PLUG PARADISE

Real - time EV Charging Station Locator with
Traffic Tracking

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START PRESENTATION

Abstract

The increasing adoption of electric vehicles (EVs) necessitates an efficient and reliable charging station locator system. 'Plug Paradise' is a real-time EV charging station locator website that provides users with live availability tracking, helping them locate and navigate to the nearest charging points. By integrating GPS, real-time data analytics, and a user-friendly interface, this platform aims to enhance the EV charging experience, reduce range anxiety, and contribute to sustainable mobility solutions.

Introduction

- Locator
- Availability
- Efficiency

As electric vehicle (EV) adoption grows, finding charging stations has become a major challenge for drivers. Long waits and uncertainty about charging station can create frustration.

The Real-Time EV Charging Station Locator with Traffic Detection is an website designed to solve this problem. Using GPS and live data, it helps users quickly find nearby charging stations and check their real-time availability. The app provides station details like charger type, location, and status (available or in use), ensuring a smoother, more efficient charging experience for EV owners.

This solution aims to simplify the charging process, supporting the growing demand for EVs and promoting sustainable transportation.

Objective

- Provide **real-time availability** of EV charging stations.
- Offer an intuitive and interactive user interface for **efficient navigation**.
- Integrate data from multiple charging station providers to **improve accessibility**.
- Enhance user convenience by **reducing search time** for available charging points.
- **Promote sustainable transportation** by making EV charging infrastructure more accessible.

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Locate Charging Stations

Real-Time Availability

Support EV Adoption

Literature Survey

Title	Year	Journal/Publication	Key Features
GIS-Based EV Charging Station Finder	2023	Journal of Cleaner Production	GIS mapping , renewable energy-based charging stations
Enhancing EV Charging Station Accessibility	2022	Transportation Research Part D	User experience improvements, dynamic pricing
IoT-Based Charging Station Management System	2021	International Journal of Energy Research	IoT integration, smart grid connectivity
A Real-Time EV Charging Station Locator	2020	IEEE Transactions on Smart Grid	Real-time tracking, API-based station integration
Smart Charging Infrastructure for Electric Vehicles	2019	Renewable Energy Journal	AI-based optimization, demand prediction

Methodology

The system gathers real-time data from various EV charging station providers via APIs.Develop an interactive UI that displays charging station locations, availability, and additional details such as charging speed and station type.Implement a mapping service (Google Maps) for precise navigation. Ensure users receive live updates on station availability and estimated wait times. Implement a feature that allows users to review and rate charging stations for better service recommendations. Future iterations may include predictive algorithms to suggest optimal charging times and locations based on user behavior and historical data.

Real-Time Examples

Website Name	Key Features	Drawbacks
PlugShare	Wide network coverage, user-generated reviews, real-time availability tracking	Some stations may lack real-time updates
ChargePoint	Large proprietary network, seamless app integration, reservation features	Limited to ChargePoint stations only
Electrify America	High-speed charging support, reliable real-time data	Higher pricing for non-members
Tesla Supercharger	Optimized for Tesla vehicles, high-speed charging	Not accessible to all EV brands

Expected Output

Logo

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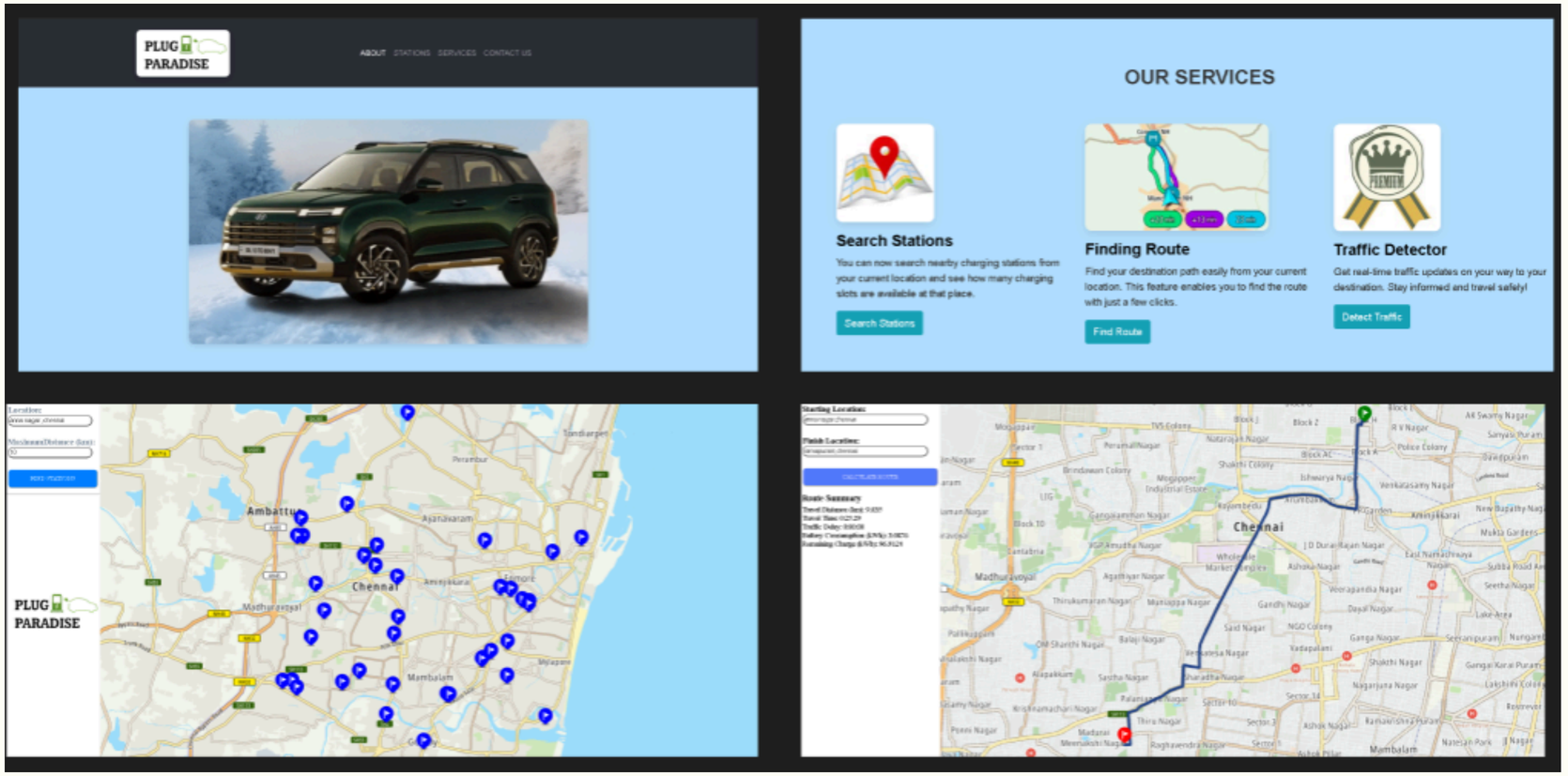

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THANK YOU!