Electric Vehicle (EV) Data Analysis Report

Project title : Electric Vehicle Data Cleaning and Insight Report

Submitted by : Atharv Kulkarni

Programming language : Python (NumPy , pandas ,seaborn ,matplotlib)

Tool used : jupyter notebook

Data size : 477 rows

Introduction :

The project is about analysis of dataset containing Electric Vehicle specification like model, range, acceleration, battery type , top speed and more. The ultimate goal is to extract meaningful insight which is useful to the EV industry and showcase of data-handling skill for freelancing/portfolio work.

Data Cleaning Summary :

1. **Initial issues:**
    - Missing values
    - Duplicates
    - Object type numeric column
2. **Step Taken:**
    a. deleted duplicates
    b. Handled missing values as mean , median strategy
    c. Cleaned and export as EV_cleaned.csv

Data Analysis & Insights:

Total EV Cars: 477

Top 5 EV Brands & Models by Speed:

brand	model	top_speed_kmh
Maserati	GranTurismo Folgore	325
Porsche	Taycan Turbo GT Weissach	305
Maserati	GranCabrio Folgore	290
Porsche	Taycan Turbo GT	290
Tesla	Model S Plaid	282

Top 5 EVs by Range:

brand	model	range_km
Mercedes-Benz	EQS 450+	685
Lucid	Air Grand Touring	665
Mercedes-Benz	EQS 450 4MATIC	655
Mercedes-Benz	EQS 580 4MATIC	640
Mercedes-Benz	EQS 500 4MATIC	640

