

VISUALIZATION TOOL FOR ELECTRIC VEHICLE CHARGE AND RANGE ANALYSIS

1.INTRODUCTION

1.1Overview

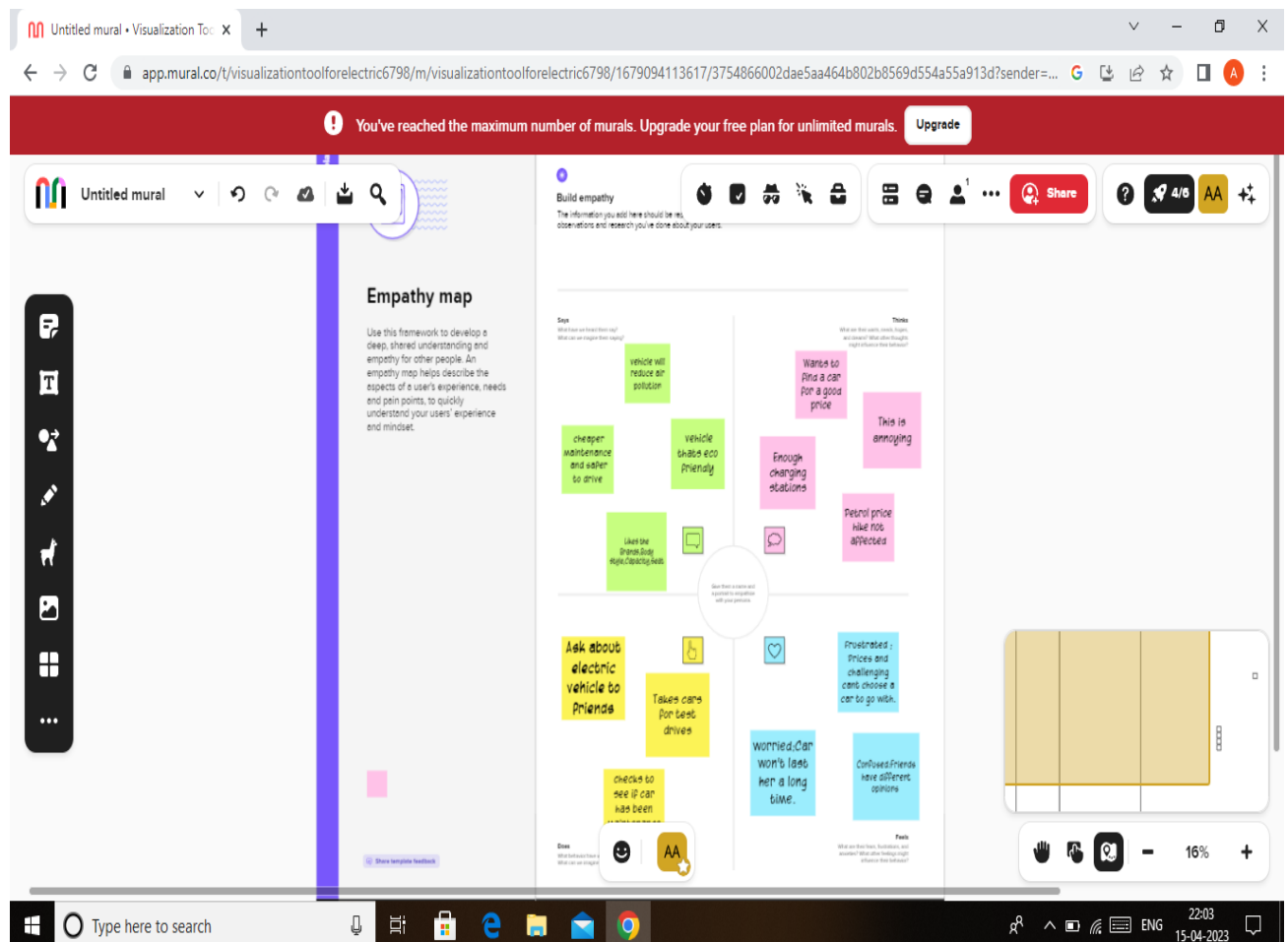
The project gives overview on **Visualization Tool for Electric Vehicle charge and Range Analysis**. Help of the Datasets we done many Activities that all are Represents with some Information like Charging Stations by region and type in India, Different EV cars in India, Price for different cars in India Etc.... Above mentioned topics are reflecting as a bar diagram, Pie chart, Bubble chart and Map. From above mentioned visualizations we created Dashboard and Story. At end of the project we done web Integration using Story and Dashboard. This is the overview of this Project.

