Visualisation Tool For Electric Vehicle Charge and Range Analysis

1.INTRODUCTION

1.1 Overview

A vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source and have an electric motor instead of an internal combustion engine.

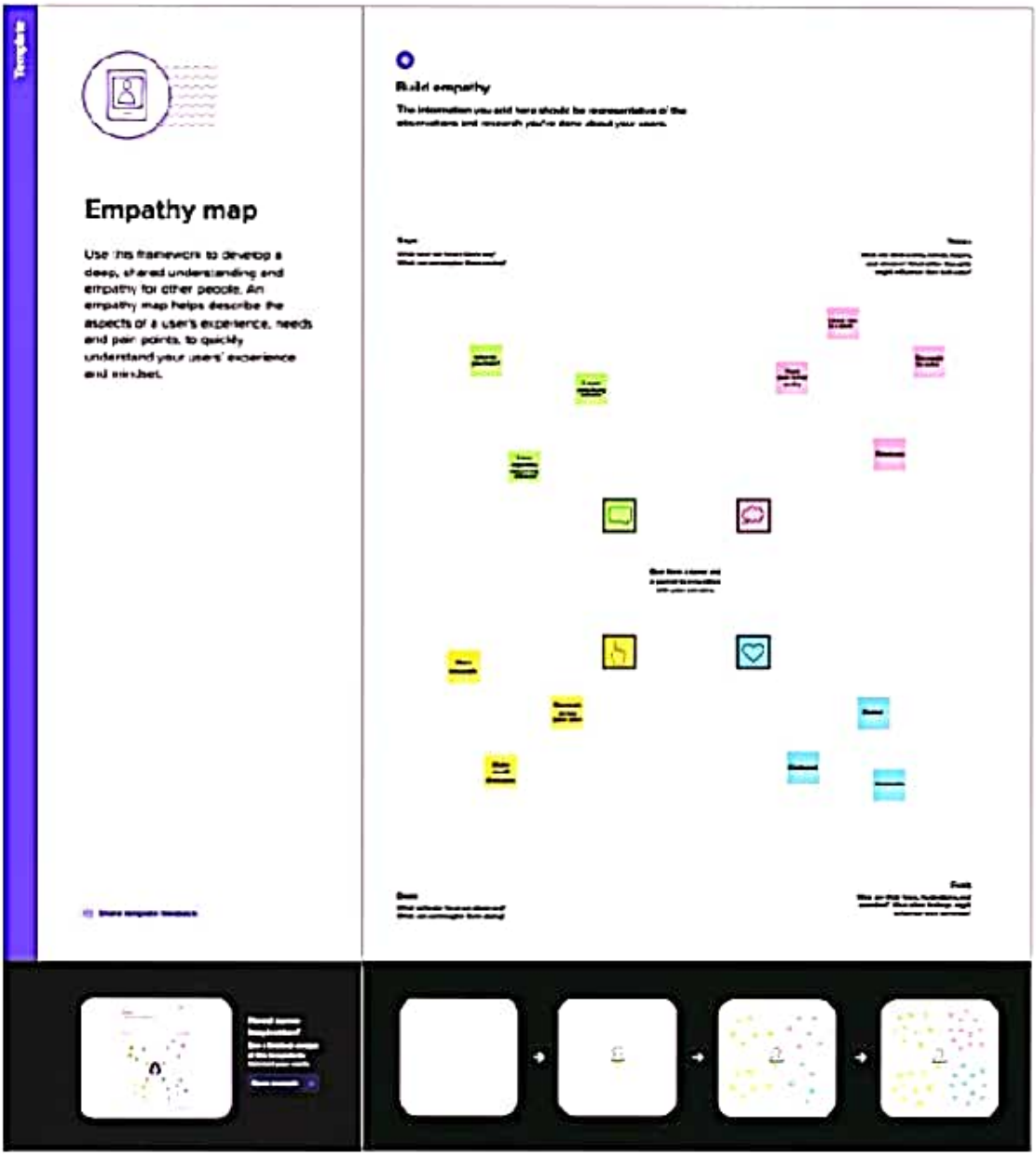
The Electric Vehicle (EV) is not new, but it has been receiving significantly more attention in recent years. Advances in both EV analytics and battery technologies have led to increased automotive market share. However, this growth is not attributed to hardware alone. The modern mechatronic vehicle marries electrical storage and propulsion systems with electronic sensors, controls, and actuators, integrated closely with software, secure data transfer, and data analysis, to form a comprehensive transportation solution. Advances in all these areas have contributed to the overall rise of EV's, but the common thread that runs through all these elements is data analytics.

