Project Profile: ReUseIt

ReUseIt is a mobile-first platform for recycling, reuse, and community coordination. The app helps users identify waste, locate recycling points, share reusable items, organize local events, and track contribution points and badges.

Scope

Full software development lifecycle: requirements, design, implementation, testing, and documentation. Deliverable: cross-platform mobile app (React Native/Expo) with NestJS/GraphQL backend, MongoDB Atlas, and on-device TensorFlow Lite for waste identification.

Target Audience

- Environmentally conscious individuals
- General public (seeking to donate or recycle items)
- New movers (relocating users needing to donate or find items)

Project Objectives

- Waste identification: On-device AI for classifying recyclables
- Community engagement: Marketplace for giveaways, requests, and local events
- Education: Recycling guides and location services
- Gamification: Points, badges, and leaderboards for eco-friendly actions

Risks & Mitigation

- ML integration: Mitigated by using TensorFlow Lite and fallback logic
- User adoption: Addressed with intuitive UI, gamification, and educational content
- Data security: Enforced with JWT, Firebase Auth, and encrypted communication

Project Plan

Agile methodology with 2-week sprints, continuous feedback, and iterative releases.