Electric Vehicle Market Analysis

📌 Overview

This project conducts a market size analysis for Electric Vehicles (EVs). Using Python, it explores adoption trends, market segmentation, and potential growth areas in the EV industry. The analysis combines data cleaning, exploratory insights, and visualizations to support market understanding.

📁 Project Structure

bash

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```
├── Electric Vehicle.ipynb   # Main Jupyter Notebook with EV market analysis
└── README.md                # Project documentation
```

📊 Dataset

The dataset contains details on electric vehicles and their adoption trends, including:

- **Vehicle details:** model, type, price range, manufacturer
- **Market metrics:** sales volume, adoption rate, infrastructure availability
- **Segmentation:** by region, vehicle type, and price category

(Dataset source not specified — can be added if available)

🛠️ Tools & Libraries

The analysis uses:

- **Python 3**
- **pandas** – data manipulation
- **numpy** – numerical operations
- **matplotlib** & **seaborn** – data visualization
- **Jupyter Notebook** – interactive development

🔍 Analysis Highlights

The notebook covers:

- **Market Size Estimation** – calculation methods and assumptions
- **Data Cleaning** – handling missing values and data inconsistencies

- **Adoption Trend Analysis** – year-wise growth patterns
- **Segmentation Analysis** – identifying growth segments by type and price
- **Infrastructure Correlation** – EV adoption vs charging station availability

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📈 **Key Insights**

- Urban areas show significantly higher EV adoption rates.
- Premium EV segments dominate early market share.
- Charging infrastructure plays a critical role in adoption patterns.
- Emerging markets show rapid growth potential.