1.2 PURPOSE

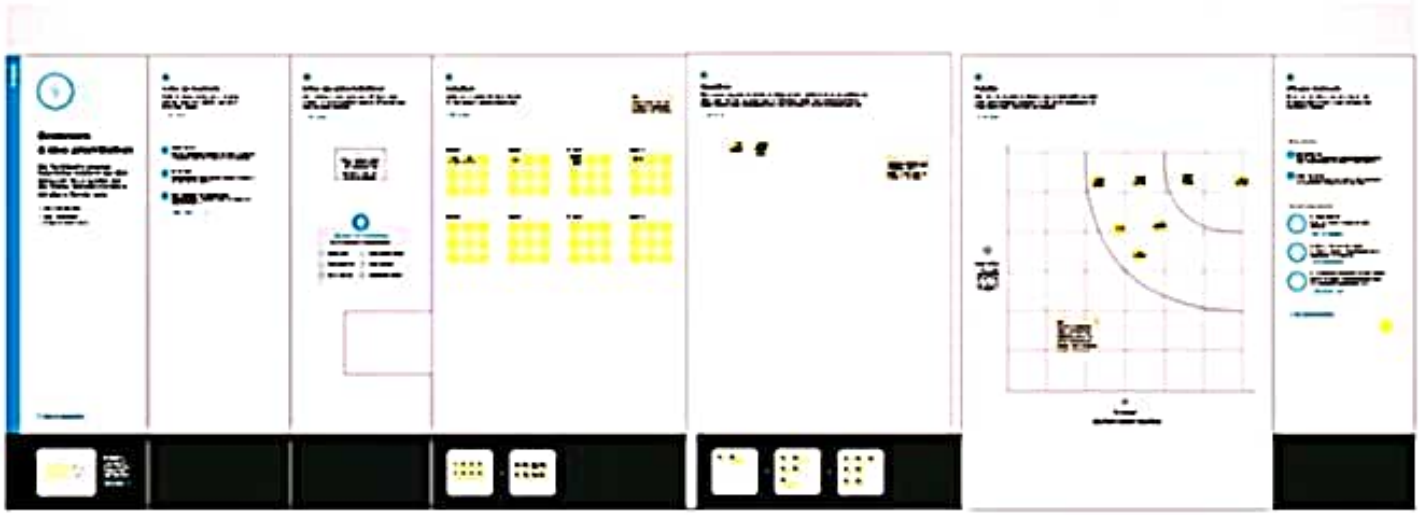
Vehicle power electronics primarily process and control the flow of electrical energy in hybrid and plug-in electric vehicles, including plug-in electric vehicles. They also control the speed of the motor, and the torque it produces.

2.Problem Definition & Design Thinking .

