🚗 Electric Vehicle Market Analysis – Report

Objective

The goal of this project is to analyze the global adoption of Electric Vehicles (EVs) and uncover trends related to growth, manufacturer performance, battery range, and price categories. This analysis helps understand the current EV landscape and highlights how clean mobility is evolving across regions.

Dataset

Source: Kaggle – Electric Vehicle Population Data 2025
(https://www.kaggle.com/datasets/nuhmanpk/electric-vehicle-population-data-2025)
Key Columns: Model Year, Make, Model, EV Type (BEV/PHEV), Range (km), Base MSRP (Price), City, State, Electric Utility, Postal Code.

Dashboard Highlights

KPI Cards: Total EVs, Total BEVs, and Total PHEVs.

State-wise EV Distribution Map: Shows which states have the highest number of electric vehicle registrations, with Washington leading.

Top 5 Manufacturers: Highlights Tesla, Nissan, Chevrolet, Ford, and BMW as major market contributors.

Top 5 EV Models: Displays Model Y, Model 3, Leaf, and others with the highest registration counts.

EV Growth Over Years: Line chart showing consistent EV adoption growth from 2010 to 2023.

Vehicle Type Comparison: Bar chart comparing BEV and PHEV proportions.

Interactive Filters: Allow users to explore by *Model Year*, *Vehicle Type*, and *State* for deeper insights.

Key Insights:

- EV adoption has grown steadily from 2010 to 2023, with a sharp rise after 2018.
- Tesla dominates the market, followed by Nissan and Chevrolet.
- Battery Electric Vehicles (BEVs) show better performance in range and adoption compared to PHEVs.
- Premium vehicles (above $60,000) generally offer higher battery range.
- California and Washington lead the U.S. in EV adoption rates.

Tools Used:

- Tableau Desktop – for data visualization and dashboard creation.
- Microsoft Excel – for initial data cleaning and preparation.

Conclusion:

The analysis demonstrates the strong upward trend in electric vehicle adoption, led by Tesla's innovation and consumer preference for long-range BEVs. As premium EVs continue to offer better range and performance, the shift toward clean energy transportation is expected to accelerate further in the coming years.

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