Afalgugn: Lost Person Finder

Software Requirements Specification (SRS)

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Revision History

Date	Version	Description	Author
08/08/2025	1.0	Initial Draft	INSA_Group_36

1. Introduction

Purpose

The purpose of the Afalgugn project is to develop a web-based platform designed to assist in reuniting lost persons with their families. This platform will provide users with tools to search for missing individuals, post profiles of lost and found persons, and utilize geolocation features to enhance the search process.

Scope

Afalgugn is intended for use by individuals seeking to locate lost persons, as well as organizations involved in search and rescue operations. The system will facilitate the posting of missing and found person profiles, allow for image uploads, and provide notification mechanisms to alert users of relevant updates.

Definitions, Acronyms, and Abbreviations

- **Afalgugn:** The name of the web application designed to help find lost persons.
- **UI:** User Interface.
- **API:** Application Programming Interface.
- **JWT:** JSON Web Token.
- **OAuth:** Open Authorization.

References

- IEEE 830-1998 SRS Standard
- IEEE 29148-2011 Standard
- React.js Documentation
- Node.js and Express.js Documentation

Overview

The following document provides a detailed specification of the requirements for the Afalgugn project. It outlines the system's overall description, specific requirements, system features, and use case scenarios, ensuring clarity for developers, testers, and stakeholders.

2. Overall Description

Product Perspective

Afalgugn will be a standalone web application leveraging modern technologies such as React.js for the frontend and Node.js for the backend. It will interact with databases like PostgreSQL or MongoDB to store user and profile data, while image hosting will be managed through Firebase or Cloudinary.

Product Functions

- **User Registration and Authentication:** Implementing secure login and registration using JWT or OAuth.
- **Profile Management:** Users can create and manage profiles for missing or found persons.
- **Search Functionality:** Advanced search capabilities to locate missing persons based on various criteria.
- **Notification System:** Alerts and notifications for updates on profiles or search results.

User Characteristics

Intended users include families of lost individuals, search and rescue organizations, and other stakeholders involved in missing person cases. Users are expected to have basic computer literacy.

Constraints

- Compliance with data protection regulations such as GDPR.
- System availability and performance requirements must be met.
- Integration with third-party APIs for location tracking and image hosting.

Assumptions and Dependencies

- Reliable internet connectivity is assumed for optimal system performance.
- Dependence on third-party services for image hosting and geolocation features.

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3. Specific Requirements

Functional Requirements

User Registration and Authentication

- **FR1:** The system shall allow users to register using email and password.
- **FR2:** The system shall support user authentication via JWT or OAuth.

Profile Management

- **FR3:** Users shall be able to create profiles for missing persons.
- **FR4:** Users shall be able to post profiles of found persons.

Non-Functional Requirements

- **Performance:** The system shall support up to 10,000 concurrent users with minimal latency.
- **Reliability:** The system shall ensure 99.9% uptime availability.
- **Security:** User data shall be encrypted in transit and at rest.

External Interface Requirements

User Interface

- **UI1:** The system shall be accessible through a responsive web interface.

APIs

- **API1:** The system shall provide a RESTful API for external integration.

Hardware

- **HW1:** The system shall be deployable on standard cloud hosting.

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4. System Features

Search Lost Persons

Provides users with the ability to search for missing individuals based on criteria such as name, age, and location.

Post Missing Person Profile

Allows users to create detailed profiles for persons who are missing, including personal information and last known location.

Post Found Person Details

Enables users to input information about individuals they have found, facilitating potential reunions.

Upload Images

Supports the upload of images related to missing or found persons, using services like Firebase or Cloudinary.

Notification System

Alerts users to updates on profiles or search results, ensuring timely information delivery.

Location Tracking

Utilizes geolocation APIs to provide approximate last known locations of missing persons.

View All Reports

Allows users to view comprehensive reports of all missing and found person profiles.

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5. Use Case Scenarios

Actors, Flows, and Exceptions

Use Case: Search for a Lost Person

- **Actor:** Registered User
- **Preconditions:** User must be logged in.
- **Main Flow:**
  a. User navigates to search page.
  b. User enters search criteria.
  c. System displays matching profiles.
- **Exceptions:**
  - E1: No results found, system displays a message.

Use Case: Post a Missing Person Profile

- **Actor:** Registered User
- **Preconditions:** User must be authenticated.
- **Main Flow:**
  a. User selects "Post Missing Person" option.
  b. User fills in the profile details.
  c. User submits the profile.
  d. System confirms submission.
- **Exceptions:**
  - E1: Missing required fields, system prompts user to complete the form.

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6. System Models

Use Case Diagrams

- Include use case diagrams illustrating the interactions between users and the system.

Data Flow Diagrams (DFDs)

- Provide DFDs to visualize data processing within the system.

Mockups

- Present simple mockups of the user interface to guide development.

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7. Appendix

Glossary

- **Profile:** A record containing details about a missing or found person.
- **Notification:** A message alerting users to updates.

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- An alphabetical listing of key terms and their locations within the document.

This detailed Software Requirements Specification document serves as a comprehensive guide for the development of the Afalgugn web application, ensuring alignment among stakeholders and a structured approach to the project's execution.