1.2Purpose

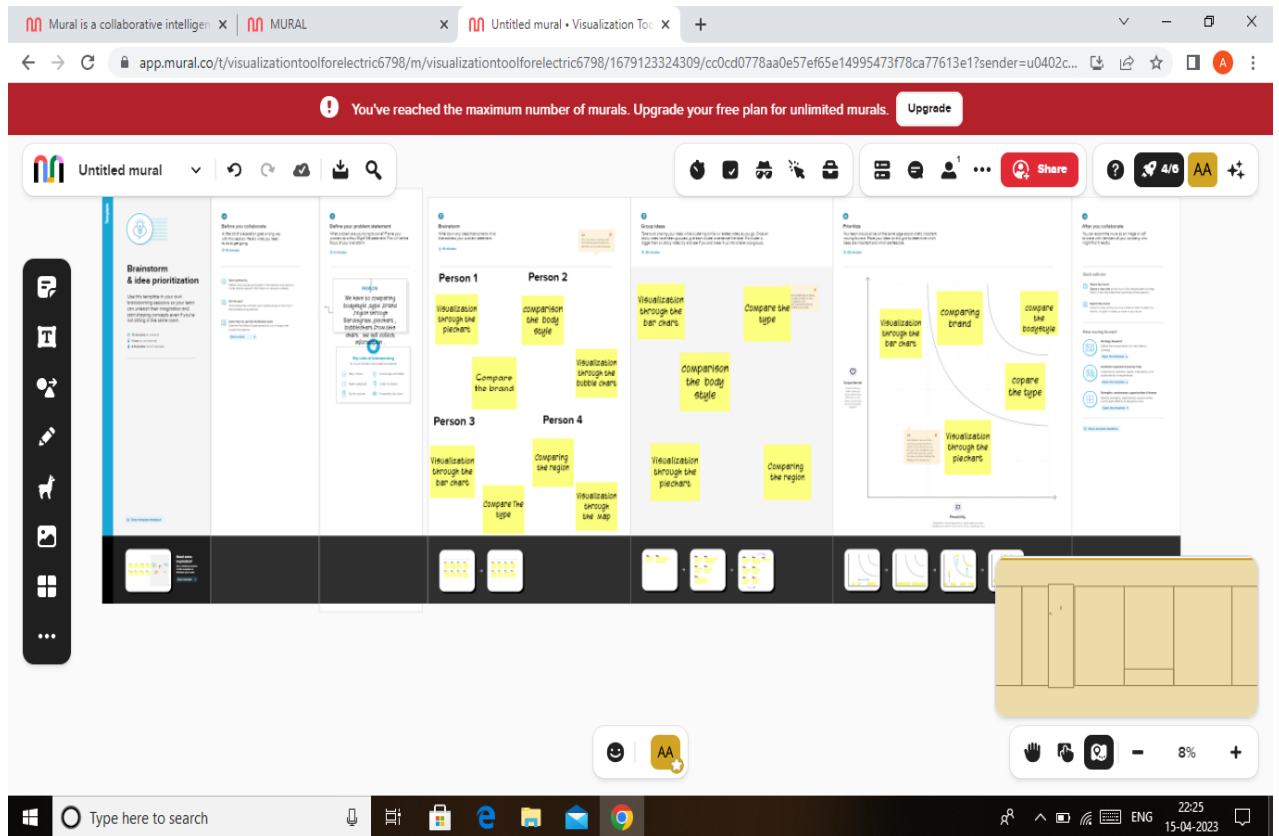
With no tailpipe, pure electric cars produce no carbon dioxide emissions when driving. This reduces air pollution considerably. Put simply, **electric cars give us cleaner streets making our towns and cities a better place to be for pedestrians and cyclists.**

