



स्वच्छता सर्वोपरि

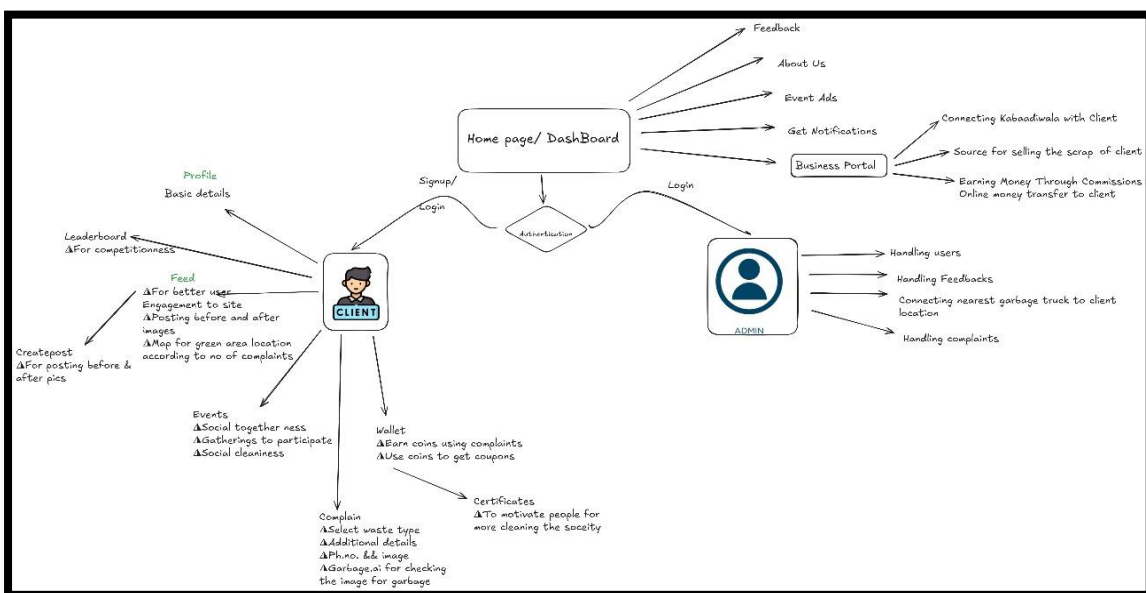
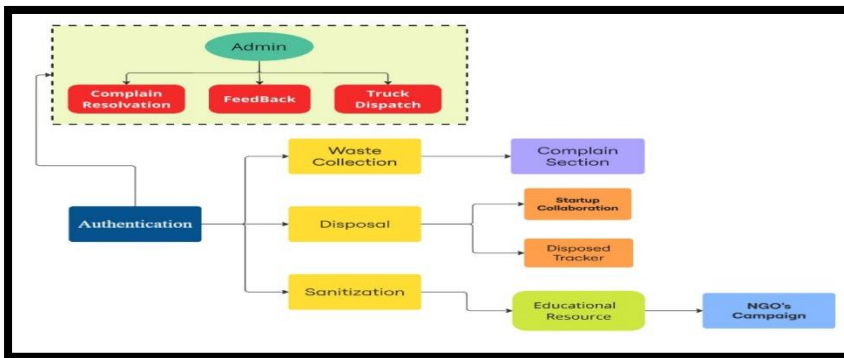
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#Project description

▲Swipe2Clean a solution for waste pickup, segregation, disposal and sanitization.

#Objectives:

- Develop Swipe2Clean, a comprehensive waste management solution.
- Streamline and optimize waste pickup, segregation, disposal, and sanitization processes.
- Integrate real-time tracking for efficient waste collection and management.
- Implement automated waste segregation to enhance sorting accuracy and efficiency.
- Ensure effective disposal methods to reduce environmental impact.
- Utilize data-driven insights to improve sanitation standards.
- Promote sustainable waste management practices within communities.





Process Description:

1.Waste Collection: Users upload a garbage photo to the site, and after AI verification,

location is sent to the nearest garbage collector for pickup.

2.Waste Disposal: We will partner with startups that use recyclable waste as raw material, ensuring they will purchase waste directly from our platform.

A tracking system monitors the location of waste, ensuring it reaches the proper disposal site efficiently.

3.Sanitization: Our site will collaborate with NGOs to organize community events. Our site offers guides on waste management and interactive flipbooks, Quizzes & AI-based Chat Bot to help you stay informed and engaged.

4.Self-Financed Model: Revenue Generation through subscription & commission

5.Waste Sorting Technologies: Categorization based on 3 R's

#Potential Challenges and Risks

1. Technical Challenges: Integration issues between various platform components. Reliability concerns for waste tracking systems.

2. Partnership Risks: Challenges in forming and maintaining partnerships with startups and NGOs. Ensuring aligned interests among all stakeholders.

3. User Engagement: Low user participation and retention without strong incentives.

4. Operational Risks: Managing logistics for waste collection and disposal effectively. Maintaining effective waste sorting technologies.

5. Data Privacy and Security: Ensuring user data protection and compliance with regulations.

6. Financial Risks: Uncertainty in generating revenue through subscriptions and commissions.

#Strategies to Overcome Challenges

1. Technical Solutions:

1. Start with pre-trained AI models and build custom models over time.
2. Use a modular, cloud-based system for scalability and integration.

2. Partnership Building:

1. Start with pilot projects to demonstrate value to potential partners.
2. Create agreements that benefit all parties involved.

