure, and that the application is compliant with relevant data privacy laws and regulations.

- Location Accuracy: The application assumes that the location data provided by the user's mobile device is accurate and reliable, as this information is crucial for emergency responders to locate users in case of emergencies.

- Third-Party Services: The application depends on third-party services, such as mapping services and emergency response systems, to provide accurate and timely information to users.

- Application Updates: The application assumes that users will keep the application updated to ensure that they have access to the latest features and security updates.

3. SYSTEM FEATURES AND REQUIREMENTS

3.1 FUNCTIONAL REQUIREMENTS

- Registration and Login: The application should have a registration and login system that allows users to create an account and log in using their email or social media accounts.

- Emergency Alert System: The application should have an emergency alert system that enables users to send a distress signal to their emergency contacts or local authorities in case of any danger or threat to their safety.

- Location Tracking: The application should be able to track the user's location in real-time, enabling emergency responders to locate them quickly.

- Self Defense Techniques: The application should provide users with self-defense techniques and tips to help them protect themselves.

- Safety Tips: The application should provide users with safety tips and advice on how to avoid dangerous situations.

- Wellness Resources: The application should provide users with access to mental health resources, including therapists, counselors, and support groups.

- Community Support: The application should have a feature that allows users to connect with other users in their community and offer support to one another.

- Reporting System: The application should have a reporting system that enables users to report any incidents of harassment, violence, or abuse.

- Privacy and Security: The application should have robust privacy and security measures in place to protect user data and ensure their safety.

3.2 EXTERNAL INTERFACE REQUIREMENTS

- User Interface: The application should have an intuitive and user-friendly interface that allows users to access its features easily.

- Compatibility: The application should be compatible with different devices and operating systems, including Android and iOS.

- Social Media Integration: The application should integrate with social media platforms, enabling users to share their experiences and seek support from their social networks.

- Maps and Navigation: The application should integrate with maps and navigation systems to help users find safe routes and access emergency services quickly.

- Contact Integration: The application should be able to import and store emergency contact information from the user's phone book or social media accounts.

- Cloud Integration: The application should integrate with cloud services to enable users to store and access their safety plans and other information from multiple devices.

- Wearable Technology Integration: The application should be able to integrate with wearable technology, such as smartwatches or fitness trackers, to provide additional safety and wellness features.

- Third-Party Integration: The application should be able to integrate with third-party services, such as transportation or delivery applications, to ensure users' safety while using these services.

3.3 SYSTEM FEATURE

- Emergency Alert System: The application should have an emergency alert system that enables users to send a distress signal to their emergency contacts or local authorities in case of any danger or threat to their safety.

- Location Tracking: The application should be able to track the user's location in real-time, enabling emergency responders to locate them quickly.

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- Reporting System: The application should have a reporting system that enables users to report any incidents of harassment, violence, or abuse.

- Privacy and Security: The application should have robust privacy and security measures in place to protect user data and ensure their safety.

- Feedback and Improvement: The application should have a feedback and improvement system that allows users to provide feedback and suggestions for future updates and enhancements.

- Real-time Notifications: The application should be able to send real-time notifications to users about any emergency situations or safety alerts in their area.

- Personalized Content: The application should provide users with personalized content based on their interests and needs, including articles, videos, and podcasts related to safety and wellness.

- In-application Chat: The application should have an in-application chat feature that allows users to connect with emergency responders, mental health professionals, or community members for support and advice.

- Automated Safety Check-ins: The application should have automated safety check-ins that allow users to set reminders for safety checks and share their status with emergency contacts if they fail to respond.

- Analytics and Insights: The application should provide analytics and insights to help users track their safety and wellness progress over time and make informed decisions about their safety plans.

3.4 NON FUCTIONAL REQUIREMENTS

- Performance: The application should perform well, responding quickly to user input and providing timely alerts in emergency situations.

- Usability: The application should be easy to use and intuitive, with clear navigation and instructions.

- Reliability: The application should be reliable, with a high level of availability and minimal downtime.

- Security: The application should be secure, with robust measures in place to protect user data and prevent unauthorized access.

- Privacy: The application should respect users' privacy, with clear policies and procedures in place for handling personal information.

- Scalability: The application should be scalable, able to handle a growing number of users and increasing traffic without impacting performance or reliability.

- Compatibility: The application should be compatible with different devices and operating systems, ensuring that users can access its features from a range of devices.

- Interoperability: The application should be interoperable, able to integrate with other systems and services, such as emergency response systems and healthcare providers.

- Compliance: The application should comply with relevant regulations and standards, such as data protection laws and healthcare regulations.