

Carbon Footprint Tracker - Project Report

1. Introduction

This project is a Data Science + SQL + Power BI solution designed to track and analyze carbon footprint from different activities, cities, and occupations. It highlights sustainability awareness using real-time visualization.

2. Objectives

- Collect and store activity-level carbon data in SQL database.
- Process and merge data into structured CSV.
- Build interactive Power BI dashboards for insights.
- Share findings on GitHub with reproducible code and documentation.

3. Architecture

Raw Data (CSV) → SQL Database (queries.sql) → Processed Data (merged_data.csv) → Power BI Dashboard → Insights & Visualization.

4. Features

- Activity-wise emission analysis
- City-level comparison using Map charts
- Occupation vs. emission with interactive slicers
- Extensible design to add diet/lifestyle analysis

5. Tools & Technologies

- SQL for querying and processing data
- Python (optional) for preprocessing
- Power BI for visualization
- GitHub for version control and portfolio showcase

6. Conclusion

The Carbon Footprint Tracker provides an innovative way to monitor sustainability metrics, making it ideal for portfolios, resumes, and academic projects.