Vehicle Sales Performance Analysis – Electric & Bike Market Insights

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Tool Used: Tableau

Datasets:

➢ *Electric_Vehicle_Population_Data.xlsx*
➢ *Bike Sales.xlsx*

Project Objective

The objective of this analysis is to explore and compare electric vehicle sales in Washington State and bike product sales across global regions. By analyzing key trends, product performance, demographic preferences, and geographic distributions, this project aims to deliver actionable insights for business growth and decision-making in the vehicle sales industry.

Dataset Overview

Dataset Name	Description
Electric_Vehicle_Population_Data.xlsx	Contains EV registrations by make, type, year, and zip code in Washington
Bike Sales.xlsx	Contains bike-related product sales across different countries, genders, age groups, and years (2011–2016)

Dashboard Overview

Electric Vehicle Sales Dashboard – Washington

- **Vehicle Type Analysis**: Comparison of Battery Electric Vehicles (BEV) vs Plug-in Hybrid Electric Vehicles (PHEV)

- **Top Makes**: Tesla, Chevrolet, Nissan, Ford, and others

- **Geographic Trends**: County-wise ownership with zip code heatmap

- **Time Series**: Vehicle registrations across years 2016–2025

- **Interactive Filters**: Car make selector and type filter

Bike Sales Dashboard – Global

- **Key KPIs**: Total revenue, profit, and YoY growth

- **Product Performance**: Top 10 products by quantity and profit

- **Demographics**: Sales by gender and age group (Youth, Young Adults, Adults, Seniors)

- **Geographic Distribution**: Sales across US, UK, Germany, France, Canada, etc.
- **Time Filter**: Year-wise analysis from 2011 to 2016

Key Insights

### *Electric Vehicle Sales*

- Tesla is the market leader with ~99,000 vehicles.
- King County has the highest EV ownership.
- BEVs dominate the market share over PHEVs.
- Registrations spiked in 2019 and 2024, indicating strong adoption cycles.
- Ownership is concentrated in urban and coastal zip codes.
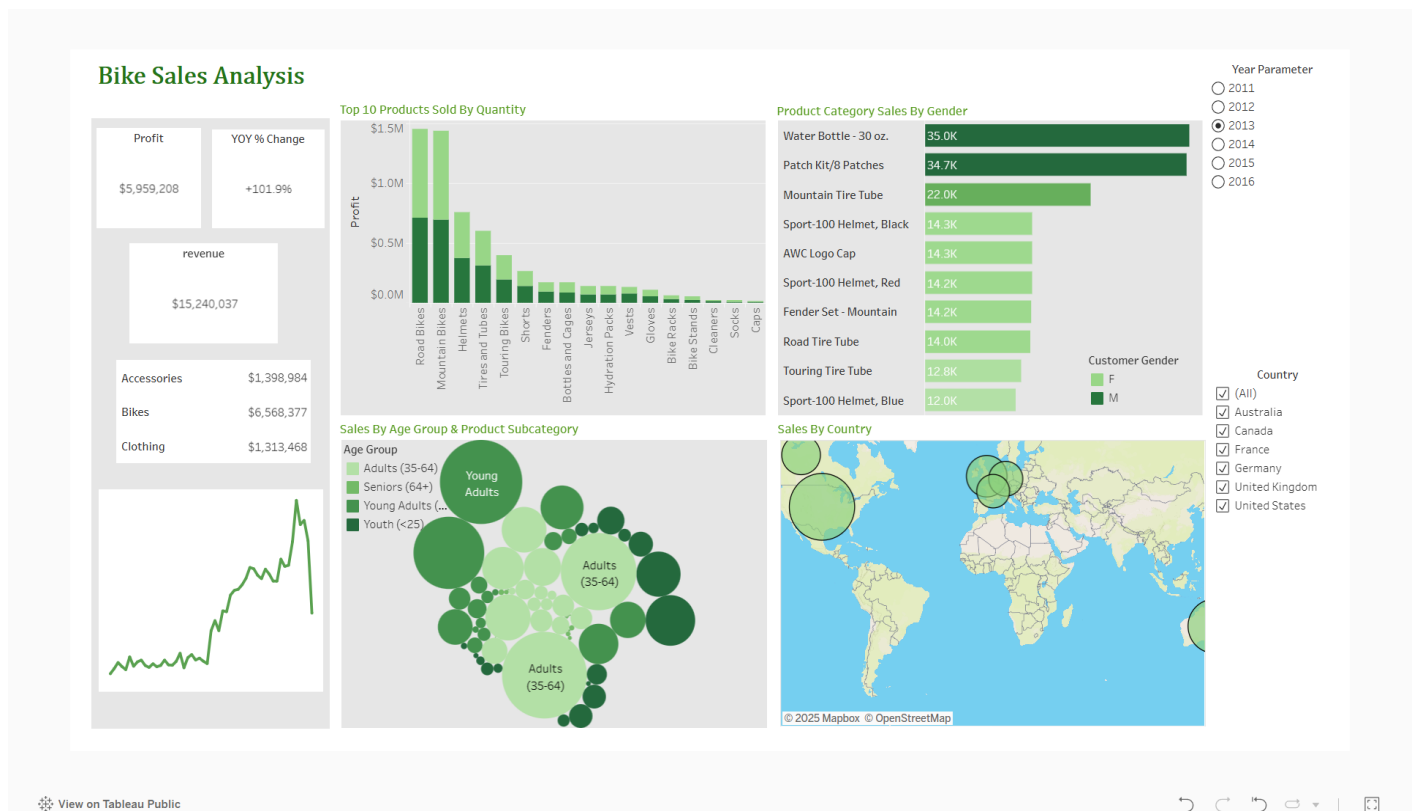
Bike Product Sales

- Highest sales in Road Bikes and Mountain Bikes.
- Young Adults (25–34) and Adults (35–64) are top buyer groups.
- 2013 saw the strongest profit growth (+101.9% YoY).
- The US, UK, and Germany lead in country-wise revenue.
- Accessories like water bottles and patch kits are high in volume.

