

INDIAN ELECTRIC VEHICLE (EV) SALES & MARKET DASHBOARD (2015–2025)

“A visual understanding of how India is shifting to electric mobility”

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Tools Used: Power BI, DAX
Dataset: Indian EV Sales (2015-2025)
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Introduction

This project analyzes India's EV sales over a 10-year period. The purpose of the dashboard is to understand EV adoption, category-wise performance, and how the market has evolved over time.

The analysis includes sales trends, penetration rates, category contributions and a short-term forecast.

Problem Statement

India's EV market has grown rapidly in recent years, but the growth hasn't been uniform across categories.

This project aims to answer:

- How has EV adoption changed from 2015 to 2025?
- Which categories are driving growth?
- How is EV penetration improving year over year?
- What does the near future look like based on trends?

The dashboard helps simplify the EV market story using clear visuals and KPIs.

Dataset Overview

The dataset covers 10 years of EV sales across India and includes:

- Sales of 2W, 3W, 4W & Electric Buses
- Year-by-year breakdown (2015-2025)
- EV penetration percentages
- Market segments like personal, passenger & cargo
- Metrics suitable for trend, comparison & forecasting visuals

Data was cleaned, structured and modelled in Power BI

KPIs Used

To highlight the core EV market performance, these KPIs were used:

- ◆ **Total EV Sales**

Overall units sold across all categories.

- ◆ **YoY Growth %**

Annual growth rate of EV sales.

- ◆ **Average EV Penetration**

EV share within the total vehicle market.

- ◆ **Vehicle Category Count**

Number of EV categories contributing to total sales.

These KPIs give a quick high-level overview before diving deeper.

