EcoMate

1. Executive Summary

The need for discussion of our carbon footprints are important in face of rising global temperatures. This project uses AI to examine transactions so that consumers can track carbon intensity and capture personal guidance on how best they might reduce their footprint.

2. Problem Statement

As the world becomes more aware of the threat climate change poses, people are left wondering just how their family spending plays into it. Today the tools for guiding advice based on actual financial behavior are primitive at best. This is what our solution intends to address.

3. Solution Overview

Product Description-

Here are the things Our A.I.-driven tool does with users transaction data:

Measure their carbon footprint versus what they spent among several categories.

Recommendable steps to mitigate emissions

Key Features

Carbon Footprint Calculator — Calculate carbon emissions from activities.

Personalized Recommendations – Recommends eco-friendly alternatives tailored to their spending habits.

PROGRESS TRACKING — Enabling users to set goals and track reductions.RESULTS

Dashboard for users: Easy to manage with visuals of carbon footprint and insights

4. Technical Details

Technology Stack

Programming Language: Python and JavaScript

We use Python (Flask/Django backend & React for frontend)

Database: PostgreSQL for user data and transaction details

AI tools: Machine Learning algorithms for a carbon footprint estimator and recommendation generator

Algorithms

Regression Analysis : To estimate the emission based on transaction categories.

Recommenders Collaborative Filtering: Recommends alternatives based on similar people interchange behaviors

5. User Interface Demo:

Dashboard of the Application

Accessibility: Grant for features supports users with disabilities.

User Testing

Tested with users to understand what was working and not. Insights: Changes implemented

7. Impact Measurement

Metrics for Success

User Engagement: Active Users and frequency of people using the tool.

Estimated Carbon Reduction: Use it to track the estimated carbon emission reduction by user actions.

8. Future Roadmap

Feature Enhancements-extend with community challenges/gamification\_dimensionsWEBPACK\_STATIC\_IMPORT\_PATH\_PLUGIN\_HOOKS\_HELPER\_SVG.

Integration Partner with environmentally friendly brands to offer incentives and discounts.

9. Team Contributions/Members-

Kirthish Shetty & Tellur Om.

10. Conclusion

This tool enables people to make more informed decisions based on digging deeper into transaction data through artificial intelligence. Working together, we can fight climate change.