2.PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy map

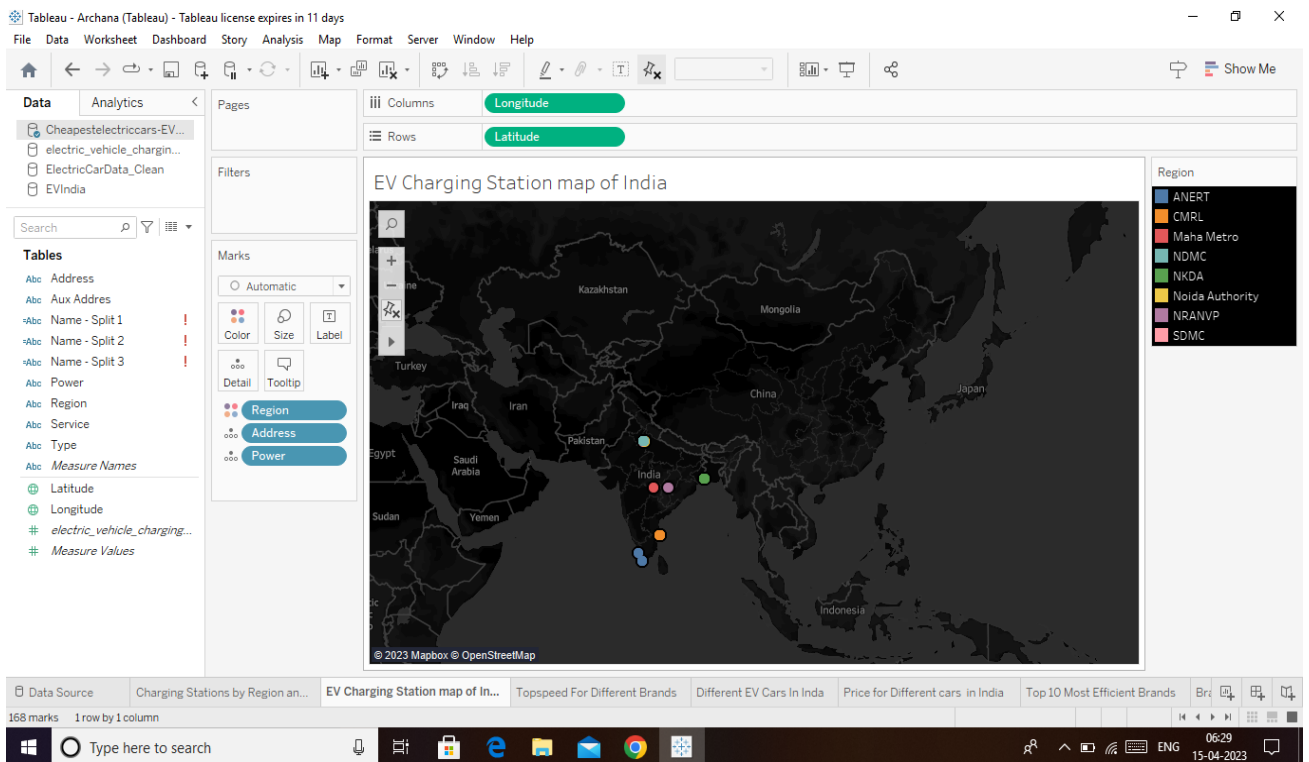
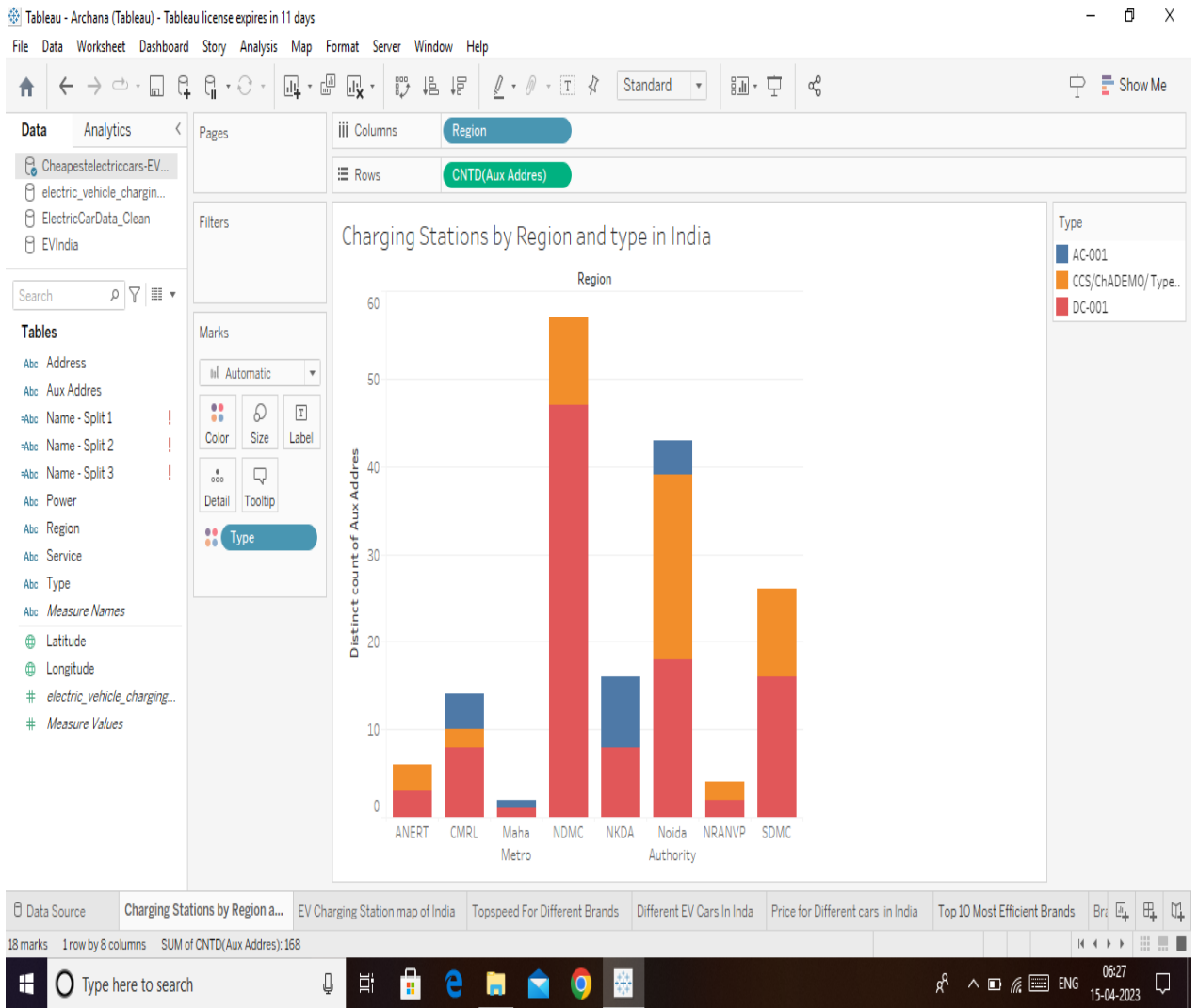


