

# **ELECTRIC VEHICLE MARKET SEGMENTATION ANALYSIS**

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## **Introduction**

India is experiencing a significant shift in its transportation landscape, driven by the widespread adoption of Electric Vehicles (EVs). The nation's rapid urbanization, growing population, and increased income levels have fuelled the embrace of EVs as an eco-friendly alternative.

By combining behavioural segments, psychographic data, and detailed vehicle specifications, stakeholders such as policymakers, automotive manufacturers, and charging station operators can devise targeted strategies and allocate resources more effectively to promote EV adoption and address the charging infrastructure needs in different vehicle category.

## **Problem Statement and Fermi Estimation**

### **Problem Statement**

The Objective of this analysis is to understand perception on India's electric vehicle market so that which vehicle category can be profitable business. The analysis focuses on behavioural segmentation derived from sales data, customer reviews (encompassing behavioral and psychographic data), and technical specifications of electric vehicles. Our objective is to employ these insights to effectively segment the market and recommend target segments for our electric vehicles.

### **Fermi Estimation**

#### **Data Collection and Assessment**

- Gather sales data, electric vehicle customer reviews, and technical specifications.
- Evaluate the reliability and comprehensiveness of the collected data.

## **Segmentation Using Behavioural Variables**

- Utilize behavioural data to identify patterns and segments within the customer base.
- Estimate the size and characteristics of each segment using data-driven techniques.

## **Target Segment Selection**

- Select target segments based on a thorough analysis of behavioural, psychographic, and technical factors.

By following these systematic steps, employing Fermi estimation at each stage, our Electric Vehicle Start up aims to make informed decisions, precisely target market segments, and tailor our marketing approach to meet the unique demands and preferences of our customers, ensuring a successful market entry and sustained growth.

## **CONCLUSION**

This project presents a comprehensive analysis of India's electric vehicle market, focusing on segmentation derived from sales data, customer reviews, and technical specifications. The study highlights the robust growth trajectory of India's two-wheeler market, establishing it as a primary revenue source. Utilizing behavioural variables from customer reviews, a rigorous market segmentation analysis was conducted employing the standard k-means algorithm. The analysis effectively partitioned the market into four distinct segments. In the context of selecting the most optimal market segment for our electric two-wheeler vehicles, thorough analysis and evaluation have pointed to Segment 1 as the ideal choice. Representing 39% of consumers, this segment boosts significant opportunities and a large customer base, making it a strategic target for market penetration.

In summary, our in-depth analysis of India's electric vehicle market led us to identify Segment 1 as the optimal target. With a significant 39% consumer base, this segment represents a substantial market opportunity. By tailoring our electric two-wheeler specifications to meet the preferences of this segment, we ensure this product align seamlessly with the demands of a large customer base. This strategic decision is grounded in a thorough understanding of market segmentation, consumer behavior, and technical specifications.

## **GITHUB LINK**

<https://github.com/Akashkg03/EV-Market-Segmentation-Analysis>