2.1 Empathy map

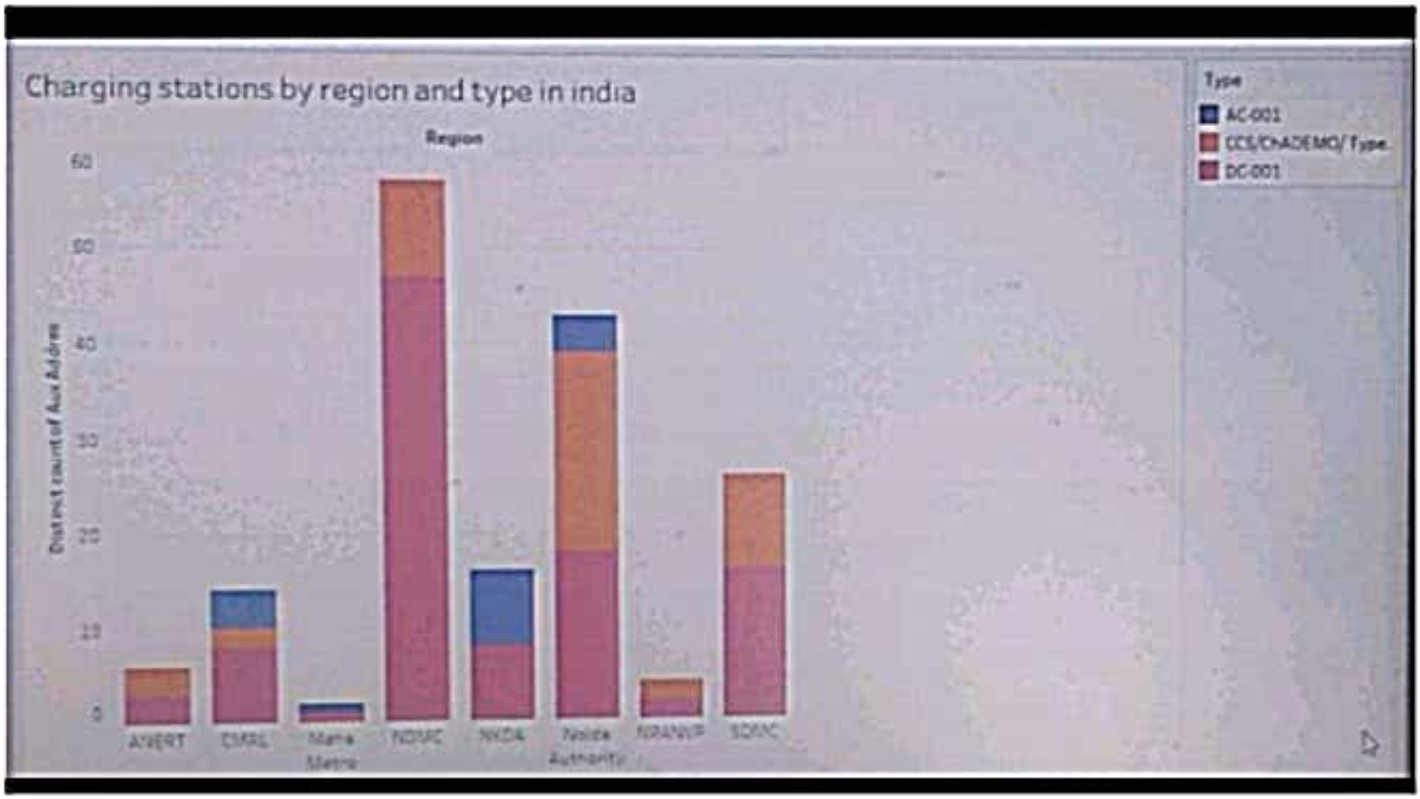


2.2 Ideation & Brainstorming map



3.sheet

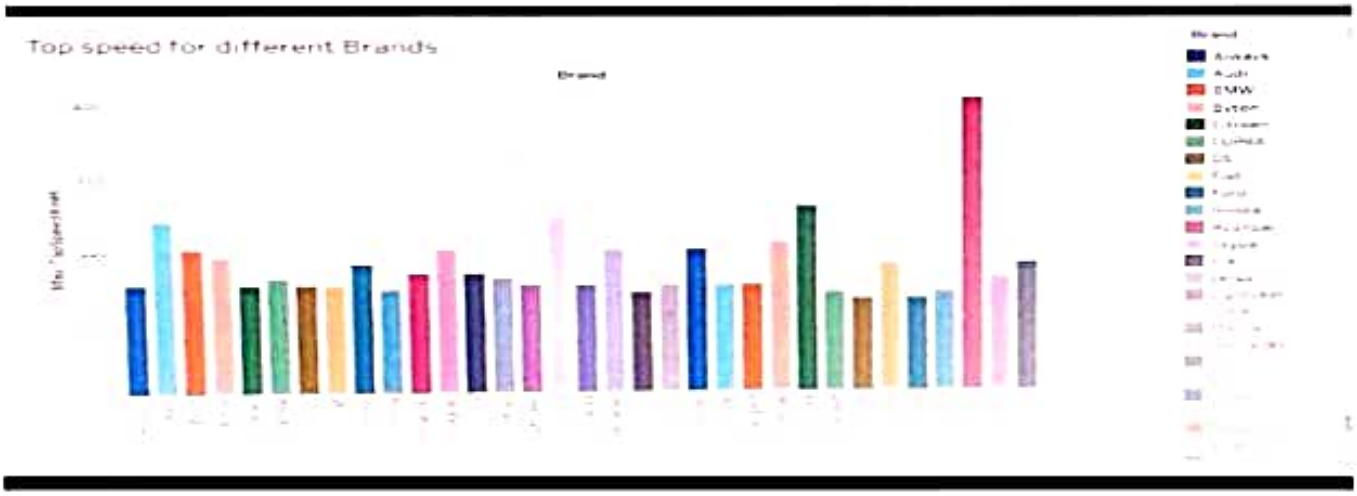
3.1 charging stations by region and type in India



