

SMART WASTE MANAGEMENT SYSTEM

Group 12 | Presentation



PROJECT OVERVIEW

• Aim: Solve real-world problems with a comprehensive waste management system.

• Focus: Enhance waste collection, recycling, and resource management through intelligent technologies.



PROJECT SETUP

- Frameworks:
- Backend: Flask/Node.js
- Database: PostgreSQL/MySQL with SQLAlchemy ORM
- CI/CD: GitHub Actions
- Deployment: Heroku/AWS



FRONTEND DEVELOPMENT

- Technologies: HTML, CSS, JavaScript
- UI/UX: Responsive design, modern UI (Bootstrap)
- Goals: User-friendly interface, seamless navigation

BACKEND DEVELOPMENT

- Technologies: Flask/Node.js, SQLAlchemy ORM
- API: RESTful API endpoints
- Features: User authentication, database interactions, deployment management

KEY FEATURES & FUNCTIONALITIES

- User Registration & Login: Secure user session management (Flask-Login)
- Waste Collection Schedule: Scheduling, notifications
- Recycling Tracker: Track efforts, view environmental impact
- Waste Collection Management: Manage routes, schedules, performance
- Admin Dashboard: System performance, user management



CONTINUOUS INTEGRATION AND DEPLOYMENT

• CI/CD Pipeline: Automated tests, deployment

• Services: Heroku



PARTICIPATION AND COLLABORATION

equitable task division

Meetings: Regular discussions on progress and challenge

• Version Control: Use Git and GitHub for collaboration

CONCLUSION

- Summary: Practical experience in full-stack development, teamwork, and best practices
- Value: Portfolio enhancement, real-world development preparation