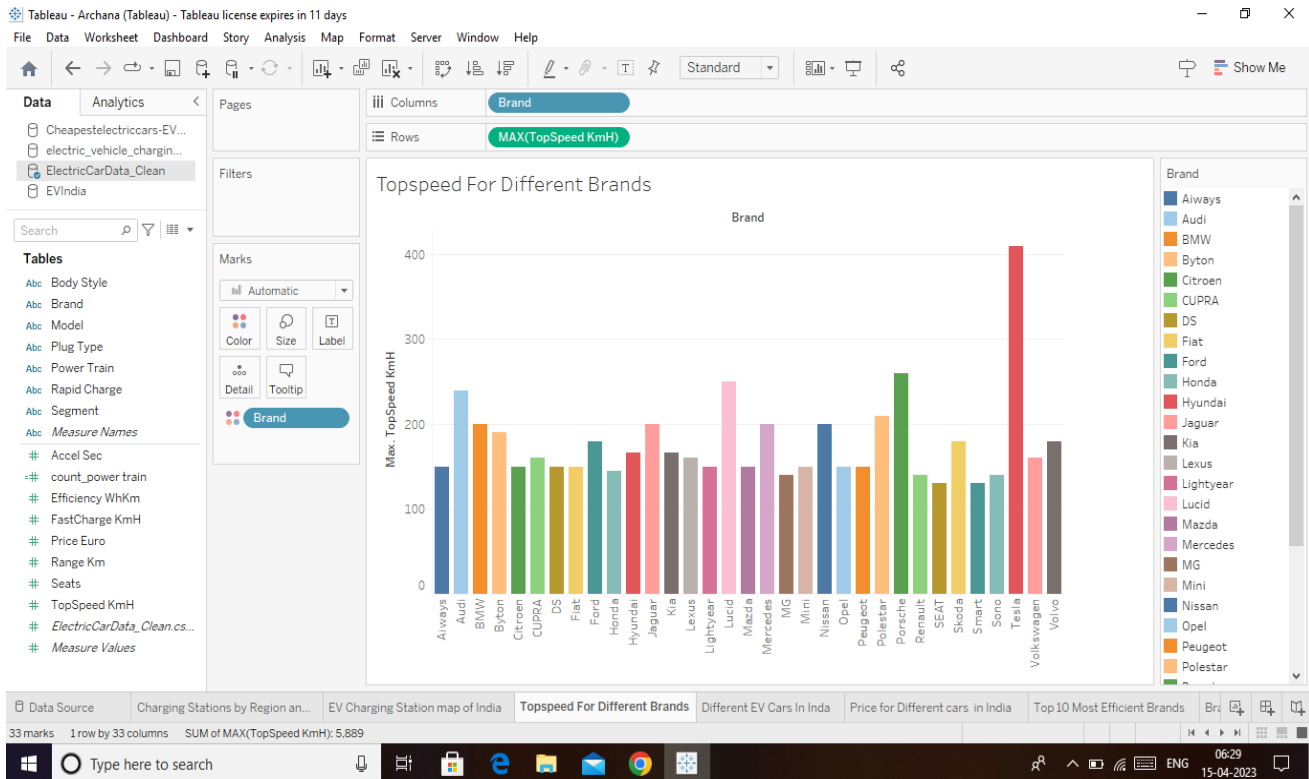
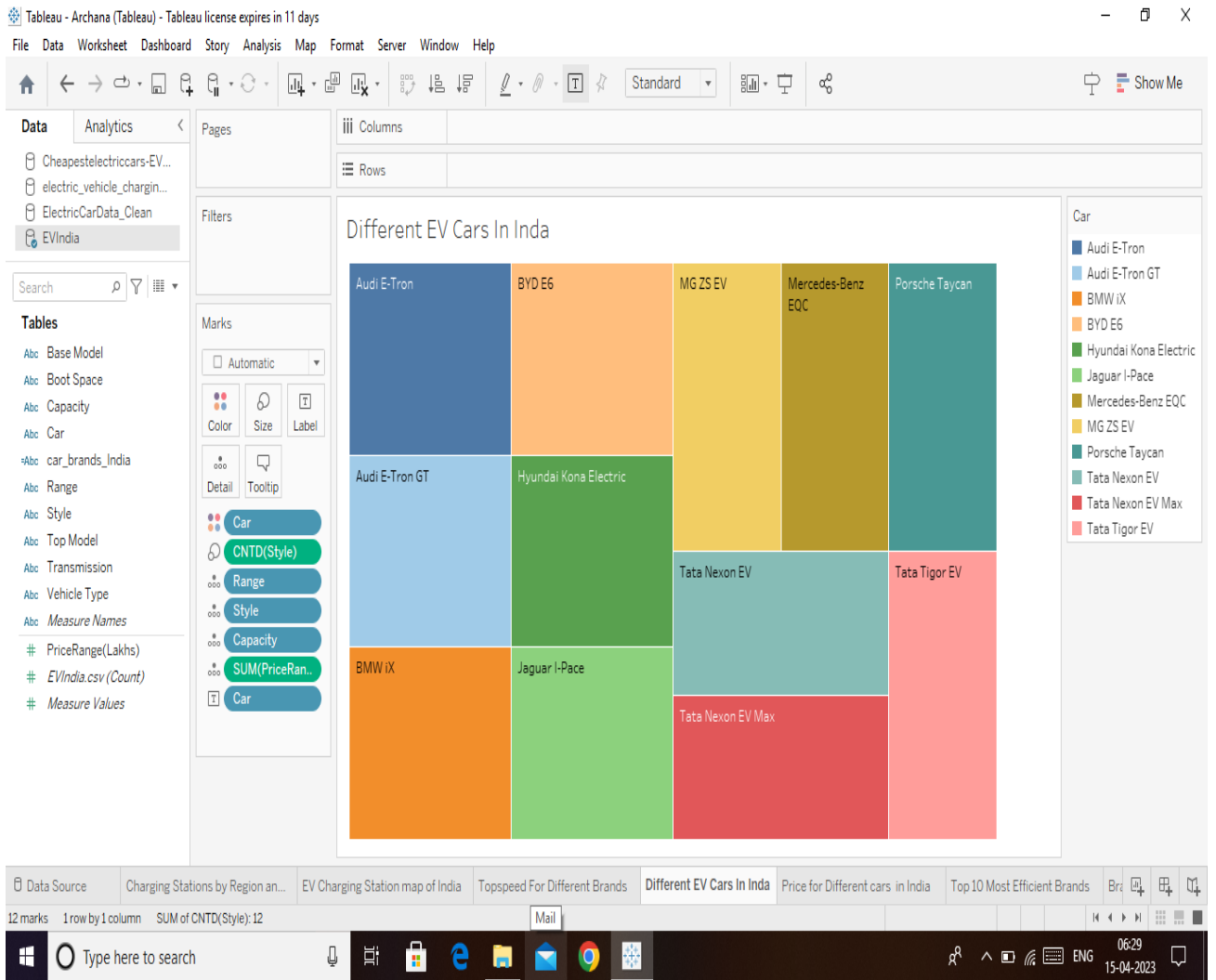
2.2 Ideation & Brainstorming Map



