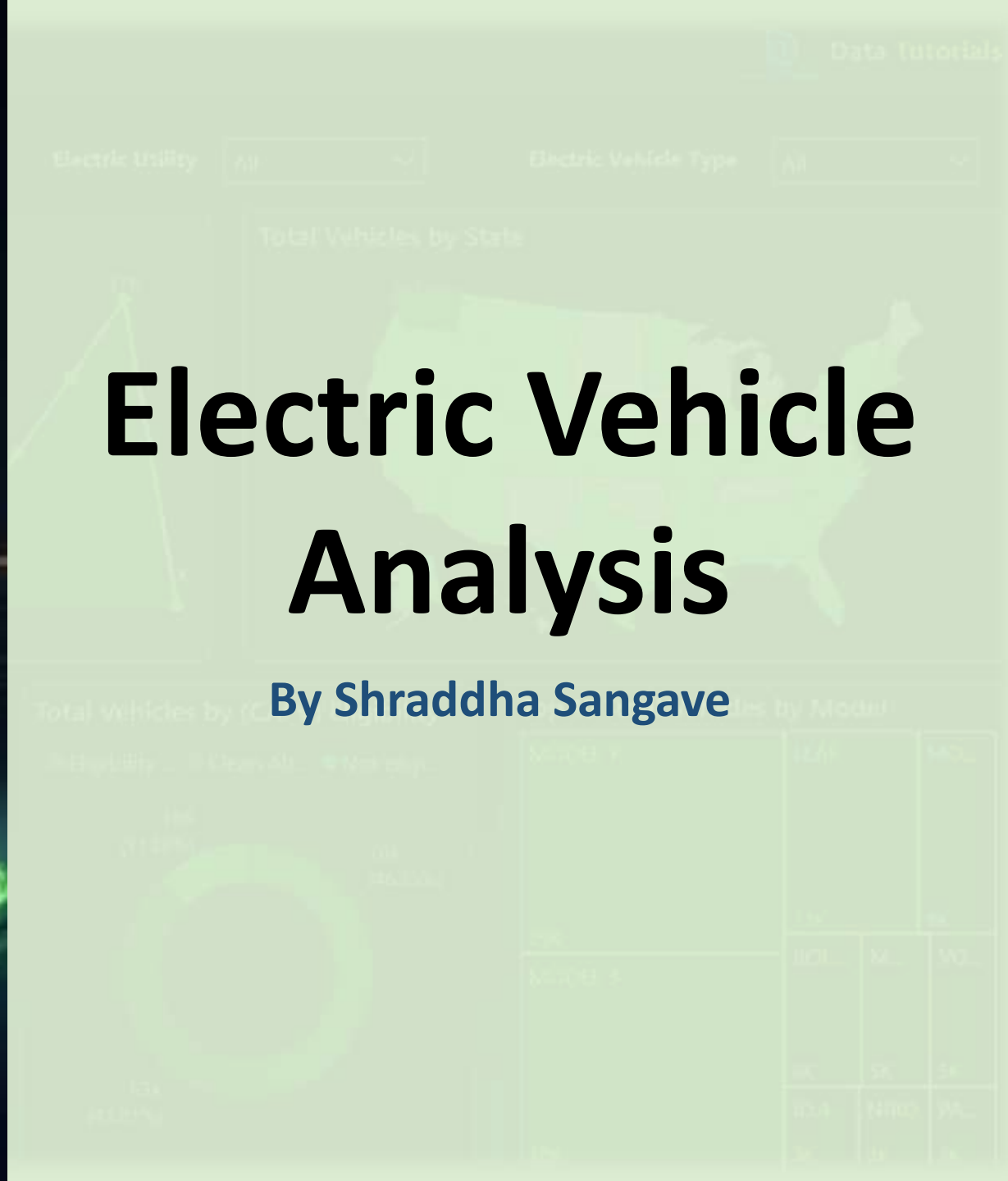




Electric Vehicle Analysis

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Overview

1. An electric car is one powered by an electric motor rather than a traditional petrol/diesel engine. This electric motor is powered by rechargeable batteries that can be charged by common household electricity.
2. An electric vehicle(EV) is one that operates on an electric motor, instead of an internal-combustion engine that generates power by burning a mix of fuel and gases.
3. Therefore, such as vehicle is seen as a possible replacement for current-generation automobile, in order to address the issue of rising pollution, global warming, depleting natural resources ,etc.
4. Through the concept of electric vehicles has been around for a long time, it has drawn a considerable amount of interest in the past decade amid a rising carbon footprint and other environmental impacts of fuel-based vehicles.



History of EV

1. The invention of the first model electric vehicle is attributed to various people.
2. In 1828, Anyos Jedlik invented an early type of electric motor, and created a small model car powered by his new motor.
3. Between 1832 And 1839, Scottish inventor Robert Anderson also invented a crude electric carriage.
4. In 1835, Professor Sibrandus Stratingh of Groningen, the Netherlands and his assistant Christopher Becker from Germany also created a small-scale electric car, powered by non-rechargeable primary cells.





Benefits of EV

1.Environmental Benefits: Lower emissions, reducing air pollution and greenhouse gases.

2. Energy Efficiency: More efficient motors result in reduced energy consumption.

3. Lower Operating Costs: Less maintenance and lower fuel costs compared to traditional vehicles.





Challenges of using EV

1. Range Limitations: Some EVs have limited driving ranges.

2. Charging Infrastructure: Availability of charging stations varies.

3. Upfront Cost: Initial purchase price may be higher, though decreasing over time.





KPI'S Requirement

1. Total Vehicles:

- Understand the overall landscape of electric vehicles, encompassing both BEVs and PHEVs, to assess the market's size and growth.

