

4. RESEARCH AND REQUIREMENTS

In the stage of defining the requirements for the project development, I had many brainstorming sessions with my Peter Hill (Capstone sponsor) to define the best benefit for the users on the SafeZone platform. I started by identifying the most important and relevant user roles at the current stage of the project. I took in consideration the project problem statement, basic feature description and goals and objectives to define the following roles:

- Visitor:
 - **Search Location:** Can search for locations without logging in.
 - **View Ratings:** Can see summarized ratings upon searching for locations.
- Registered User:
 - **Submit Ratings and Reviews:** Can submit detailed safety ratings and reviews.
 - **Personalized Dashboard:** Access to a personalized dashboard that tracks their submitted reviews and preferred locations.
- Administrator:
 - **Manage Content:** Oversee the submission and moderation of reviews and ratings to ensure they meet community guidelines.
 - **Data Analysis Tools:** Access to analytics tools to monitor user engagement and the effectiveness of the platform.

4.1 Functional Requirements

User	Requirement	Definition
User Account Management	Registration	Users can create an account using an email address or social media login. Necessary Fields: <ul style="list-style-type: none"> ● Username ● Password ● Email address ● Demographic info (optional)
	Login/Logout	Secure login and logout functionality. Implement measures to prevent unauthorized access and attacks such as brute force.
	Password Recovery	Users should be able to recover their password through a 'forgot password' link which sends a

		password reset link to their registered email.
Rating System	Submitting Ratings	Users can rate locations on a scale (1 to 5 stars) and provide a text review detailing their safety experiences. Ensure the interface is user-friendly to encourage participation.
	Viewing Ratings	Users can view an aggregated score of a location and browse individual reviews and ratings. Display the average rating prominently and allow users to easily navigate through detailed reviews.
Data Categorization	Gender Identity Categorization	<p>Allow users to identify their gender identity when submitting feedback to provide context to their safety ratings. This data should be handled sensitively, ensuring privacy and compliance with data protection laws such as:</p> <ul style="list-style-type: none"> ● General Data Protection Regulations (GDPR) -EU ● California Consumer privacy Act (CCPA) - USA ● Health Insurance Portability and Accountability Act (HIPAA) - USA ● Personal Information Protection and Electronic Documents Act (PIPEDA) - Canada
	Use of Categorized Data	Analyze and present safety data with filters based on gender identity to show how safety perceptions might vary among different demographic groups.
Search and Filter	Search Functionality	Users should be able to search for locations using keywords, addresses, or names. Incorporate an auto-complete feature to help users find locations quickly.
	Filter Options	Users can filter search results based on safety ratings, user demographics, and other criteria such as location types or specific safety concerns
Responsive Design	Cross-Platform Accessibility	Ensure that the web application is fully responsive and functions seamlessly across various devices and screen sizes, including desktops, tablets, and smartphones.
	User Interface	Design a clean, accessible interface that adjusts layout and navigation elements based on the device being used.

Admin Panel	Moderation Tools	Provide moderators with tools to approve or reject public posts and comments to ensure content quality and appropriateness.
	User Management	Admins should have the capability to manage user accounts, including updating privileges, banning users for violations, and viewing user activity logs.
	Data Oversight	Tools for monitoring and exporting data trends, user activity, and compliance with data handling standards.