

1. Scope

This web application is designed to connect individuals affected by the LA fires with essential resources such as housing, food, wellness services, and supplies. It also provides opportunities for donors and volunteers to contribute to relief efforts. Users can create profiles to list and browse available resources, communicate through a messaging system, and toggle between English and Spanish languages.

2. Referenced Documents

- Web Accessibility Standards (WCAG 2.1)
- Security Best Practices for Web Applications
- Localization and Internationalization Guidelines

3. Requirements

3.1 Required States and Modes

- User browsing mode (viewing resources and listings)
- User interaction mode (creating profiles, posting resources, messaging)
- Admin mode (moderation and management)
- Language toggle mode (English/Spanish)

3.2 Functional Requirements

- Display categorized resources (Housing, Food, Wellness, Supplies)
- Allow users to create profiles and post resource listings
- Implement a messaging system for direct communication
- Provide a donation and volunteer opportunities tab
- Support bilingual interface
- Implement an admin panel for moderation and management

3.3 External Interface Requirements

- Web-based UI accessible on desktop and mobile devices
- RESTful API for integrations (e.g., mapping services, external databases)
- Integration with third-party authentication (Google, Facebook, Email)

3.4 Internal Interface Requirements

- Database for storing user profiles, listings, and messages

- Secure API for handling data transactions
- Logging and analytics system for tracking usage

3.5 Internal Data Requirements

- User information: name, email, contact info (stored securely)
- Resource listings: title, description, address, website link
- Messages: sender, recipient, timestamp, content

3.6 Adaptation Requirements

- Must function across different devices and screen sizes
- Support accessibility standards for users with disabilities
- Allow easy content updates without major code changes

3.7 Safety Requirements

- Ensure compliance with data privacy laws (GDPR, CCPA)
- Implement content moderation to prevent misinformation

3.8 Security Requirements

- Encrypt sensitive user data (passwords, messages)
- Implement role-based access control (RBAC) for admins
- Enable CAPTCHA for spam protection

3.9 Environment Requirements

- Cloud-based hosting with CDN for scalability
- Browser support: Chrome, Firefox, Safari, Edge

3.10 Computer Resource Requirements

- Minimum server specifications: 4-core CPU, 8GB RAM, 100GB storage
- Database: Firebase

3.11 Software Quality Factors

- High availability (99.9% uptime)
- Low-latency response time (<200ms per request)

3.12 Design and Implementation Constraints

- Open-source frameworks preferred (React, Node.js, Django)

- Mobile-responsive design required

3.13 Personnel-related Requirements

- Web developers (frontend and backend)
- UX/UI designers
- Security analysts

3.14 Training-related Requirements

- Admin training for managing content and moderation
- User guides for posting and finding resources

3.15 Logistics-related Requirements

- Regular database backups for data integrity
- Cloud deployment strategy for scaling

3.16 Other Requirements

- Multi-language support (English/Spanish)

3.17 Packaging Requirements

- Not applicable (web-based application)

3.18 Precedence and Criticality of Requirements

- Core functionality (resource browsing, listing, messaging) takes priority
- Language toggle and GiveAid tab are secondary priorities

3.19 Qualification Provisions

- Unit testing for individual components
- User acceptance testing (UAT) with affected community members

3.20 Requirements Traceability

- Each requirement mapped to a development task

3.21 Notes

- Future enhancements may include matching systems

3.22 Appendices

- A: Wireframes and UI Mockups
- B: API Documentation

3.23 Evaluation Criteria

- Usability testing scores
- System performance benchmarks
- Security audit results

3.24 Acronyms and Abbreviations

- RBAC: Role-Based Access Control
- WCAG: Web Content Accessibility Guidelines
- CCPA: California Consumer Privacy Act