Data analytics using tableu

Project Documentation format

1. Introduction

- **Project Title:** Visualization Tool for Electric Vehicle Charge and Range Analysis
- **Team Members:**
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  d. B Saipriya
  e. Nandhini Thambisetty

2. Project Overview

- **Purpose:** This project aims to provide a comprehensive analysis of electric vehicle (EV) data to identify market trends, vehicle specifications, and environmental impacts using interactive Tableau dashboards**.**
- **Features:**
  - Interactive visualization of EV models, range, and price.
  - Comparison of charging types, battery capacities, and efficiency.
  - Year-over-year growth in electric car adoption.

3. Architecture

- **Frontend:** Built using Tableau Public, allowing users to interact with embedded dashboards in a web interface.
- **Backend:** No traditional backend used. Data processing and analytics were performed within Tableau using calculated fields and filters.
- **Database:** Data is sourced from clean CSV datasets related to EV specs, prices, and environmental statistics, imported directly into Tableau.

4. Setup Instructions

- **Prerequisites:** Tableau Public Desktop (for local editing), Web browser for dashboard access
- **Installation:**
  1. Open Tableau Public.
  2. Import dataset (CSV or Excel).
  3. Open .twb or .twbx dashboard file.
  4. Publish or view via Tableau Public link.

5. Folder Structure

- **Client:** Describe the structure of the React frontend.
- **Server:** Explain the organization of the Node.js backend.

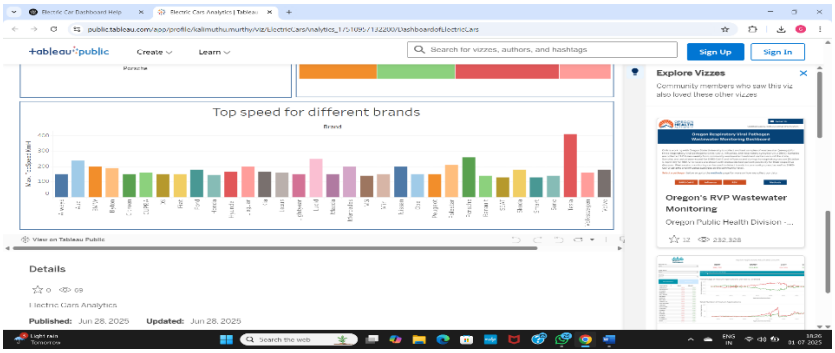
6. Running the Application

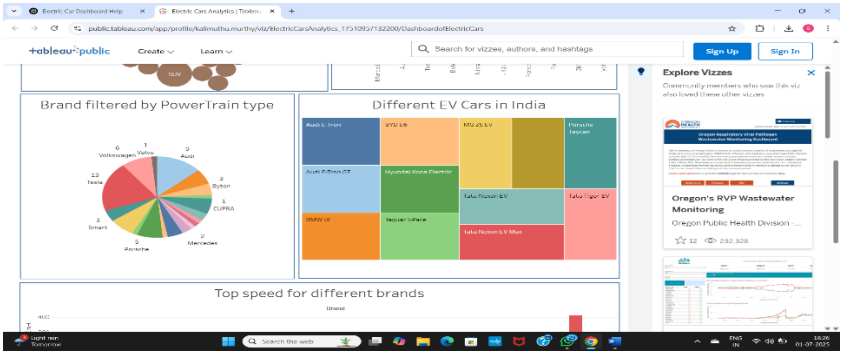
- **Frontend:**
  - Dashboard 1: https://public.tableau.com/app/profile/kalimuthu.murthy/viz/ElectricCarsAnalytics_17510957132200/DashboardofElectricCars
  - Dashboard 2: https://public.tableau.com/app/profile/kalimuthu.murthy/viz/shared/CRK875DZS

