**PROBLEM STATEMENT**

**KPI’S Requirement**

1. **Total Vehicles:**
   * Understand the overall landscape of electric vehicles, encompassing both BEVs and PHEVs, to assess the market's size and growth.

**2. Average Electric Range:**

* + Determine the average electric range of the electric vehicles in the dataset to gauge the technological advancements and efficiency of the EVs.

**3. Total BEV Vehicles and % of Total BEV Vehicles:**

* + Identify and analyze the total number of Battery Electric Vehicles (BEVs) in the dataset.
  + Calculate the percentage of BEVs relative to the total number of electric vehicles, providing insights into the dominance of fully electric models.

**4. Total PHEV Vehicles and % of Total PHEV Vehicles:**

* + Identify and analyze the total number of Plug-in Hybrid Electric Vehicles (PHEVs) in the dataset.
  + Calculate the percentage of PHEVs relative to the total number of electric vehicles, offering insights into the market share of plug-in hybrid models.
* **Total Vehicles by Model Year (From 2010 Onwards):**
* Visualization: Line/ Area Chart
* Description: This chart will illustrate the distribution of electric vehicles over the years, starting from 2010, providing insights into the growth pattern and adoption trends.
* **2. Total Vehicles by State:**
* Visualization: Map Chart
* Description: This chart will showcase the geographical distribution of electric vehicles across different states, allowing for the identification of regions with higher adoption rates.
* **3. Top 10 Total Vehicles by Make:**
* Visualization: Bar Chart
* Description: Highlight the top 10 electric vehicle manufacturers based on the total number of vehicles, providing insights into the market dominance of specific brands.
* **4. Total Vehicles by CAFV Eligibility:**
* Visualization: Pie Chart or Donut Chart
* Description: Illustrate the proportion of electric vehicles that are eligible for Clean Alternative Fuel Vehicle (CAFV) incentives, aiding in understanding the impact of incentives on vehicle adoption.
* **5. Top 10 Total Vehicles by Model:**
* Visualization: Tree map
* Description: Highlight the top 10 electric vehicle models based on the total number of vehicles, offering insights into consumer preferences and popular models in the market.