

Problem Statement

Date	20 June 2025
Team ID	LTVIP2025TMID48669
Project Name	Visualization Tool for Electric Vehicle Charge and Range Analysis.
Maximum Marks	2 Marks

TITLE :

Visualization Tool for Electric Vehicle Charge and Range Analysis.

Team ID : LTVIP2025TMID48669

Team Members :

Team Leader : Likitha Dadi

Team member : Ella Likhitha

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Customer Problem Statement

What specific challenges do EV users or potential buyers face when trying to understand the range and charging infrastructure of electric vehicles across different regions in India and globally, and how does the lack of clear, accessible data impact their decision-making or confidence in switching to EVs?

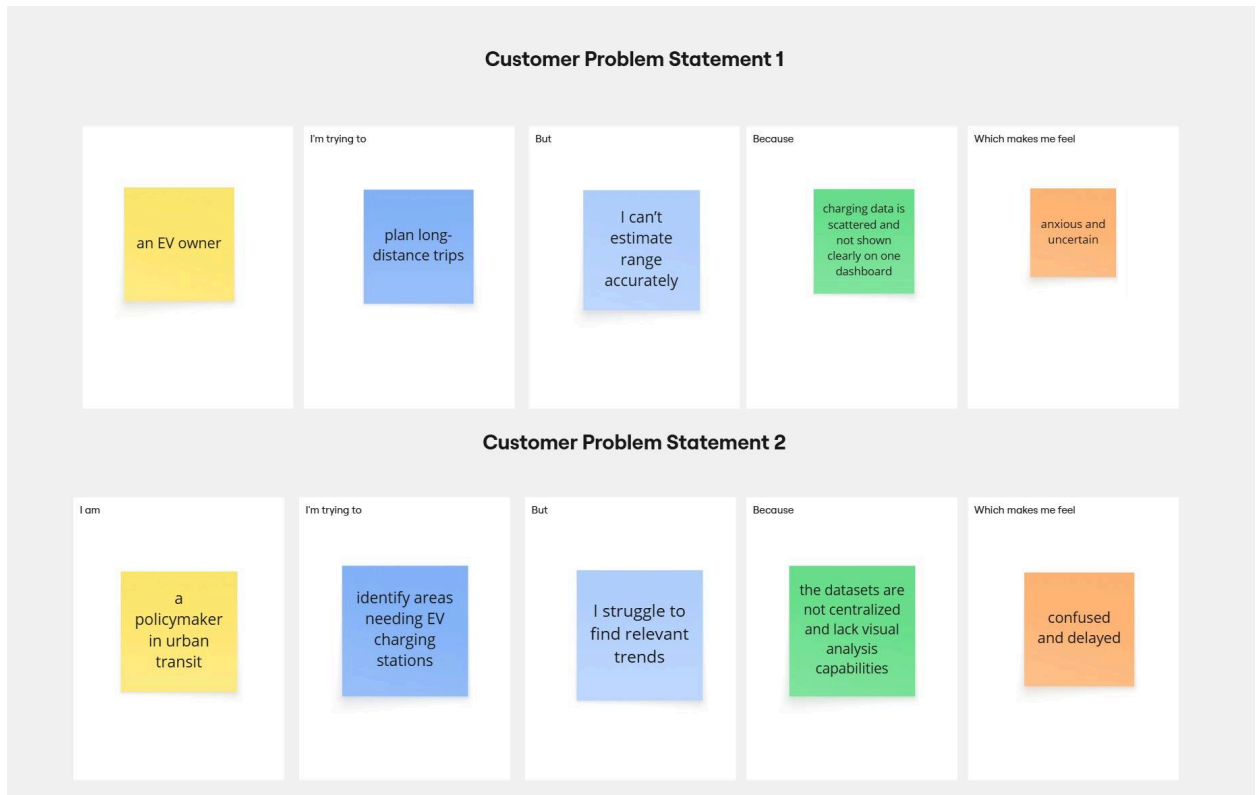
How do EV manufacturers, policymakers, or infrastructure planners currently monitor and interpret EV charging data, usage trends, and regional adoption rates, and what limitations do they face due to fragmented data sources or lack of intuitive analytical dashboards?

In what ways could a centralized, interactive Tableau-based dashboard improve the ability of various customer groups (e.g., consumers, fleet operators, urban planners) to compare charging infrastructure, battery performance, and vehicle range across brands and geographies?

What emotional or psychological barriers (such as range anxiety, uncertainty about infrastructure, or distrust in data) do EV users experience, and how might insightful and transparent data visualizations help overcome these perceptions?

How might the visualization tool help different stakeholders forecast future EV trends, identify infrastructure gaps, and make informed decisions, and what types of visuals (e.g., heatmaps, trend lines, comparative bar charts) would be most meaningful for these insights?

EV users face significant challenges in accessing real-time charge station data, managing battery range, and visualizing their usage trends. There is a need for a centralized dashboard that integrates multiple datasets to provide insights, improve planning, and support the growing electric vehicle ecosystem through smart analytics.



Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	an EV owner	plan long-distance trips	I can't estimate range accurately	charging data is scattered and not shown clearly on one dashboard	anxious and uncertain
PS-2	a policymaker in urban transit	identify areas needing EV charging stations	I struggle to find relevant trends	the datasets are not centralized and lack visual analysis capabilities	confused and delayed