

# ***VISUALIZATION TOOL FOR ELECTRIC VEHICLE CHARGE AND RANGE ANALYSIS***

## **INTRODUCTION**

### **1.1 OVERVIEW**

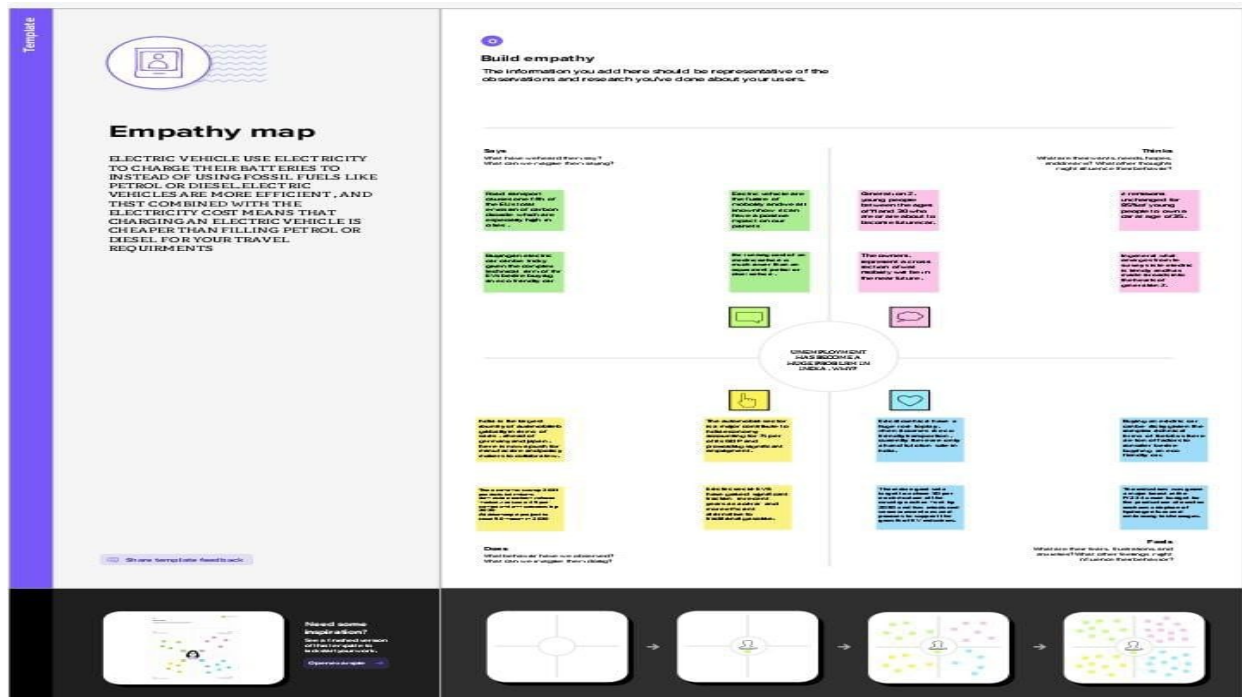
**THE ELECTRIC VEHICLE (EV) IS NOT NEW, BUT IT HAS BEEN RECEIVING SIGNIFICANTLY MORE ATTENTION IN RECENT YEARS.** Advances in both EV analytics and battery technologies have led to increased automotive market share. However, this growth is not attributed to hardware alone. The modern mechatronic vehicle 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.