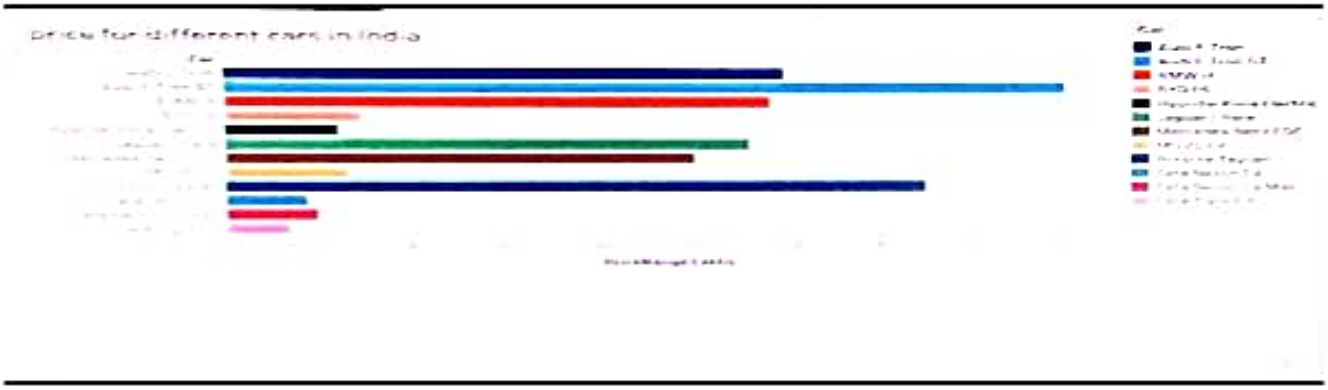
3.2 EV Charging stations map of India

3.3 Different EV cars in India

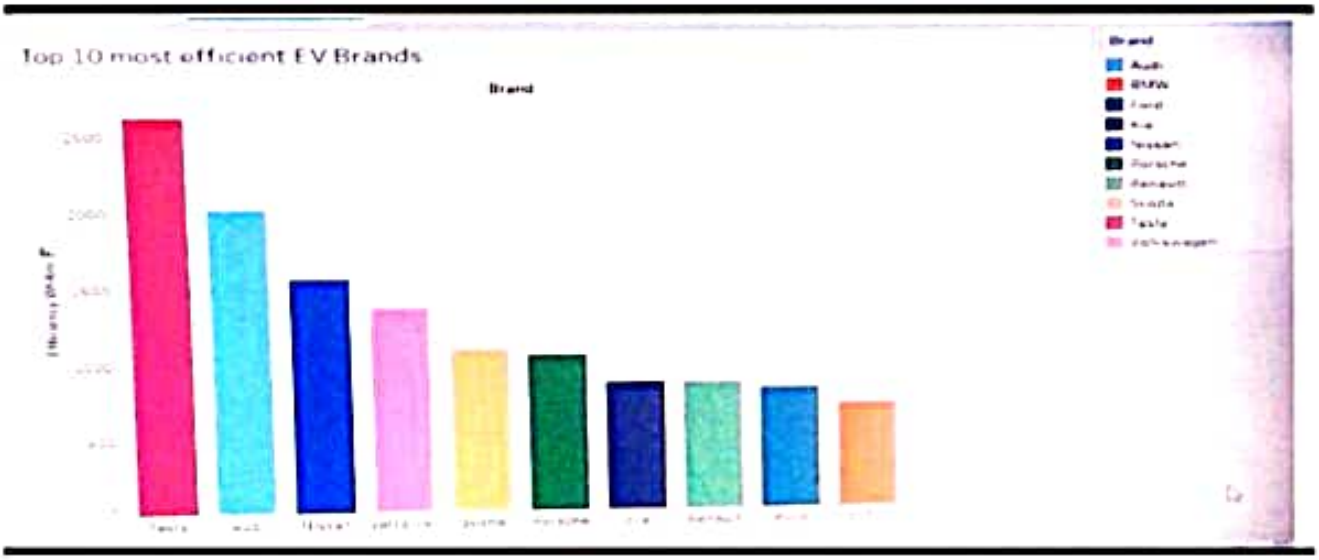
3.4.Top speed for different brands