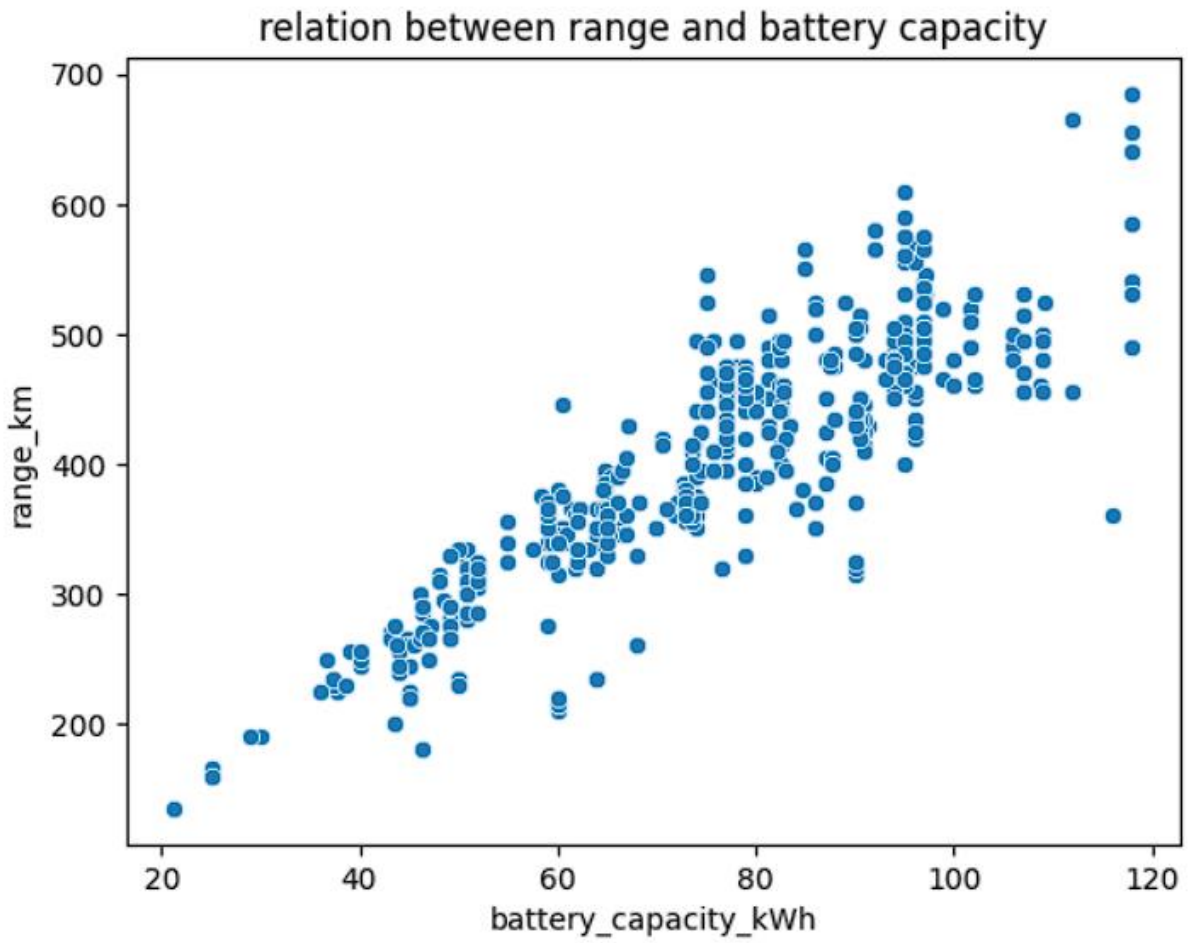
Most Popular Body Type: SUV

Average Battery Capacity: 74.11 kWh

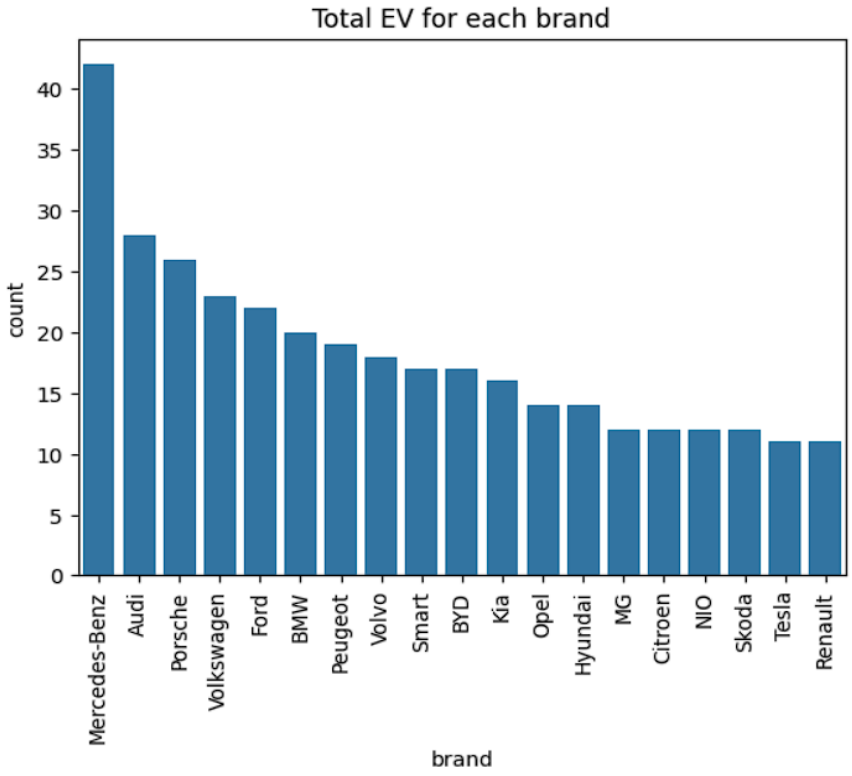
top pickup from 0–100 km/h:

acceleration_0_100_s	brand	model
2.2	Porsche	Taycan Turbo GT Weissach
2.3	Tesla	Model S Plaid
2.3	Porsche	Taycan Turbo GT

Correlation between battery capacity & range: Their is strong positive correlation between battery capacity and range with 0.87.



Most EV cars in each brand : Mercedes-Benz is the brand who has most Ev and that is 42



Conclusion

This project helped demonstrate real-world data cleaning and insight generation using Pandas. It shows how battery, range, and speed relate in electric vehicles, and provides a structured, clean dataset ready for business use.