### **1.2 PURPOSE**

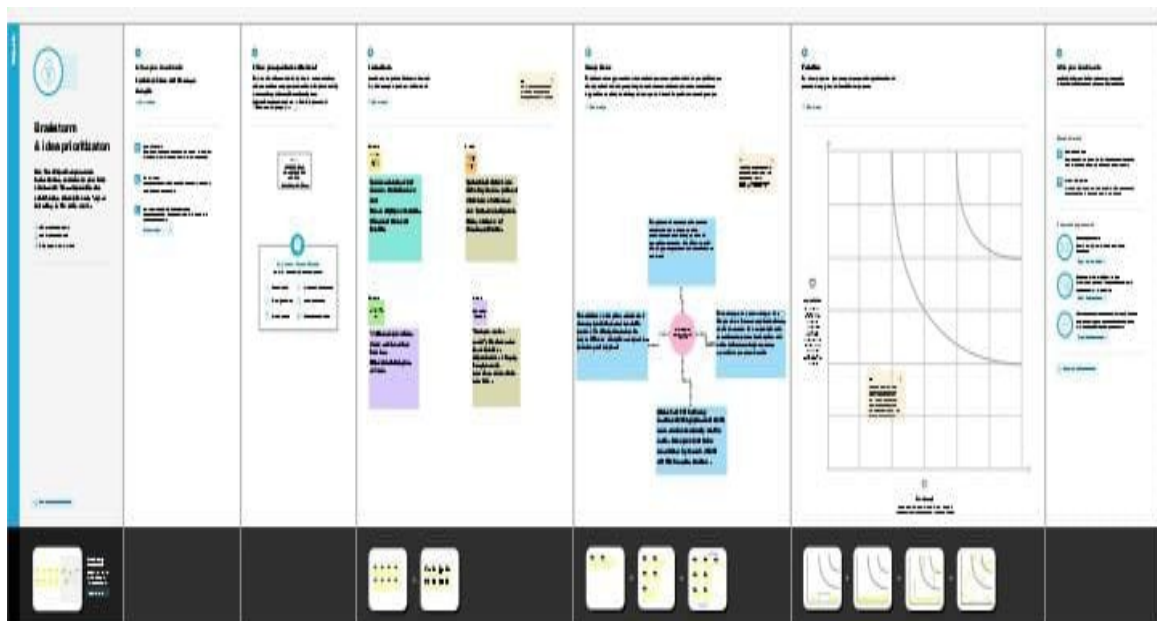
In this project we are trying to analysis the visualization tool for electric vehicle charge and range analysis from the data using business intelligence tools. To extract the insight from the data and put the data in the form of **visualization, dashboard and story we employed tableau tool.**

## 2. PROBLEM DEFINITION AND DESINE THINKING

### 2.1 EMPATHY MAP



### 2.2 IDEATION AND BRAINSTORMING MAP



## **APPLICATION**

- 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.
- It can be used to provide data that can be used to improve the efficiency of charging station operations.
- No fuel required so you save money on gas. Environmental friendly as they do not emit pollutants
- Its goal is to reduce vehicular emissions and air pollution levels within the country..

