

Anna Mitra Project Evaluation

Food Redistribution Platform Assessment



Project Overview

Problem Statement

- ! **Edible food discarded** while nearby communities face food insecurity
- ! No central platform to announce surplus food
- ! Coordination gaps between donors, NGOs, volunteers

Motivation

- ✓ Create **single coordinated system** connecting all stakeholders
- ✓ Provide end-to-end donation lifecycle management

Objectives

- ★ **Fast, reliable matching** of surplus food with nearby NGOs/volunteers
- ★ End-to-end visibility, food safety, trust & accountability
- ★ Actionable insights via dashboards and reports

Target Users and System Environment

Target Users



Donor

Restaurants, events, households - create donations, list items, set pickup window



NGO

View nearby donations, claim suitable ones, coordinate volunteer pickup



Volunteer

Accept/assigned pickups, view route/map, follow safety checklist



Admin

Monitor donations, manage users, moderate content, track metrics

System Environment



Web-based platform supporting multiple devices



Role-specific access with different features per user type



Responsive design for different screen sizes



Real-time notification system

Requirement Specification

Functional Requirements



User Registration & Authentication

Email/OTP registration • Role selection • Secure authentication



Donation Management

Create donations • View status • Receive notifications • Rate NGOs/Volunteers



NGO Management

View nearby donations • Request/claim • Assign volunteers • Confirm delivery



Volunteer Management

View assigned donations • Accept pickups • Update status • Upload proof



Admin Dashboard

Verify NGOs/users • Monitor donations • Handle disputes • View metrics

Non-Functional Requirements



Performance

Publish → notify latency < 5s • Support 100+ concurrent users



Security & Privacy

Passport authentication • Password hashing • Encrypted data • Phone masking



Usability & Accessibility

Simple UI • Large buttons • Readable contrast • Mobile-friendly layout



Localization

Support for English, Hindi, Gujarati



Scalability & Maintainability

Modular backend architecture • Separate frontend/backend repositories

Use Case Diagrams and User Stories

Main Use Cases



Donor

- ✓ Create donation
- ✓ View donation status
- ✓ Receive notifications
- ✓ Rate NGO/Volunteer



NGO

- ✓ View nearby donations
- ✓ Request/claim donations
- ✓ Assign volunteers
- ✓ Confirm delivery



Volunteer

- ✓ View assigned pickups
- ✓ Update status flow
- ✓ Upload delivery proof
- ✓ View route map



Admin

- ✓ Verify NGOs/users
- ✓ Monitor all donations
- ✓ Handle complaints
- ✓ View system metrics

User Stories (Agile Format)



Donor

As a **Donor**, I want to **create a donation post** so that nearby NGOs can request it



NGO

As an **NGO**, I want to **view nearby open donations** so that I can claim them



Volunteer

As a **Volunteer**, I want to **see my assigned pickup points on a map** so I can plan efficient routes



Admin

As an **Admin**, I want to **verify NGOs and manage users** to ensure platform security and reliability

Technology Stack Justification

Technology Choices



Frontend: React

- ✓ Component-based
- ✓ Efficient rendering
- ✓ Rich ecosystem



Backend: Node.js + Express

- ✓ JavaScript full-stack
- ✓ High-performance
- ✓ Lightweight



Database: MongoDB

- ✓ Flexible document model
- ✓ Easy scaling
- ✓ Node.js integration



Authentication: Passport.js

- ✓ Modular auth middleware
- ✓ Multiple strategies
- ✓ Easy integration



System Architecture Benefits

- ✓ Full-stack JavaScript
- ✓ RESTful API
- ✓ Responsive design
- ✓ Modular architecture
- ✓ Cloud deployment

Conclusion

Project Evaluation



Clarity

- ✓ Clear objectives
- ✓ Detailed implementation
- ✓ Well-defined roles



Relevance

- ✓ Addresses social issues
- ✓ Food waste & hunger
- ✓ SDG alignment



Feasibility

- ✓ Suitable tech stack
- ✓ Realistic timeline
- ✓ Proper team structure

Project Strengths & Challenges

Strengths

- ▶ **End-to-end solution** - Complete donation lifecycle
- ▶ **Multi-role coordination** - Connects all stakeholders
- ▶ **Transparency & accountability** - Ratings & delivery proof
- ▶ **Food safety** - Time windows & safety checklists

Potential Challenges

- ▶ **Volunteer shortage** - May affect pickup efficiency
- ▶ **Food safety risks** - Requires strict monitoring
- ▶ **Scalability issues** - Challenges with user growth

Anna Mitra project has clear objectives, social relevance, and feasible technical approach to reduce food waste and address hunger