3.RESULT

The following Visualizations we find out using dataset Charging stations by region and type in India, EV charging station map of India, Top speed for different brands, Different EV cars in India, Price for different cars in India, Top ten most Efficient brands, Brands According to body style, no of models by each brand through the bar chart, pie chart, bubble chart also we attached dashboard and story.





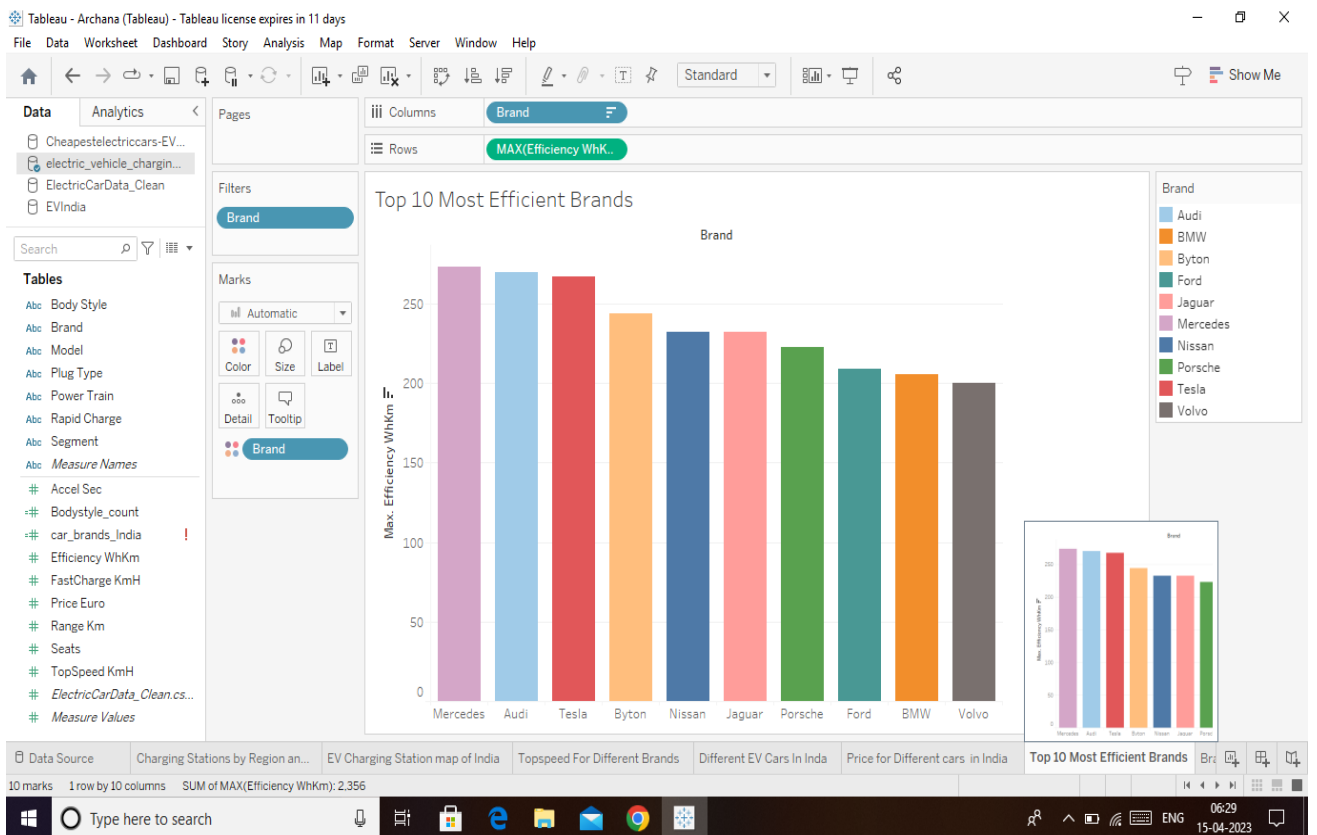
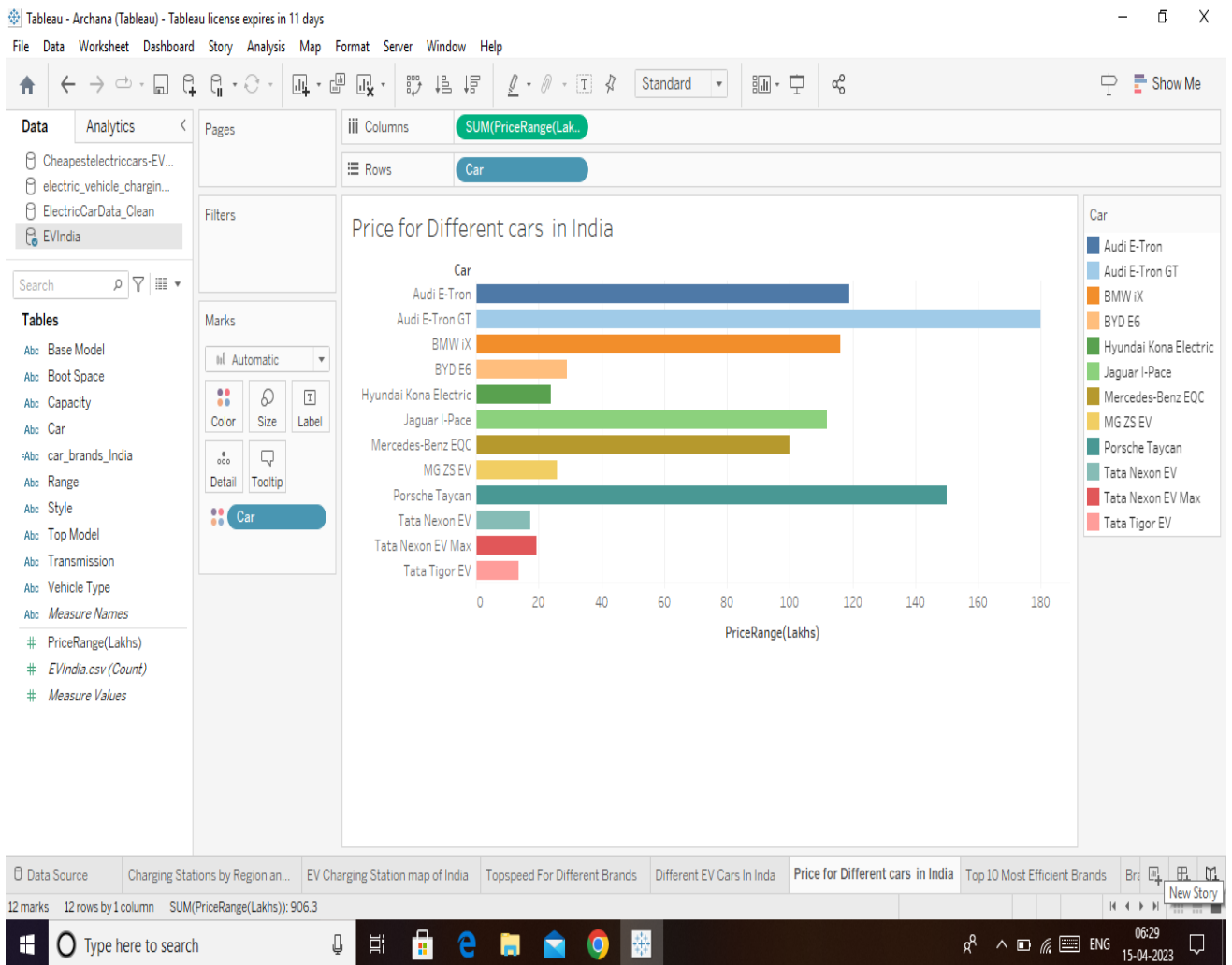


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Data Analytics Pages Columns Rows

Cheapestelectriccars-EV...
electric_vehicle_chargin...
ElectricCarData_Clean
EVIndia