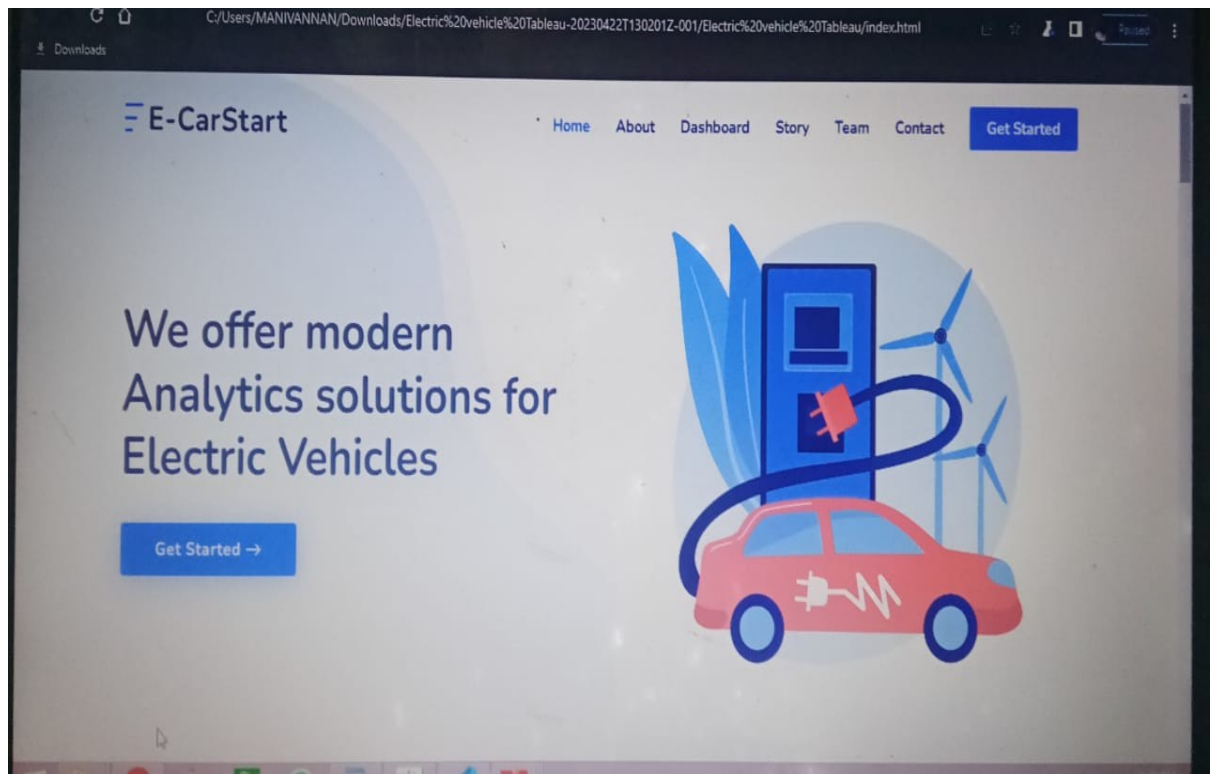
## **CONCLUSION**

Good data visualization should communicate a data set clearly and effectively by using graphics. The best visualization makes it easy to comprehend data at a glance.

## **FUTURE SCOPE**

- Most Indian buyers believe that an electric vehicle will be ready by 2023, but the majority also believe that it would no longer be available until 2025
- . In India Scheme targets to convert 30% of total transportation into electric vehicles by the year 2030.

## **PROJECT REPORT TEMPLATE**

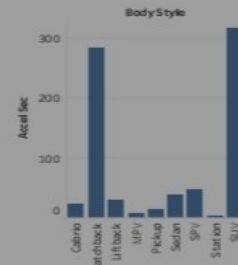


The screenshot shows a Microsoft Excel spreadsheet with a table of electric vehicle specifications. The table has 17 columns: Brand, Model, AccelSec, TopSpeed, Range, Km, Efficiency, FastCharge, RapidCharge, PowerTrain, PlugType, BodyStyle, Segment, Seats, and PriceEuro. The data includes various models from Tesla, Volkswagen, Polestar, BMW, Honda, Lucid, Peugeot, Porsche, Audi, Mercedes, Nissan, Hyundai, Kia, and Skoda.

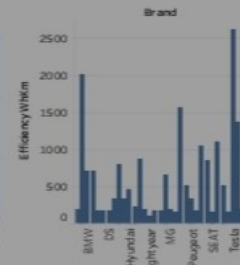
	Brand	Model	AccelSec	TopSpeed	Range	Km	Efficiency	FastCharge	RapidCharge	PowerTrain	PlugType	BodyStyle	Segment	Seats	PriceEuro
2	Tesla	Model 3 Low	4.6	233	450	183		940 Yes		AWD	Type 2 CCS	Sedan	D	5	55480
3	Volkswagen	ID.3 Pure	10	160	270	187		250 Yes		RWD	Type 2 CCS	Hatchback	C	5	30000
4	Polestar	2	4.7	210	400	181		620 Yes		AWD	Type 2 CCS	Liftback	D	5	56440
5	BMW	iX3	6.8	180	300	206		560 Yes		RWD	Type 2 CCS	SUV	D	5	68040
6	Honda	e	5.5	145	170	168		190 Yes		RWD	Type 2 CCS	Hatchback	B	4	32997
7	Lucid	Air	2.8	250	610	180		620 Yes		AWD	Type 2 CCS	Sedan	F	5	105000
8	Volkswagen	e-Golf	9.6	150	190	168		220 Yes		FWD	Type 2 CCS	Hatchback	C	5	31900
9	Peugeot	e-208	8.1	150	275	164		420 Yes		FWD	Type 2 CCS	Hatchback	B	5	29682
10	Tesla	Model 3 Sfx	5.6	225	310	153		650 Yes		RWD	Type 2 CCS	Sedan	D	5	46380
11	Audi	Q4 e-tron	6.3	180	400	193		540 Yes		AWD	Type 2 CCS	SUV	D	5	55000
12	Mercedes	EQC 400 4M	5.1	180	370	216		440 Yes		AWD	Type 2 CCS	SUV	D	5	69484
13	Nissan	Leaf	7.9	144	220	164		230 Yes		FWD	Type 2 CHA	Hatchback	C	5	29234
14	Hyundai	Kona Electr	7.9	167	400	160		380 Yes		FWD	Type 2 CCS	SUV	B	5	40795
15	BMW	i4	4	200	450	178		650 Yes		RWD	Type 2 CCS	Sedan	D	5	65000
16	Hyundai	IONIQ Electr	5.7	165	250	153		210 Yes		FWD	Type 2 CCS	Liftback	C	5	34459
17	Volkswagen	ID.3 Pro S	7.9	160	440	175		590 Yes		RWD	Type 2 CCS	Hatchback	C	4	40936
18	Porsche	Taycan Turf	2.8	260	375	223		780 Yes		AWD	Type 2 CCS	Sedan	F	4	180781
19	Volkswagen	e-Up!	11.9	130	195	166		170 Yes		FWD	Type 2 CCS	Hatchback	A	4	21421
20	MG	ZS EV	8.2	140	220	193		260 Yes		FWD	Type 2 CCS	SUV	B	5	30000
21	Mini	Cooper SE	7.3	150	185	156		260 Yes		FWD	Type 2 CCS	Hatchback	B	4	31681
22	Opel	Corsa-e	8.1	150	275	164		420 Yes		FWD	Type 2 CCS	Hatchback	B	5	29146
23	Tesla	Model Y Low	5.1	217	425	171		930 Yes		AWD	Type 2 CCS	SUV	D	7	58620
24	Skoda	Enyaq IV 50	10	160	290	179		230 Yes		RWD	Type 2 CCS	SUV	C	5	35000
25	Audi	e-tron GT	3.5	240	425	197		850 Yes		AWD	Type 2 CCS	Sedan	F	4	125000
26	Tesla	Model 3 Low	3.4	261	435	167		910 Yes		AWD	Type 2 CCS	Sedan	D	5	61480