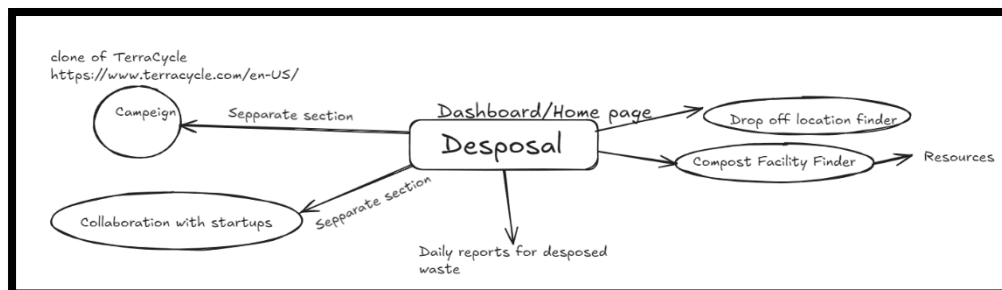
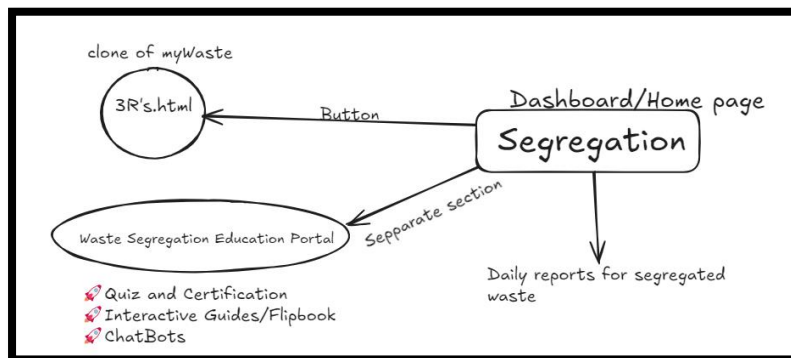
3. Increase User Engagement:

1. Use gamification, rewards, and dynamic content to motivate users.

4. Operational Coordination:

1. Centralize logistics management and use real-time communication tools.

Web Flow:



#Requirements:

1. **Platform Architecture:** Use Node.js or Django for backend, React or Vue.js for frontend, and a hybrid database with MongoDB (NoSQL)
2. **AI Image Verification:** Develop a waste recognition model with Trash Ai.
3. **Geolocation and Task Assignment:** Utilize Google Maps API or OpenStreetMap for location tracking and assign tasks to the nearest garbage collector.
4. **Waste Disposal Partnering and Tracking:** Integrate with waste management startups via API and use IoT sensors with GPS for tracking.
5. **Community Engagement and Sanitization:** Develop modules for NGO collaboration, event scheduling, and educational content via a CMS.
6. **Security and Data Privacy:** Ensure data security with SSL/TLS, AES-256 encryption, OAuth 2.0 authentication, MFA, and regular security audits.
7. **Direct Connection with Garbage Collectors:** Build a communication interface using WebRTC or Twilio API for user-collector interaction.
8. **Scalability & Infrastructure:** Deploy on AWS or Google Cloud, using auto-scaling and load balancers for high traffic and efficient resource management.

#Uniqueness

- **ML- based Feed section:** user engagement
- **Wallet coins:** redeem coupons
- **Earn money:** by selling recyclable collected waste
- **Colony Ranking/Leaderboard:** Our leaderboard ranks areas based on their efforts to maintain cleanliness. The more active an area, the higher its rank!
- **Certificates**
- **Business Section/Event:** After selling the plastic garbage to the trader & Post before-and-after photos of area transformations in our feed, earn **virtual coins**, and redeem them for **exciting coupons**!

#Conclusion:

1. Social Benefits:

- **Enhanced Community Cleanliness:** Contributes to cleaner and health communities.
- **Increased Civic Participation:** Involvement in local environmental issues.

2. Economic Benefits:

- **Cost-Efficient Waste Management:** Reduces the costs associated with waste disposal for municipalities by improving waste sorting and recycling.
- **Revenue Opportunities:** Generates revenue for local startups by providing a steady supply of recyclable materials.

3. Environmental Benefits:

- **Reduced Waste in Landfills:** Promotes recycling and proper disposal, reducing the volume of waste that ends up in landfills.
- **Lower Carbon Footprint:** Minimizes the environmental impact of waste by promoting recycling and sustainable practices.

4. Technological Benefits:

- **Data-Driven Decision Making:** Provides valuable data on waste patterns that can local authorities make informed decisions.
- Innovation in Waste Management:** Encourages the development of new technologies and methods for waste sorting and disposal.

5. Potential Impact on the Target Audience

Improved Community Engagement:

- Encourages residents to actively participate in keeping their neighborhoods clean through easy-to-use platforms and rewards.

Increased Awareness and Education:

- Educates users about waste management practices, recycling, and sustainability, promoting behavioral change.

Streamlined Waste Disposal:

- Simplifies the process of waste collection and disposal by connecting users directly to waste collectors and disposal partners.

Empowered NGOs and Local Groups:

- Provides NGOs and community organizations a platform to coordinate events and activities related to waste management.

#Research and References

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2.Exalidraw:- <https://excalidraw.com/>

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6.National Portal of India:- https://services.india.gov.in/service/listing?cat_id=106&ln=en

7. Central Pollution Control Board:-

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