Search

Tables

- Abc Body Style
- Abc Brand
- Abc Model
- Abc Plug Type
- Abc Power Train
- Abc Rapid Charge
- Abc Segment
- Abc Measure Names
- # Accel Sec
- # count_power train
- # Efficiency WhKm
- # FastCharge KmH
- # Price Euro
- # Range Km
- # Seats
- # TopSpeed KmH
- # ElectricCarData_Clean.cs...
- # Measure Values

Filters

Marks

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Color Size Text

Detail Tooltip

CNTD(Brand)

Different Brands of Electric cars globally

33

Data Source Sheet 1 Charging Stations in India Sheet 4 Sheet 3 Sheet 5 Sheet 6 Sheet 7 Sheet 8 Sheet 9 Different Brands of Electric car... Show Me

1 mark 1 row by 1 column SUM of CNTD(Brand): 33

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Data Analytics Pages Columns Rows

Cheapestelectriccars-EV...
electric_vehicle_chargin...
ElectricCarData_Clean
EVIndia

Search

Tables

- Abc Base Model
- Abc Boot Space
- Abc Capacity
- Abc Car
- # car_brands_India
- Abc Range
- Abc Style
- Abc Top Model
- Abc Transmission
- Abc Vehicle Type
- Abc Measure Names
- # PriceRange(Lakhs)
- # EVIndia.csv (Count)
- # Measure Values

Filters

Marks

Automatic

Color Size Text

Detail Tooltip

CNTD(car_bra...

Different Electric Cars brands in India

2

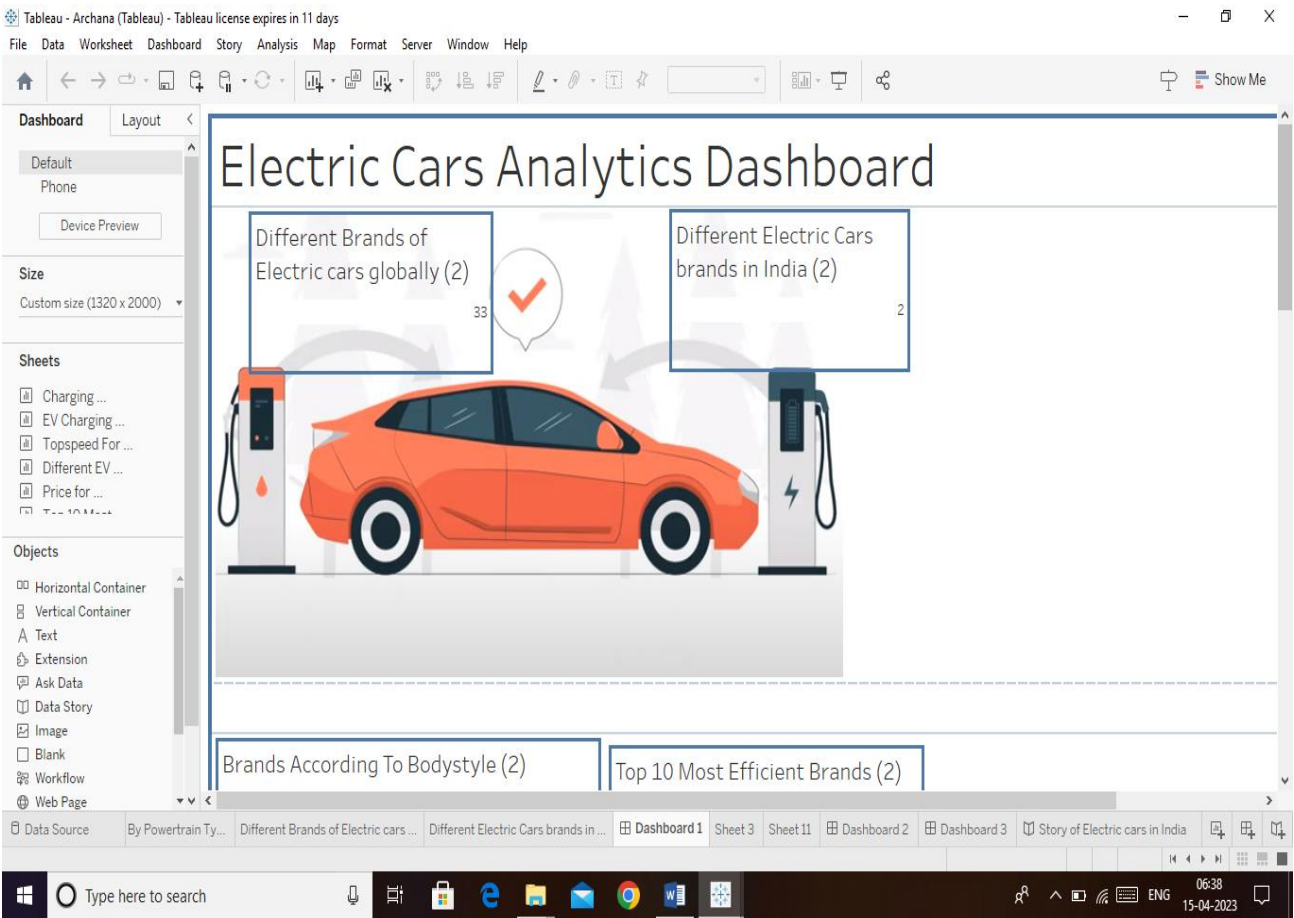
Data Source Sheet 1 Charging Stations in India Sheet 4 Sheet 3 Sheet 5 Sheet 6 Sheet 7 Sheet 8 Sheet 9 Different Brands of Electric cars ... Different Electric Cars brands i... Show Me