3.5 Price for different Cars in India

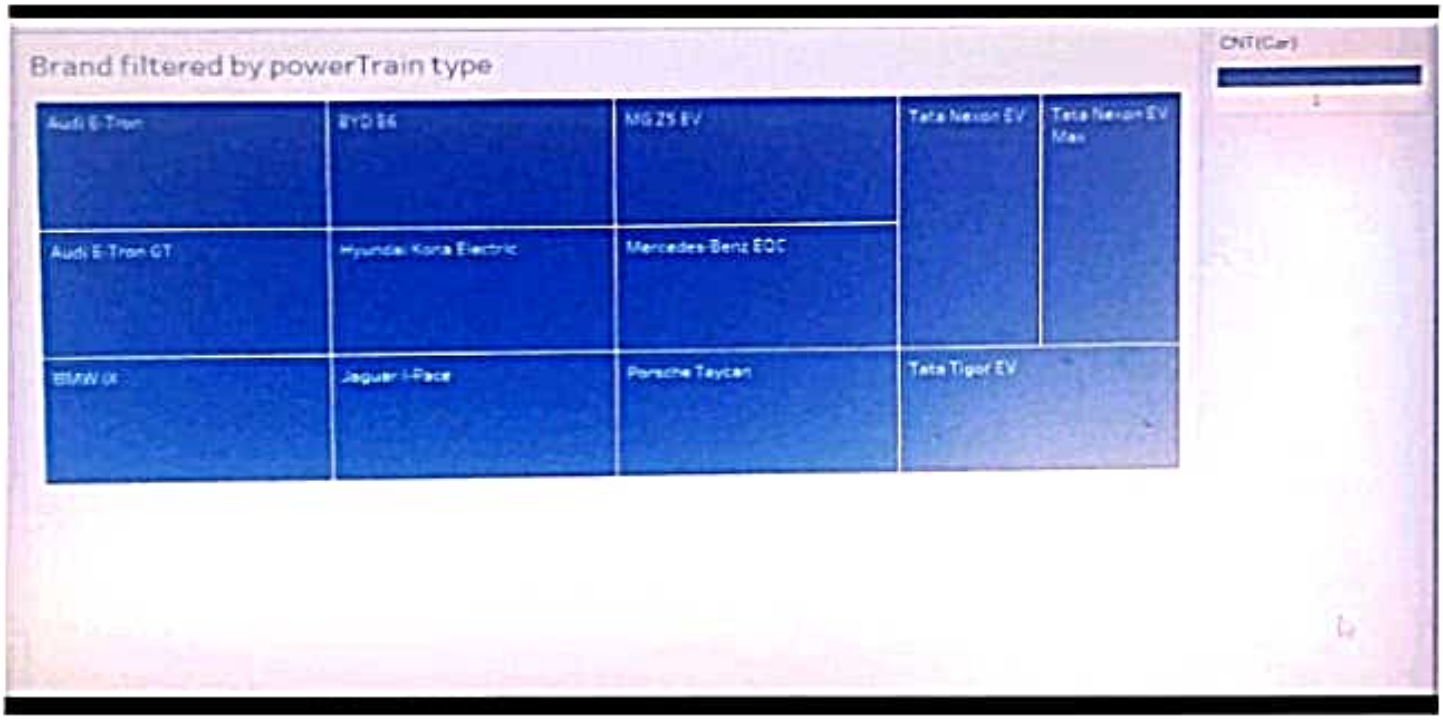


3.6.Top 10 most efficient EV Ca

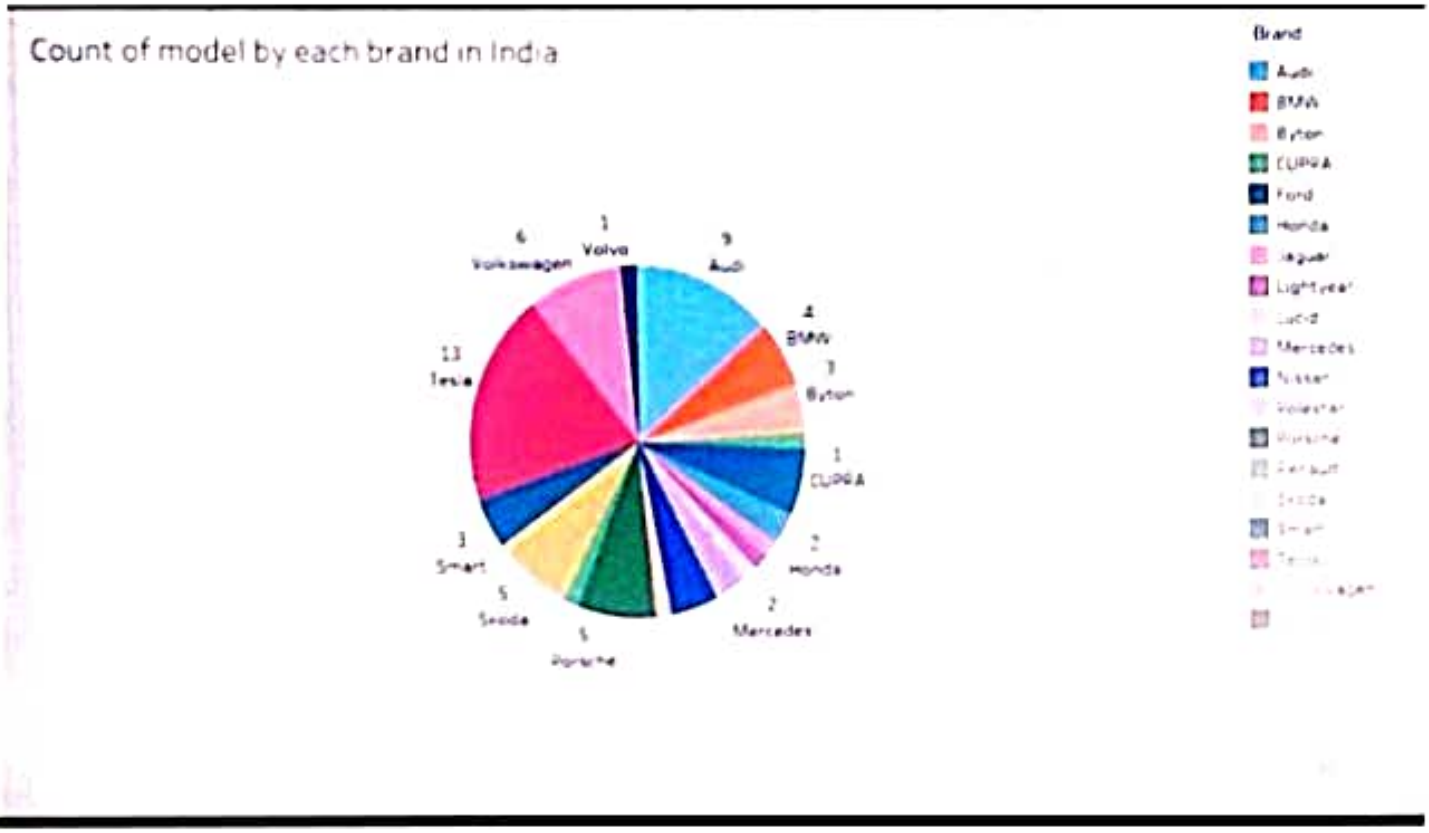


3.7 .Brands according to Bodystyle