KPI Screenshots

Total EV Sales

7M

▲ 236.49%



YoY Growth %

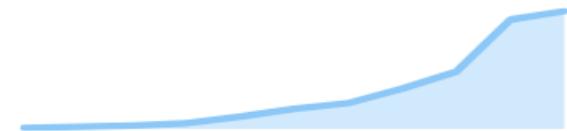
0.50



Avg EV Penetration

6.12

▼ -37.21%

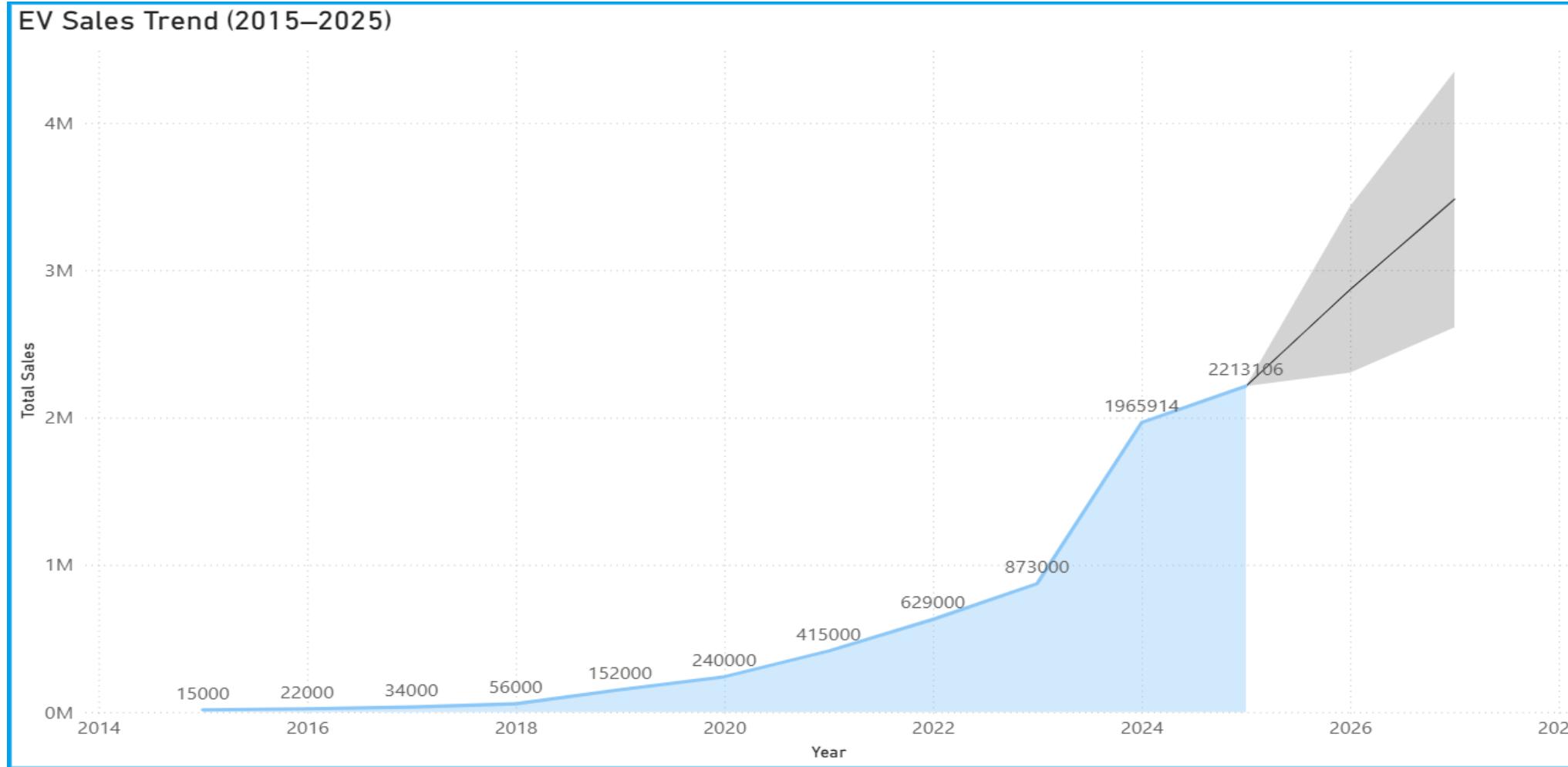


Vehicle Category Count

4

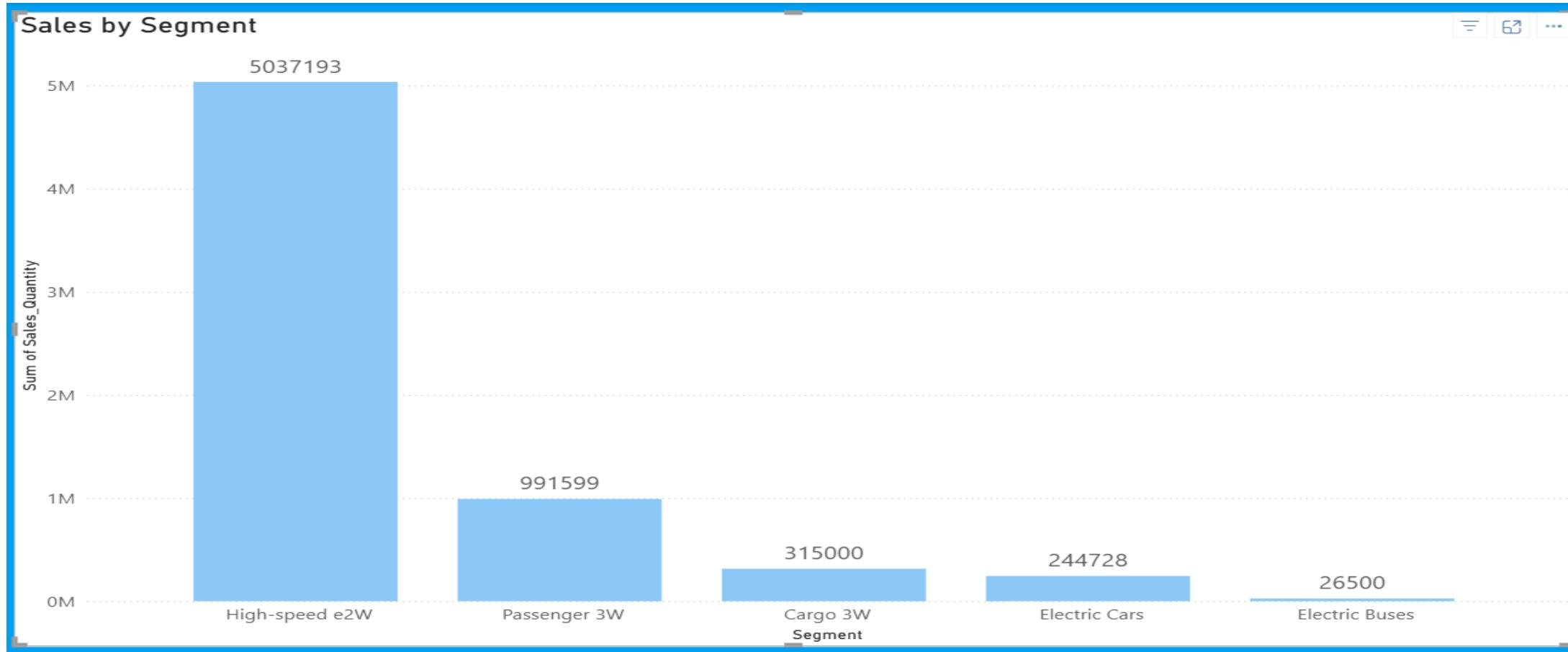


Sales Trend + Forecast Screenshot

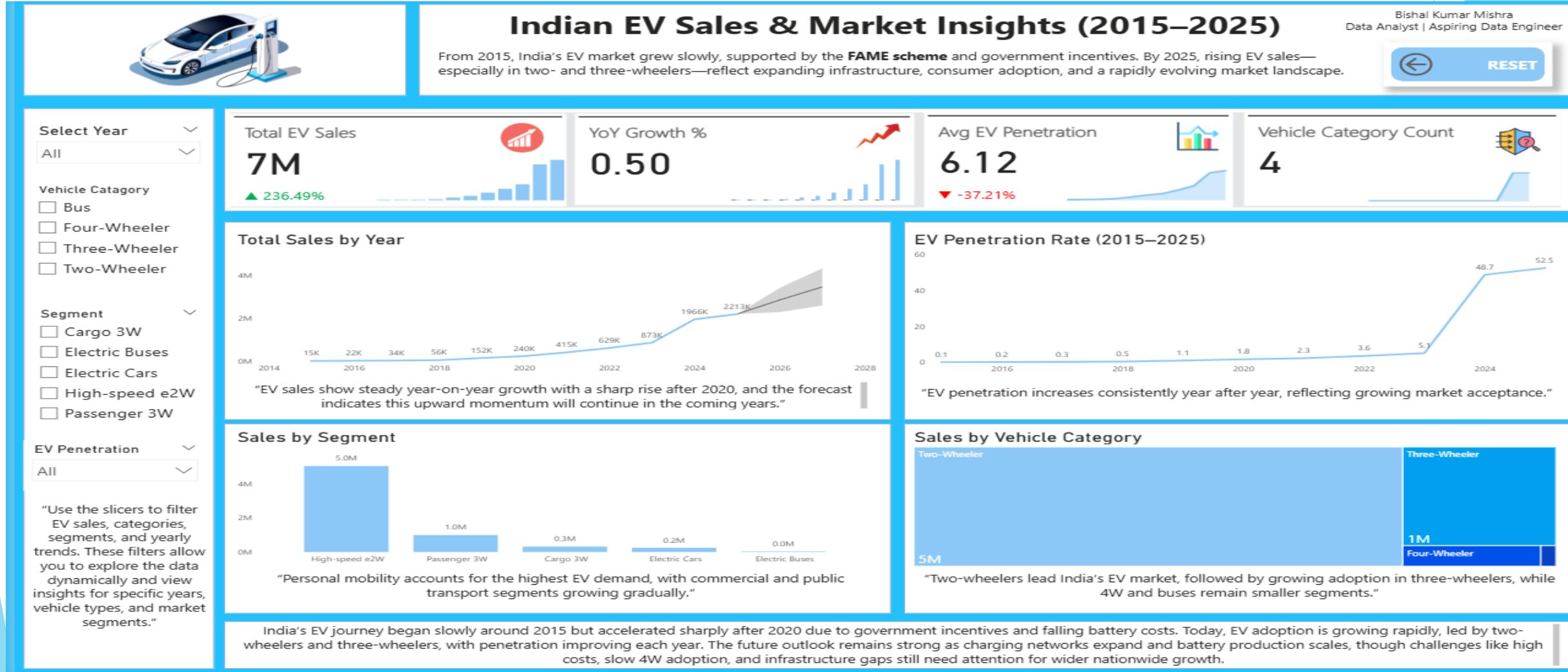


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Category Comparison Screenshot



Full Dashboard Screenshot



Key Insights

Analysis of the visuals shows:

- EV sales rise each year, especially after 2020
- Two-wheelers lead EV adoption with the highest contribution
- Three-wheelers maintain strong and steady growth
- Four-wheelers and buses grow slowly but consistently
- EV penetration improves every year
- The sales forecast indicates continued growth ahead

The market is expanding, driven mostly by affordable EV segments.

Problems & Proposed Solutions

Challenges Identified:

- Charging infrastructure is still limited
- Battery prices remain high
- Slow adoption of four-wheeler EVs
- Range concerns still influence buying decisions
- EV bus adoption is slow due to higher costs

Proposed Solutions:

- Expand fast-charging and public-private charging ecosystems
- Promote local battery manufacturing and swapping models
- Provide better financing options and incentives
- Develop highway charging corridors
- Encourage state-led EV bus procurement programs

Future Outlook

Looking ahead, India's EV market shows strong momentum:

- EV sales expected to grow steadily in the next few years
- 2W & 3W will remain the biggest growth drivers
- More affordable 4W EVs may boost private car adoption
- Charging infrastructure will improve across cities & highways
- Domestic battery manufacturing will help reduce costs

Overall, the EV ecosystem is moving toward wider adoption and stronger market confidence.

Conclusion

The dashboard provides a clear picture of how India's EV market has grown over the past decade.

Although challenges remain, the trend shows strong progress, especially after 2020.

These insights can support planning, investment decisions, and policy development as India continues its shift toward electric mobility.