Project Report:

**Electric vehicle sales analysis**

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**Project Title** – **Electric vehicle sales analysis**

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**Technology** – tableau

**Tools- tableau tools**

**Project Overview**

The goal of this analysis is to understand the distribution, trends, and characteristics of electric vehicles (EVs) based on key parameters such as vehicle type, model year, make, state distribution, and eligibility for CAFV (Clean Alternative Fuel Vehicle) programs.

**Key Objectives:**

1. Key Insights

Total EV Vehicles:

Count: 116,745 total EV vehicles recorded.

Average Electric Range: 90.21 miles across all models.

1. Trends by Model Year: Significant growth in EV adoption was observed post-2017.

notable increase in total vehicles: 2017: 8,057 vehicles ,2022: 17,968 vehicles ,2023: 13,985 vehicles.

This indicates increasing consumer adoption and market penetration of EVs.

1. Top 10 Vehicle Makes: Tesla leads with a significant market share: Accounts for 60.24% of total vehicles.

Other major contributors include:

 Nissan (11.79%)

 Chevrolet (3.56%)

 Kia (2.35%)

 Remaining makes account for smaller percentages, showcasing Tesla's dominance.

4. Top 10 Vehicle Models:

 Model Y Tesla: 28,501 vehicles (41.34% of total).

 Model 3 Tesla: 27,708 vehicles (40.19% of total).

 Other popular models include Model S and Model X from Tesla, highlighting the brand's popularity across its product line.

5. State-wise Distribution:

 Highest concentration: One state accounts for 68,782 vehicles, indicating a potential EV hub or concentrated adoption region. Other states have significantly lower adoption rates, which could reflect variations in infrastructure, incentives, or awareness.

6. CAFV Eligibility:

 37.50% of vehicles are CAFV eligible.

 62.50% are categorized as "CAFV Unknown."

 Indicates a need for better data tracking or outreach to clarify eligibility statuses.

**Recommendations**

1. Expand EV Infrastructure: Focus on regions with lower adoption rates to improve charging station availability and incentives.

2. Enhance Data Quality: Address the high percentage of "CAFV Unknown" data to improve analysis and policy-making.

3. Targeted Marketing: Leverage Tesla's success as an example for other manufacturers to boost consumer interest in their models.

4. Incentives and Awareness: Promote CAFV eligibility benefits to improve clarity and encourage more EV purchases.

5. Further Research: Conduct deeper analysis into the factors driving state-specific adoption and high performance by Tesla.

**Visualization Summary**

The dashboard effectively highlights:

* Growth in EV adoption (line chart).
* State-level distribution (geographical heat map).
* Brand and model dominance (bar and pie charts).
* CAFV eligibility distribution (donut chart).

**Conclusion**

The analysis showcases the growing prominence of EVs, driven largely by Tesla. While some states and brands dominate the landscape, there is significant potential to expand EV adoption across other regions and makes. This report serves as a foundation for strategic decision-making in EV policy, infrastructure, and marketing.