2. Average Electric Range:

- Determine the average electric range of the electric vehicles in the dataset to gauge the technological advancements and efficiency of the EVs.

3. Total BEV Vehicles and % of Total BEV Vehicles:

- Identify and analyze the total number of Battery Electric Vehicles (BEVs) in the dataset.
- Calculate the percentage of BEVs relative to the total number of electric vehicles, providing insights into the dominance of fully electric models.

4. Total PHEV Vehicles and % of Total PHEV Vehicles:

- Identify and analyze the total number of Plug-in Hybrid Electric Vehicles (PHEVs) in the dataset.
- Calculate the percentage of PHEVs relative to the total number of electric vehicles, offering insights into the market share of plug-in hybrid models.



Charts Description

1.Total Vehicles by Model Year (From 2010 Onwards):

1. Visualization: Line/ Area Chart
2. Description: This chart will illustrate the distribution of electric vehicles over the years, starting from 2010, providing insights into the growth pattern and adoption trends.

2. Total Vehicles by State:

1. Visualization: Map Chart
2. Description: This chart will showcase the geographical distribution of electric vehicles across different states, allowing for the identification of regions with higher adoption rates.

3. Top 10 Total Vehicles by Make:

1. Visualization: Bar Chart
2. Description: Highlight the top 10 electric vehicle manufacturers based on the total number of vehicles, providing insights into the market dominance of specific brands.

4. Total Vehicles by CAFV Eligibility:

1. Visualization: Pie Chart or Donut Chart
2. Description: Illustrate the proportion of electric vehicles that are eligible for Clean Alternative Fuel Vehicle (CAFV) incentives, aiding in understanding the impact of incentives on vehicle adoption.

5. Top 10 Total Vehicles by Model:

1. Visualization: Tree map
2. Description: Highlight the top 10 electric vehicle models based on the total number of vehicles, offering insights into consumer preferences and popular models in the market.

MODEL Y	LEAF		MODEL 3
	LEAF	MODEL 3	
13K	8K	20K	
MODEL 3	BOLERO	MODEL 3	MODEL 3
	BOLERO	MODEL 3	MODEL 3
6K	5K	5K	
20K	3K	3K	3K



ELECTRIC VEHICLE ANALYSIS

Total Vehicles

173.47K

Avg Electric Range

60.11

Filter Panel

City

All

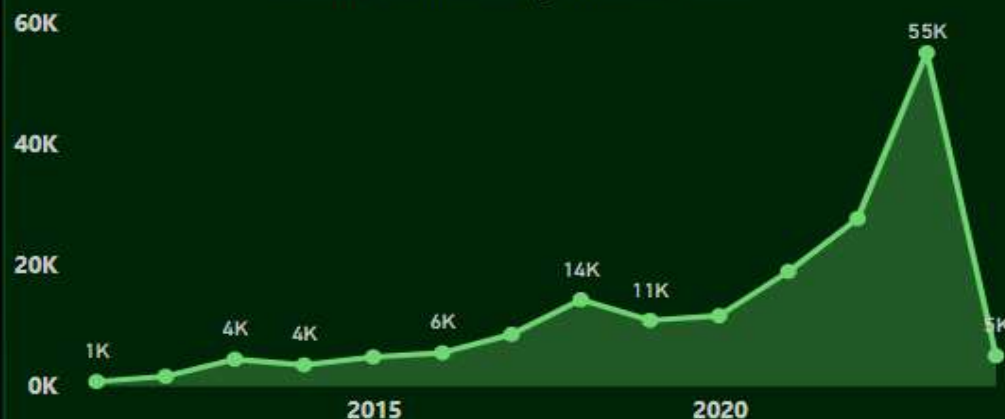
Electric Utility

All

Electric Vehicle Type

All

Total Vehicles by Model Year



Total Vehicles by State



BEV Vehicles

136K

% of Total

78%

PHEV Vehicles

38K

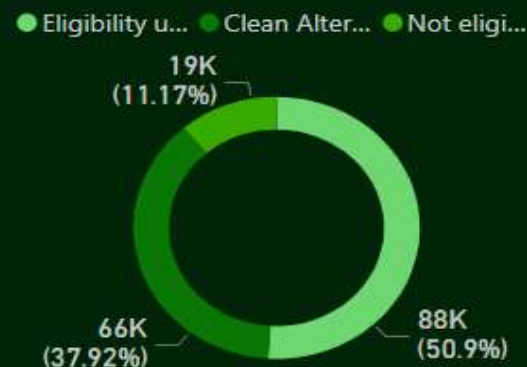
% of Total

22%

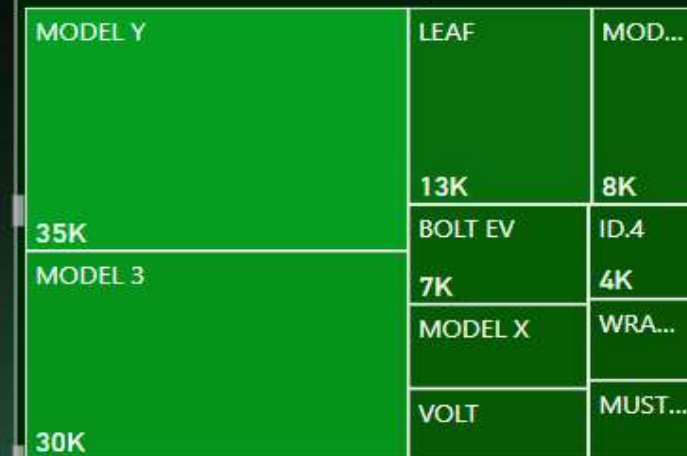
Total Vehicles by Make



Total Vehicles by (CAFV) Eligibility



Total Vehicles by Model





Thank You