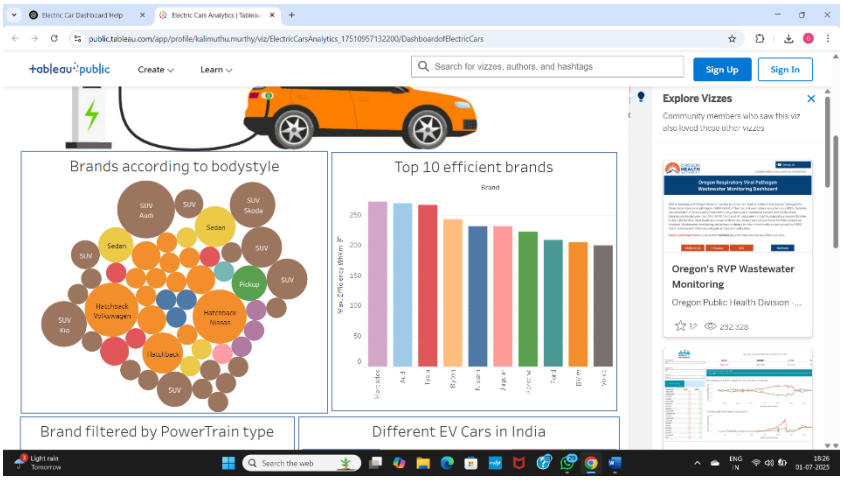
7. User Interface

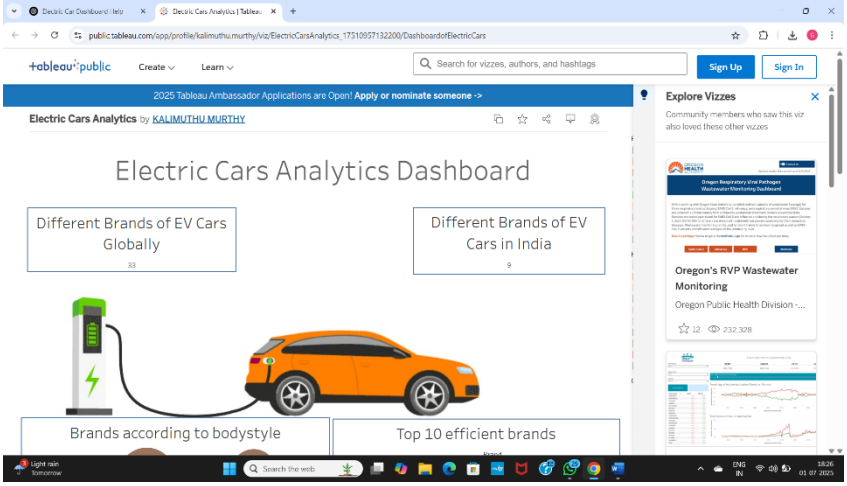
- Clean, user-friendly Tableau interface with filters, dropdowns, and hover tooltips.
- Interactive charts like bar graphs, line plots, bubble charts, and heatmap

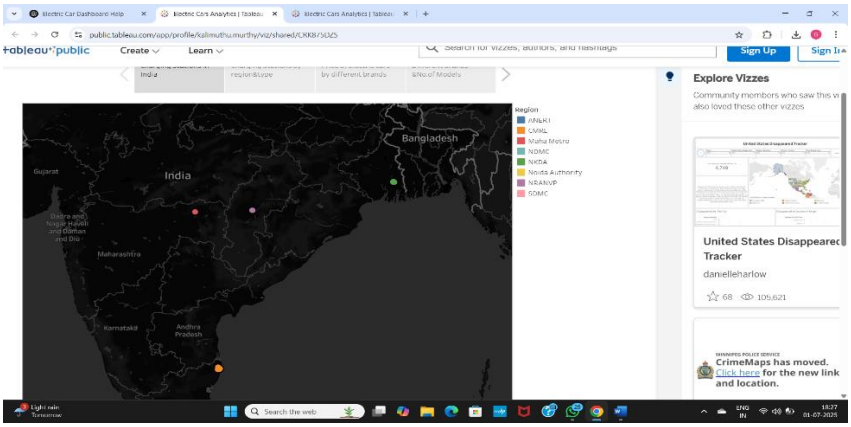
8. Screenshots or Demo











9. Future Enhancements

- Integrate real-time EV data from APIs or IoT sensors.
- Build a web app around the dashboards using MERN stack.
- Add predictive analytics (e.g., future EV trends using ML models).