## Story 1

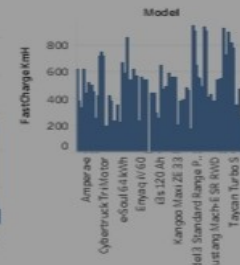
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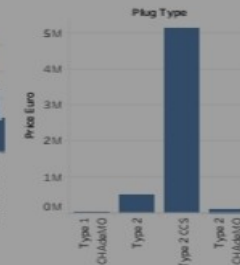
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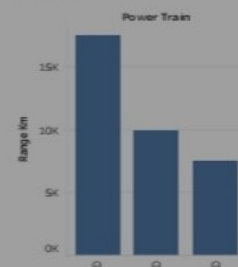
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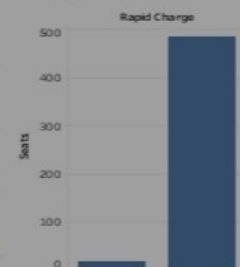
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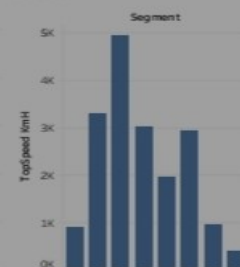
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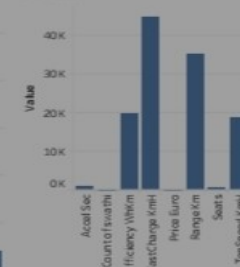
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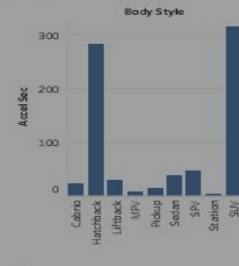
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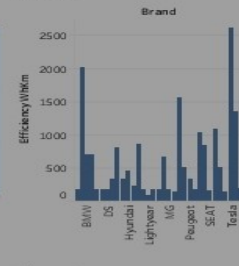
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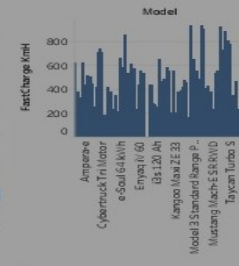
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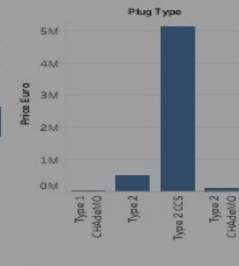
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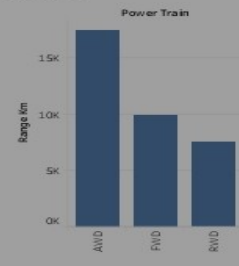
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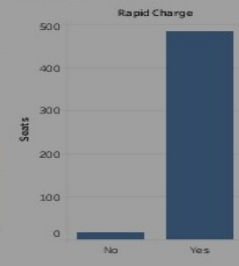
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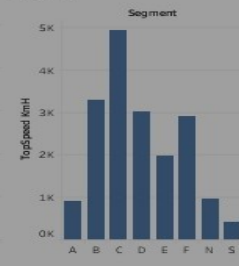
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