Visual Snapshots

> *EV Sales Dashboard*
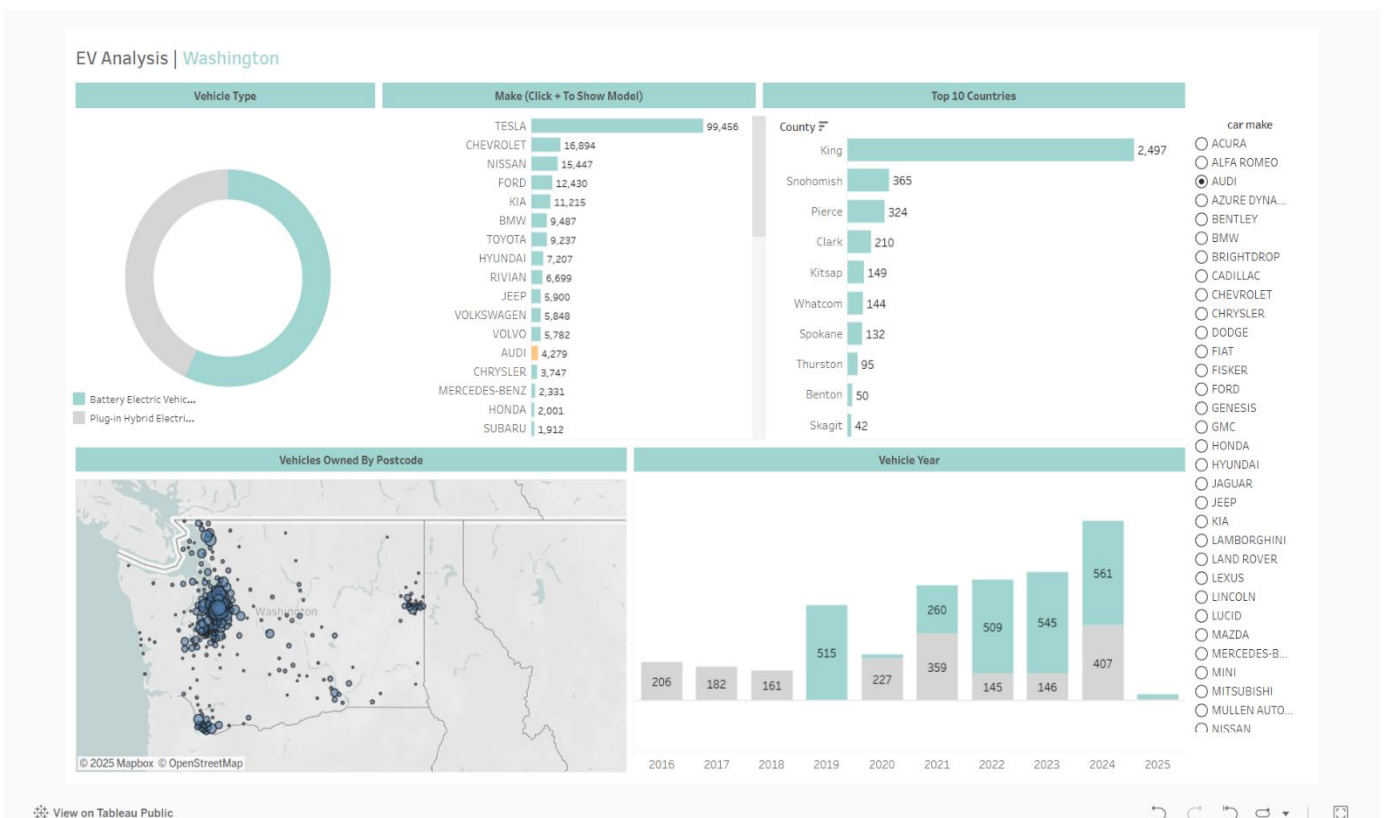
> *Bike Sales Analysis Dashboard*

Tools & Skills Demonstrated

- **Tableau**: Data visualization and dashboard creation
- **Excel**: Data cleaning and preparation
- **Analytical Thinking**: Identifying patterns and business insights
- **Storytelling with Data**: Presenting insights clearly to stakeholders

Business Recommendations

- **EV Segment**:
  - Increase charging infrastructure in counties with growing adoption.
  - Partner with high-volume brands like Tesla and Chevrolet for campaigns.
  - Promote newer BEV models given rising popularity.
- **Bike Segment**:
  - Focus marketing efforts on young adult demographics.
  - Expand inventory in top-performing product lines (e.g., Road Bikes).
  - Use gender-based segmentation to personalize offers.