

Project Development Phase

Data Preprocessing Steps

1. Data Collection

- Downloaded the EV dataset in CSV/Excel format.
- Verified the dataset completeness and structure.
- Ensured attributes like vehicle type, range, charging time, price, and location are available.

2. Understand the Dataset

- Identified column names and meanings.
- Checked data types (numeric, text, date).
- Identified missing values and inconsistencies.
- Reviewed business questions related to EV adoption and charging infrastructure.

3. Import Dataset into Database / Spreadsheet

- Loaded dataset into MySQL / Excel / Tableau.
- Validated a successful import.
- Ensured no data truncation or format issues.

4. Connect Tableau Desktop to Database Server

- Established connection between Tableau and data source.
- Verified tables and fields are visible.
- Checked relationships if multiple tables are used.

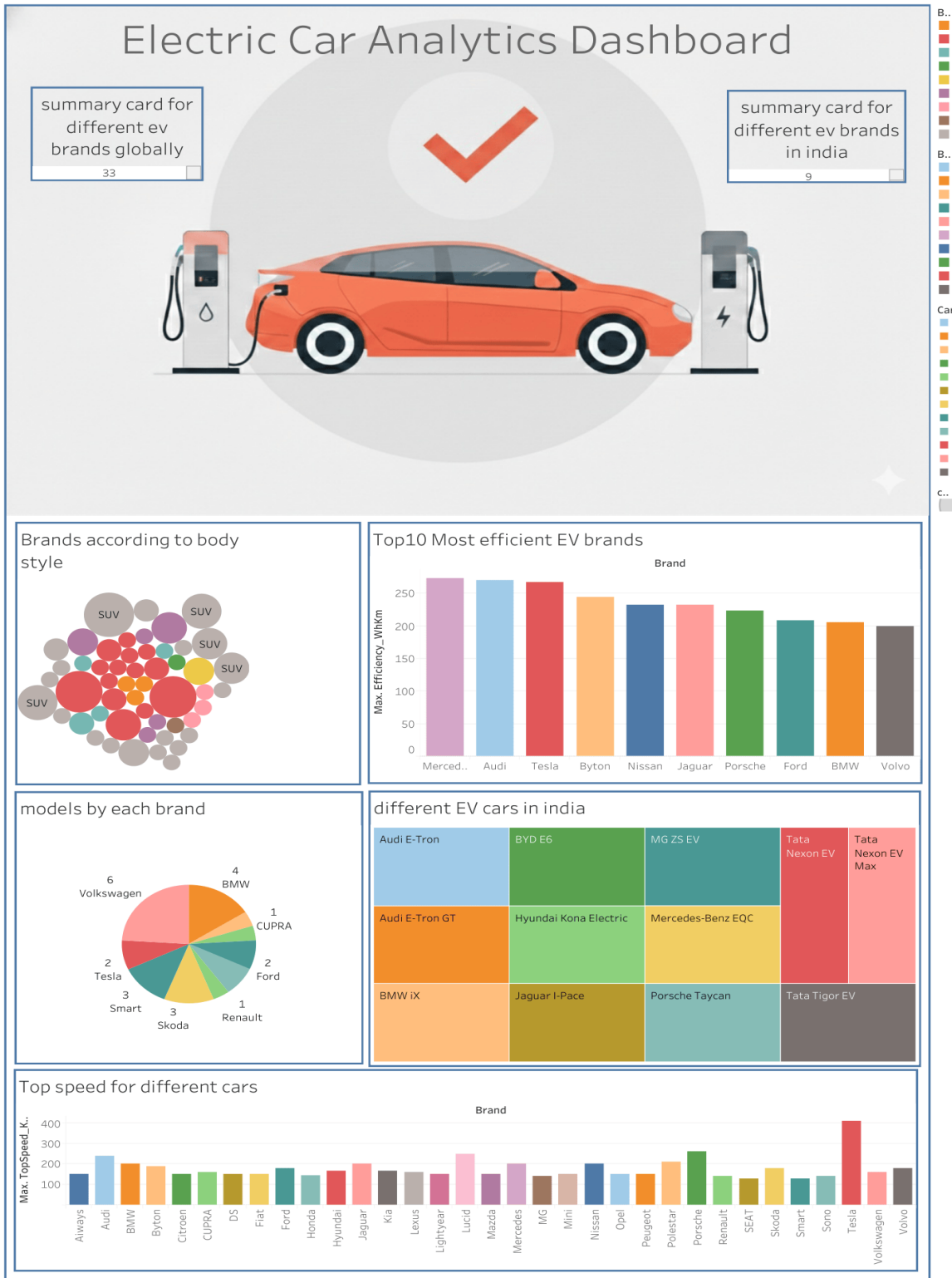
5. Data Preparation

- **Remove Duplicate Records**
Eliminated repeated entries.
- **Handle Missing Values**
Replaced null numeric values using average/median.
Replaced missing categorical values with mode or default label.
- **Correct Data Types**
Converted text fields to numeric where required.
Formatted date columns properly.
Ensured price and range fields are numeric.
- **Data Standardization**
Standardized units (km, hours).
Normalized state or city names.
Format currency properly.
- **Create Calculated Fields in Tableau**
Range Efficiency
Charging Speed Ratio
State-wise EV count
Average price per region
- **Filtering & Cleaning**
Removed unnecessary columns.
Filtered irrelevant or outlier records.

6. Data Validation

- Cross-checked totals and aggregations.
- Ensured no null values affecting visualizations.

Dashboard



Story

Story of Electric Cars in India

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Charging Stations in India

Charging Stations by Region & Type

Price of Electric Cars by different

Different Brands & No. of Models

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