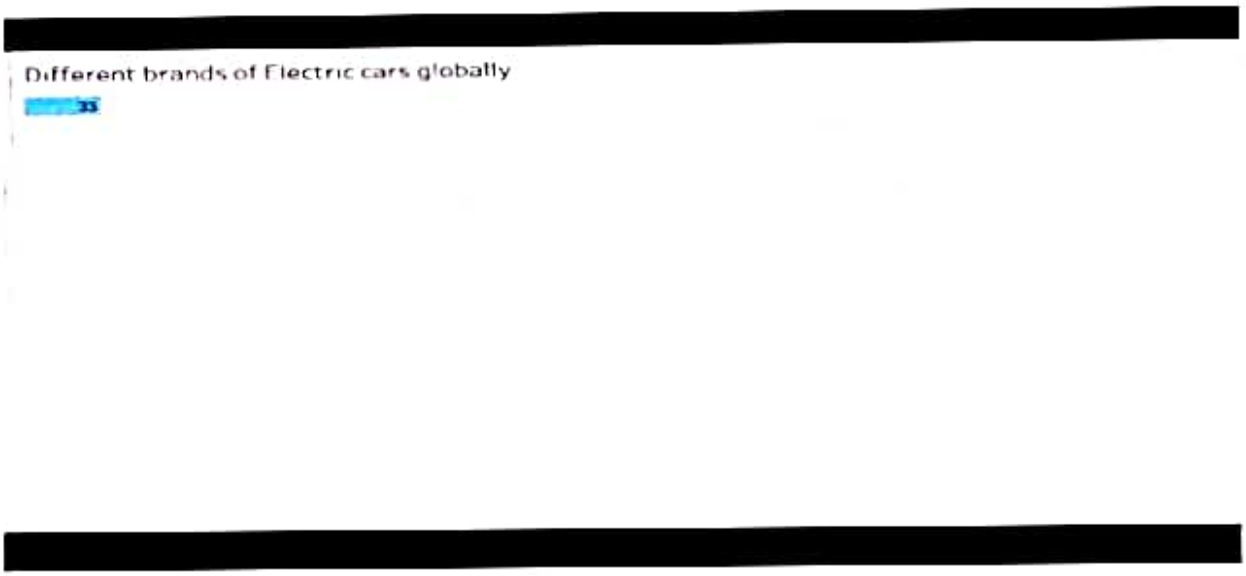
3.8.Brand filtered by power train type



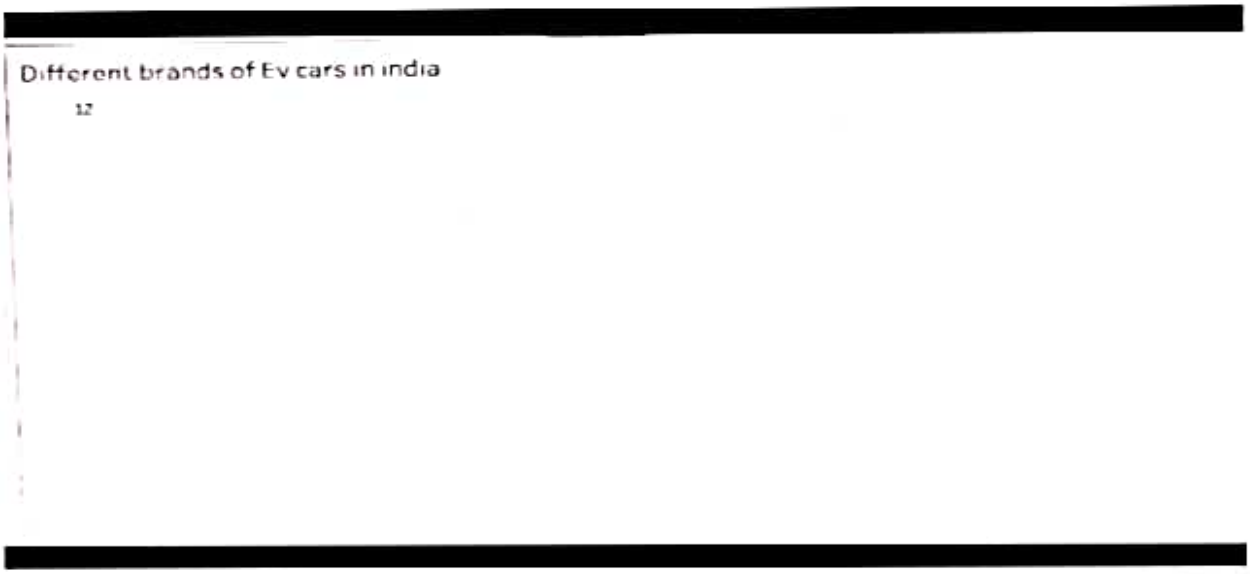
3.9. Count of model by each brand in India

