# Problem Statement

The Challenge:

Climate change is one of the most pressing issues of our time. While individuals and small businesses want to reduce their carbon emissions, they often lack simple, accessible tools to track their daily carbon footprint and receive actionable recommendations for reducing their environmental impact.

Your Solution:

Create a user-friendly web application that calculates carbon emissions based on daily activities (transportation, energy consumption, diet, etc.) and provides AI-powered personalized recommendations to help users reduce their environmental footprint.

Understanding Carbon Footprint

A carbon footprint is the total amount of greenhouse gas emissions (primarily CO2) caused by an individual, organization, or activity. It's measured in kilograms or tonnes of CO2 equivalent (CO2e).

Main Sources of Personal Carbon Emissions:

- Transportation: Car, bus, train, flights
- Energy: Electricity, heating, cooling
- Diet: Meat consumption, food waste
- Consumption: Shopping, waste generation

Required Features

1. User Authentication

• Registration and login system

• User profile management

2. Activity Input System

• Daily activity logging (transportation, energy use, diet, etc.)

• Multiple input methods (forms, quick add buttons)

• Edit and delete past entries

3. Carbon Emission Calculator

• Calculate emissions for each activity using standard formulas

• Display daily, weekly, and monthly totals

• Categorize emissions by type (transport, energy, food, etc.)

4. Visual Dashboard

• Charts showing emissions trends over time

• Breakdown by category (pie/bar charts)

• Comparison with previous periods

5. AI-Powered Recommendations

• Chatbot or recommendation engine using AI APIs

• Personalized tips based on user's emission patterns

• Actionable suggestions for reducing carbon footprint