Sustainable Food System Mapper

By Omshree Chinni

Connecting surplus food with those in need, reducing waste and hunger.

Why I Did This Project

I was always bothered by how much food goes to waste while so many people struggle with hunger. It felt wrong that surplus food from restaurants, stores, or homes often doesn't reach those who really need it. I wanted to create something simple, real, and impactful.

Problem

Many communities face hunger while tons of food are wasted daily. There was no simple way to connect donors with recipients efficiently. This motivated me to create a solution that could make food redistribution smarter and easier.

Solution

The Sustainable Food System Mapper is a web application that connects food donors with recipients. It provides an interactive map, finds the nearest matches, and tracks impact metrics such as meals provided and CO_2 saved.

How I Built It

The project uses Flask for the backend and HTML, CSS, and JavaScript for the frontend. Leaflet.js with OpenStreetMap creates interactive maps. Matching algorithms ensure donors reach recipients efficiently, and impact metrics are calculated automatically.

Challenges

Ensuring realistic matches considering distance, food type, and urgency was tricky. Designing a simple interface usable by people of all tech levels required careful thought. Calculating and displaying impact accurately also posed challenges.

Accomplishments

Despite the challenges, I built a working platform that successfully matches donors with recipients, displays impact metrics, and could be used by communities to reduce food waste and fight hunger.

Skills I Used

Python, Flask, HTML, CSS, JavaScript, Leaflet.js, OpenStreetMap, problem-solving, and UI/UX design. I applied these skills to build a complete end-to-end application.

My Work / Proof

I developed the Flask backend, integrated the frontend, created the interactive map, implemented forms for donors and recipients, and coded the matching algorithms. Screenshots and images of the project are included to demonstrate the interface and functionality.

Images:

[https://github.com/Omshree3/Sustainable-Food-System-Mapper/blob/main/images/Screenshot%202025-08-24%20041834.png]

[Ihttps://github.com/Omshree3/Sustainable-Food-System-Mapper/blob/main/images/Screenshot%202025-08-24%20040950.pngnsert Screenshot 2]

[https://github.com/Omshree3/Sustainable-Food-System-Mapper/blob/main/images/Screenshot%202025-08-24%20040936.png]

[https://github.com/Omshree3/Sustainable-Food-System-Mapper/blob/main/images/Screenshot%202025-08-24%20040903.png]

Story About Real-Life People

Many communities struggle with hunger. This platform helps redirect surplus food to those who need it most. Through this project, I learned how to combine technology with social impact, designing practical, ethical, and user-friendly applications that make a tangible difference in people’s lives.