EcoConnect - Complete Project Documentation

Project Overview

EcoConnect is a full-stack NGO-based environmental management platform designed to enable citizens, NGOs, volunteers, and city administrators to collaboratively manage tree plantations, garbage collection, water conservation, oxygen park awareness, and recycling. The platform promotes eco-awareness while providing actionable tools for participation and transparent impact tracking.

Purpose

To empower communities with digital tools that facilitate environmental action, provide real-time tracking of activities, and ensure transparency in NGO and municipal work.

Unique Angle

EcoConnect uniquely combines waste reporting, recycling pickups, volunteer management, green space directories, and donation management into one cohesive platform. It is gamified with leaderboards and integrates maps for location-first experiences.

Target Users

- Citizens: Report, donate, volunteer
- NGOs: Manage eco-campaigns and logistics
- Volunteers: Assist with pickups & cleanups
- Municipal Authorities: Monitor and resolve environmental issues
- Students & Teachers: Participate in campaigns

Key Modules & Features

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1. Campaign Management

2. Issue Reporting

3. Volunteer Coordination

4. Donation Management

5. Pickup Scheduling

6. Map Directory

7. Event Calendar

8. Leaderboard & Badges

9. Admin Dashboard

10. Awareness Hub

11. Impact Dashboard

Pages List

1. Home Page

2. Explore Campaigns

3. Report an Issue

4. Event Calendar

5. Oxygen Park Directory

6. Donate Items

7. Donate Money

8. Become a Volunteer

9. Impact Dashboard

10. Leaderboard

11. Awareness Resources

12. User Login/Register

13. User Profile

14. NGO Dashboard

15. Admin Panel

16. Notification Center

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17. 404 Page

18. 403 Page

19. Empty State Screens

User Flow Example - Report Garbage Spot

1. Home -> Report Issue

2. Upload image -> Select type -> Pin location

3. Submit -> Confirmation screen

4. Dashboard shows status updates

5. Notification sent upon resolution

Django Models

User:

- Extended from Django's AbstractUser

- Roles: citizen, ngo, admin, volunteer, recycler

WasteReport:

- Tracks garbage or recycling issues

- Includes location, photo, and status

Campaign:

- Managed by NGOs

- Includes title, description, date range

VolunteerParticipation:

- Links volunteers to campaigns

Park:

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- Green space directory entry

- Includes oxygen rating and features

ParkFeedback:

- Ratings and comments for parks

Donation:

- Clothing and item donations

- Linked to donor and volunteer

ImpactScore:

- Leaderboard points tracker

Relationships Summary

- Users can report waste, donate, volunteer, and give park feedback

- Campaigns managed by NGOs can have volunteers

- Parks can have feedback entries

- Donations are linked to donors and volunteers

- Leaderboard aggregates impact scores from actions

Unique Perspective

EcoConnect's all-in-one approach, map-first UX, gamification, and transparency make it unique. The feedback loop ensures citizens see real impact through before/after photos and stories.