# VISUALIZATION TOOL FOR ELECTRIC VEHICLE CHARGE AND RANGE ANALYSIS

## 1. Introduction:

#### 1.1 Overview

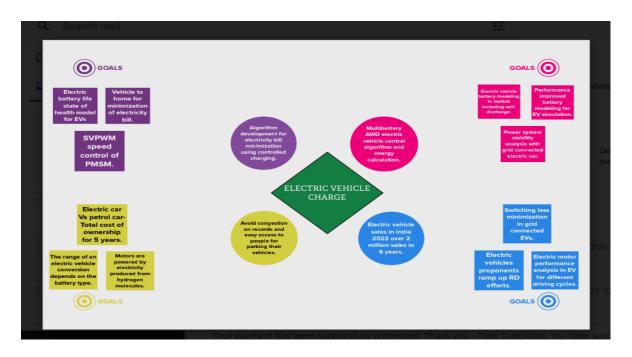
A Vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source and have an electric motor instead of an internal combustion engine. Our crew offers with electric powered automobile cost mission manner in this electric powered automobile cost. We understand about the vehicles with electric cost the use of batteries this helps to limit air pollution in our international world it can minimize gas fees and helps in low in cost boom it is very beneficial in our busy world. Electric charging via batteries can limit electrical energy fees too.

## 1.2 Purpose

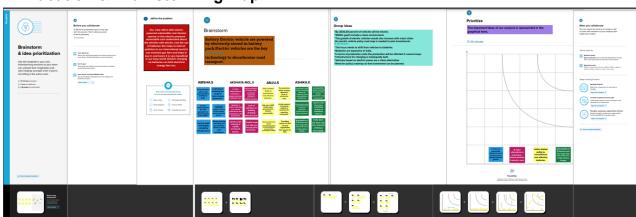
Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and that combined with the electricity cost means that charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements.

## 2. Problem Definition & Design Thinking

## 2.1 Empathy Map



## 2.2 Ideation & Brainstorming Map

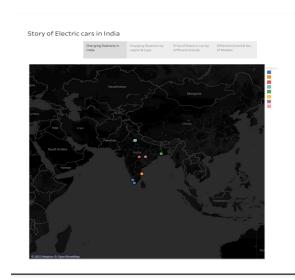


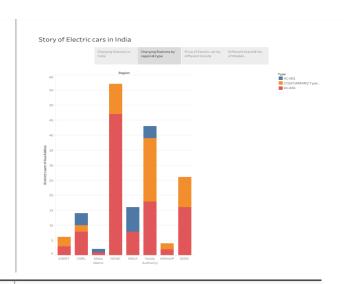
## 3. Result

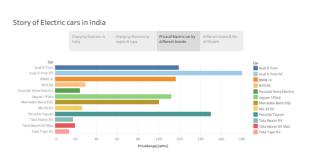
## **Dashboard**

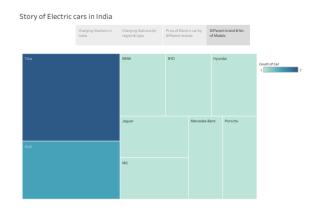


## **Story**









## 4. ADVANTAGES:

- Highly efficient.
- Reduced emissions.
- High performance and low maintenance.
- Very responsive and have very good torque.
- Ev motors are quiet and smooth.
- Are more digitally connected then conventional vehicles.
- Low electicity consumption.
- Good acceleration.

#### **DISADVANTAGES:**

- Electricity storage is still expensive.
- Battery charging is time consuming.
- Range anxiety.
- Battery degradation costs.
- Causes indirect pollution.
- Lacks the power to accelerate and climb quickly.
- Are heavy due to overloaded batteries.
- Sufficient public charging infrastructure is still lacking.

## 5. APPLICATIONS:

- It is used in the electric motors, batteries, inverters, wiring and in charging stations because of its durability, malleability, reliability and superior electrical conductivity.
- 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.
- Its main job is to recharge the battery of an EV to keep the vehicle in motion.
- Most electric vehicles batteries can only be charged with DC power, yet some EV have a charge that converts AC electricity into DC.

## 6. CONCLUSION:

• The progress that the electric vehicle industry has seen in recent years is not only extremely welcomed, but highly necessary in light of the increasing global green house gas levels. As demonstrate with in the economic, social, and environmental analysis, the benefits of electric vehicles far surpass the costs. We hope that over the course of the next decade technological advancements and policy changes will help ease the transition from traditional fuel-powered vehicles. Each person can make a difference, so go electric and help make a difference!

## 7. FUTURE SCOPE:

We can expect new electric vehicles to enter the market, building on the innovations made by Tesla and other well-known EV manufactures like BYD,BAIC,Nissan,BMW,and Volkswagen.

Legislative advancements in Europe, ever-increasing demand in Asia, and an increased awareness of fossil fuels environmental impacts will ensure that EV technology continues to grow. Racing consumer road vehicles aren't the only ones going electric. Motorcycles historic motorcycles manufactures such as Harely-Davidson and Ducati are already gearing towards a shift towards electric motorcycles.

#### 8. APPENDIX:

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  </head>
```

## <body>

<h1>Visualization Tool for Electric Vehicle Charge and Range Analysis</h1>

#### <Introduction>

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## <Purpose>

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.

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                   else
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                                  divElement.offsetWidth
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vizElement.style.minWidth='1320px';vizElement.style.maxWidth='100%';vizEle
ment.style.minHeight='2050px';vizElement.style.maxHeight=(divElement.offset
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```

## <h2>Conclusion</h2>

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