

Problem Statement

To support data-driven decisions in the electric vehicle (EV) sector, there is a need to track and visualize key metrics that reflect adoption trends, market distribution, and policy impact from 2010 onwards. The analysis should capture the following:

1. **Total Vehicles by Model Year:** Track the annual growth and adoption trends of electric vehicles starting from 2010, using a line or area chart to illustrate how adoption has evolved over time.
2. **Total Vehicles by State:** Visualize the geographic distribution of EVs across U.S. states with a map chart to identify regions with high or low adoption rates.
3. **Top 10 Total Vehicles by Make:** Identify the top 10 EV manufacturers by total vehicle count using a bar chart, highlighting dominant brands and shifts in market share.
4. **Total Vehicles by CAFV Eligibility:** Show the proportion of EVs eligible for Clean Alternative Fuel Vehicle (CAV) incentives using a pie or donut chart, to assess how incentives may be influencing adoption.
5. **Top 10 Total Vehicles by Model:** Highlight the most popular EV models in the market through a tree map, helping to understand consumer preferences and the models driving overall adoption.

The objective is to build a comprehensive visual dashboard that tracks these metrics, enabling stakeholders to monitor EV adoption, evaluate policy impact, and recognize key players in the market.