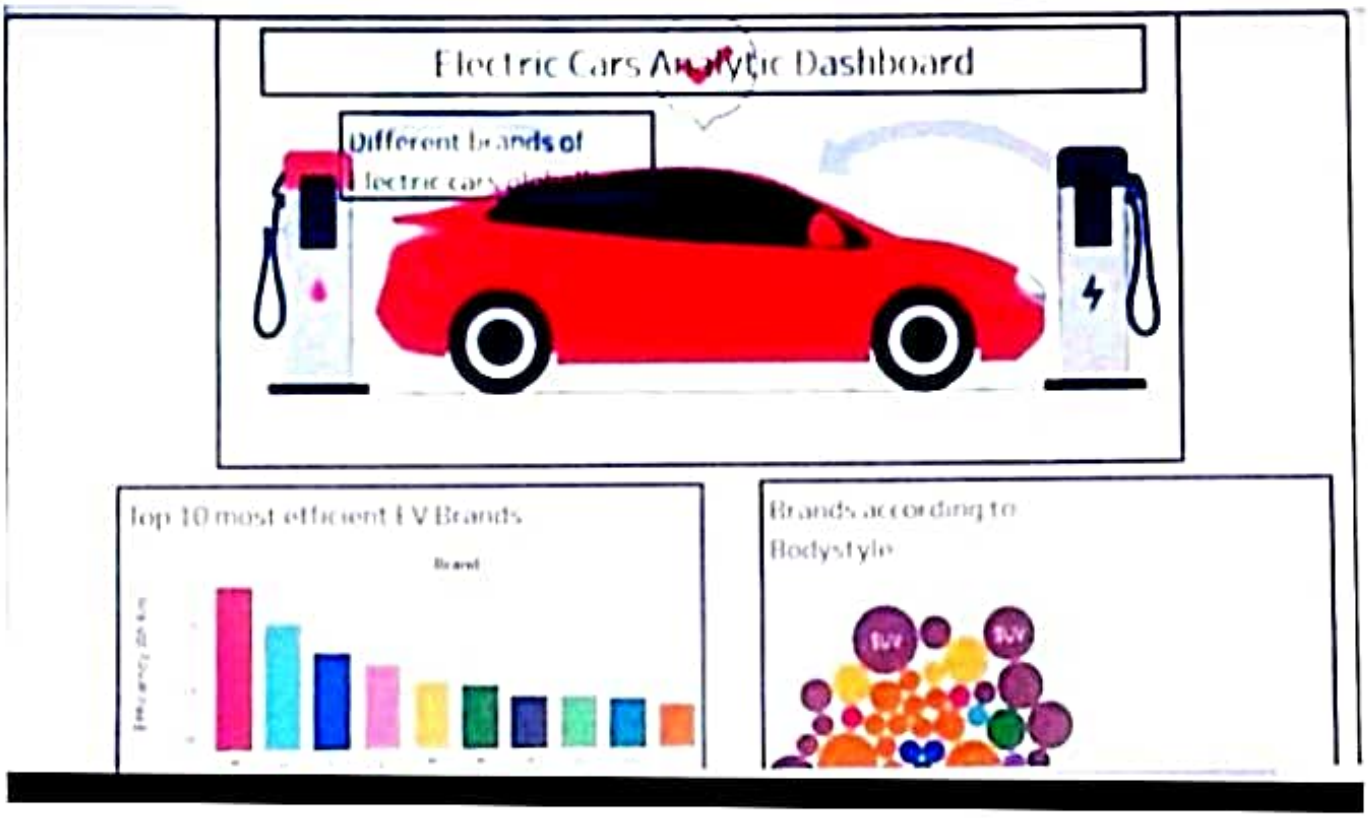


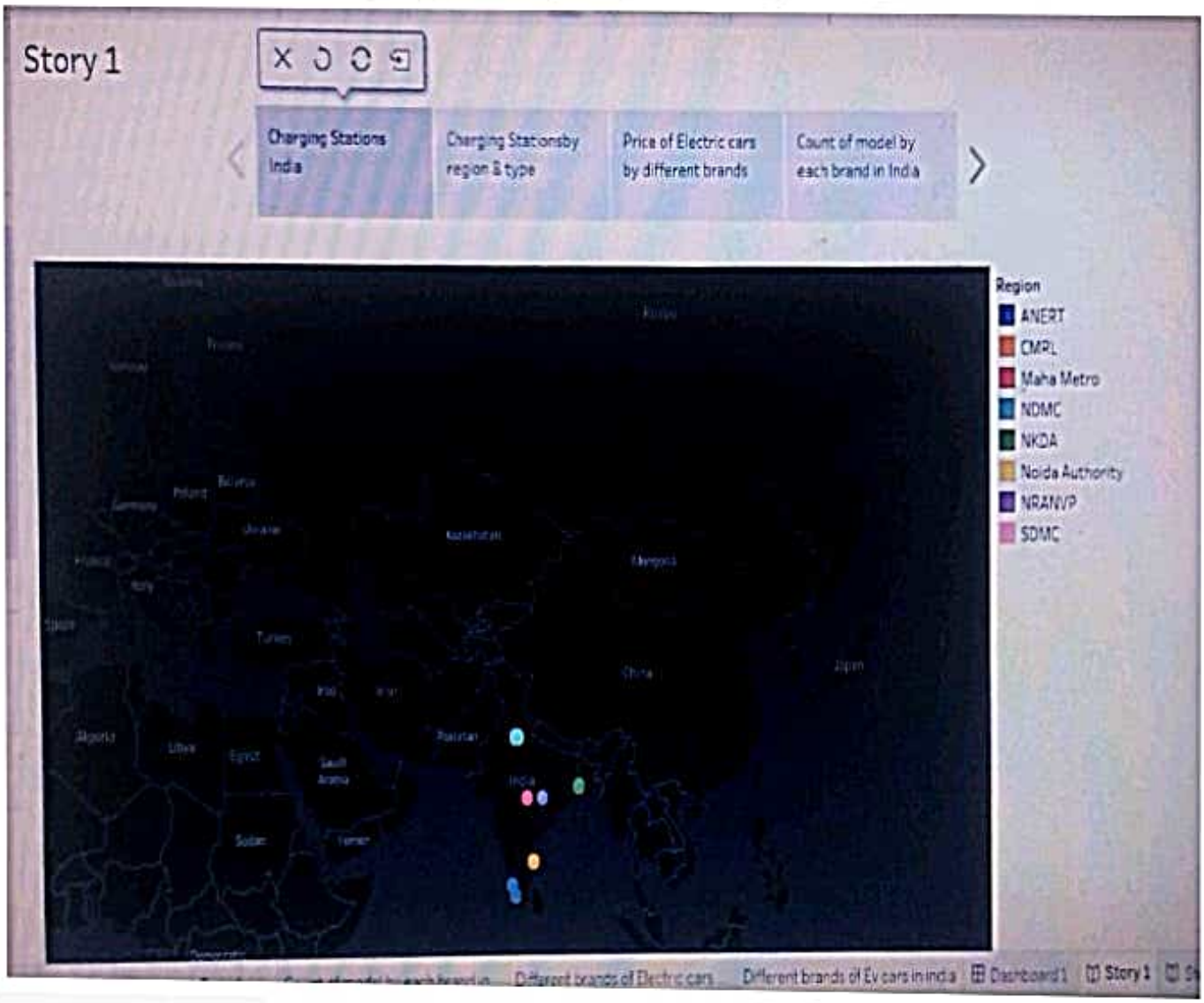
3.10. Different brands of Electric cars globally



3.11. Different brands of EV cars in India




Electric Cars Analytic Dashboard
Different brands of
top 10 most effecient EV Brands
Brand
Brands according to
Bodystyle
SUV
SUV


Story 1
Charging Stations India
Charging Stationsby region & type
Price of Electric cars by different brands
Count of model by each brand in India
Region
ANERT
CMRL
Maha Metro
NDMC
NKDA
Noida Authority
NRANVP
SDMC
Different brands of Electric cars
Different brands of Ev cars in india
Dashboard1
Story 1

4.ADVANTAGES AND DISADVANTAGES:

Advantages:

1.Eco -friendly.

2.Renewable energy source.

3.Less noise and smoother motion.

Disadvantages:

1.High initial cost.

2.Charging station limitations.

3. Recharging takes time.

5.APPLICATIONS

Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and that combined with the electricity cost means that charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements.

6.CONCLUSION

Although electric vehicle manufacturers must solve the hurdles that are currently preventing people from purchasing, the future is clear: EVs will outlast gas-powered automobiles in the long run. Both GM and Nissan declared in January 2021 that they will go all-electric by the 2030s.

7. FUTURE SCOPE

The Government wants India to be a 100%, electric vehicle nation by the year 2030. Under the new plan of the government, every car which will get sold in India from 2030 will be electric.