1 mark 1 row by 1 column SUM of CNTD(car_brands_India): 2

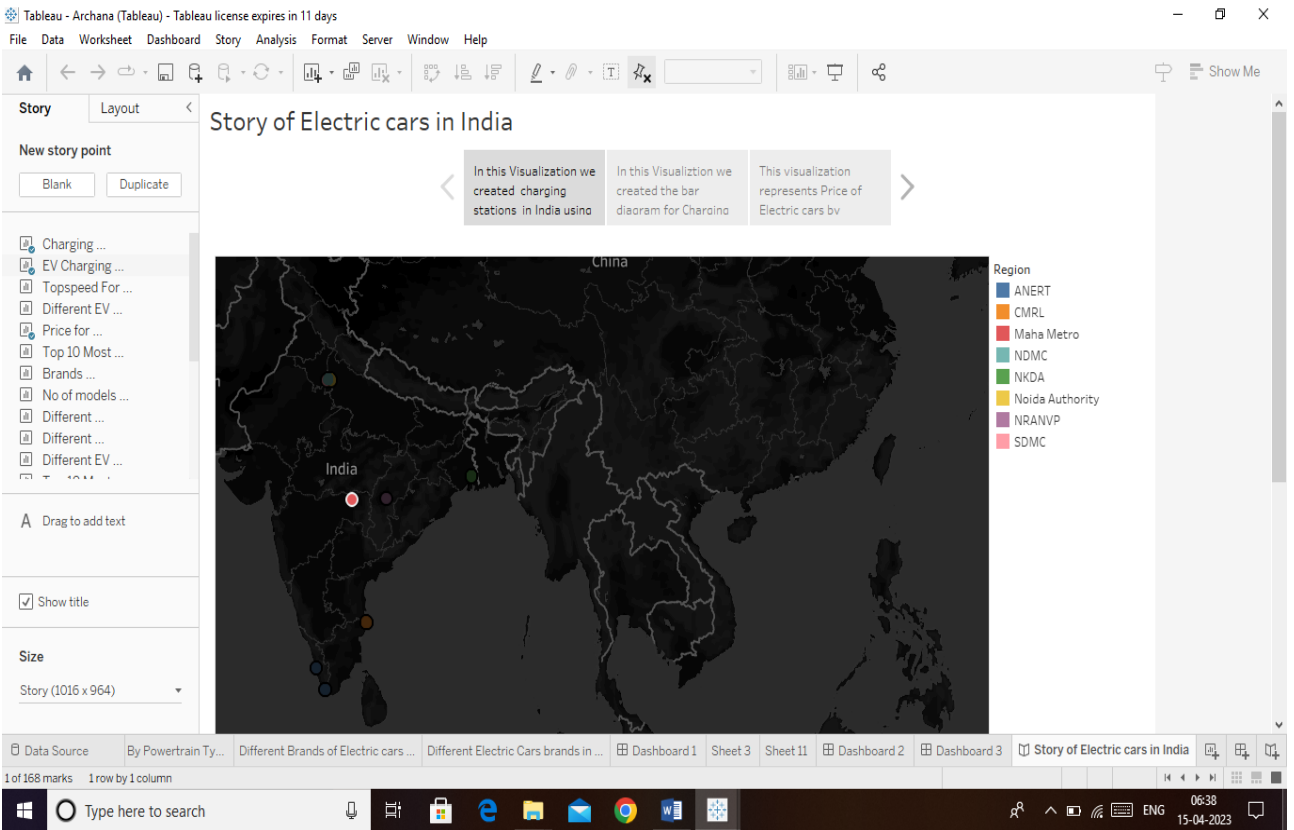
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Dashboard



Story



4.ADVANTAGES & DISADVANTAGES

ADVANTAGES

- No fuel required so you save money on gas.
- Environmental friendly as they do not emit pollutants.
- Lower maintenance due to an efficient electric motor.
- Better Performance.
- Easy to operate.
- No licence and Registration Needed

DISADVANTAGES

- Higher Purchase cost.
- Low speed and Range.
- Slow charging.
- Problem for Fuel-Producing Countries
- Fewer User

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

In this project I learned many things about electric vehicle we created many visualizations every visualization giving many information about electric vehicles charging stations, price for different cars, Top speed for different brands etc., you can understand with the help of the diagram. After that we created Dashboard and story regarding electric vehicle and also created web integration using Html.

7.FUTURE SCOPE

Hereafter people want to know about advantages of electric vehicle we can completely reduce using of petrol, diesel. Definitely we can make green India and also make a noise free environment.

8.APPENDIX

file:///C:/Users/ELCOT/Desktop/Electric%20vehicle%20Tableau/index.html