

# Visualization Tool for Electric Vehicle Charge and Range Analysis

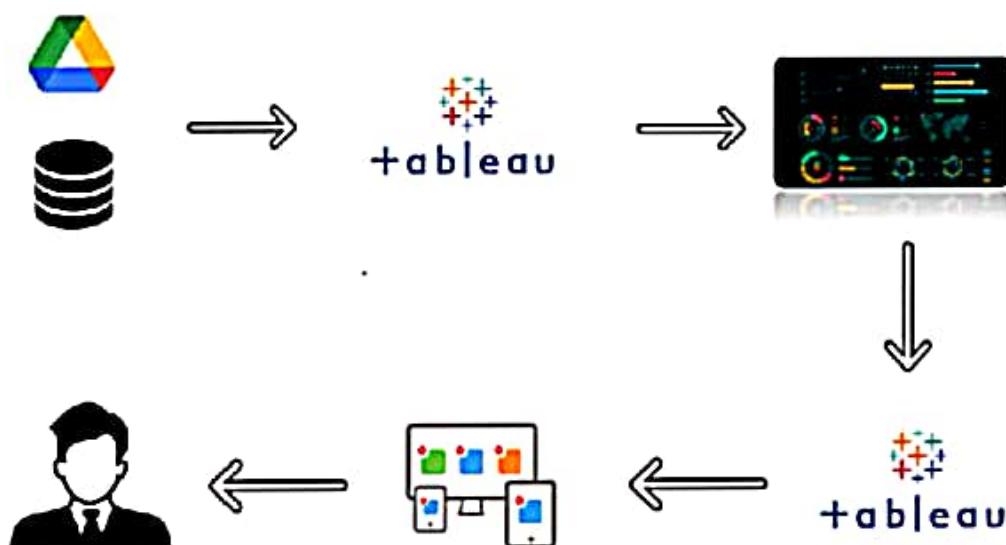
## Project Description

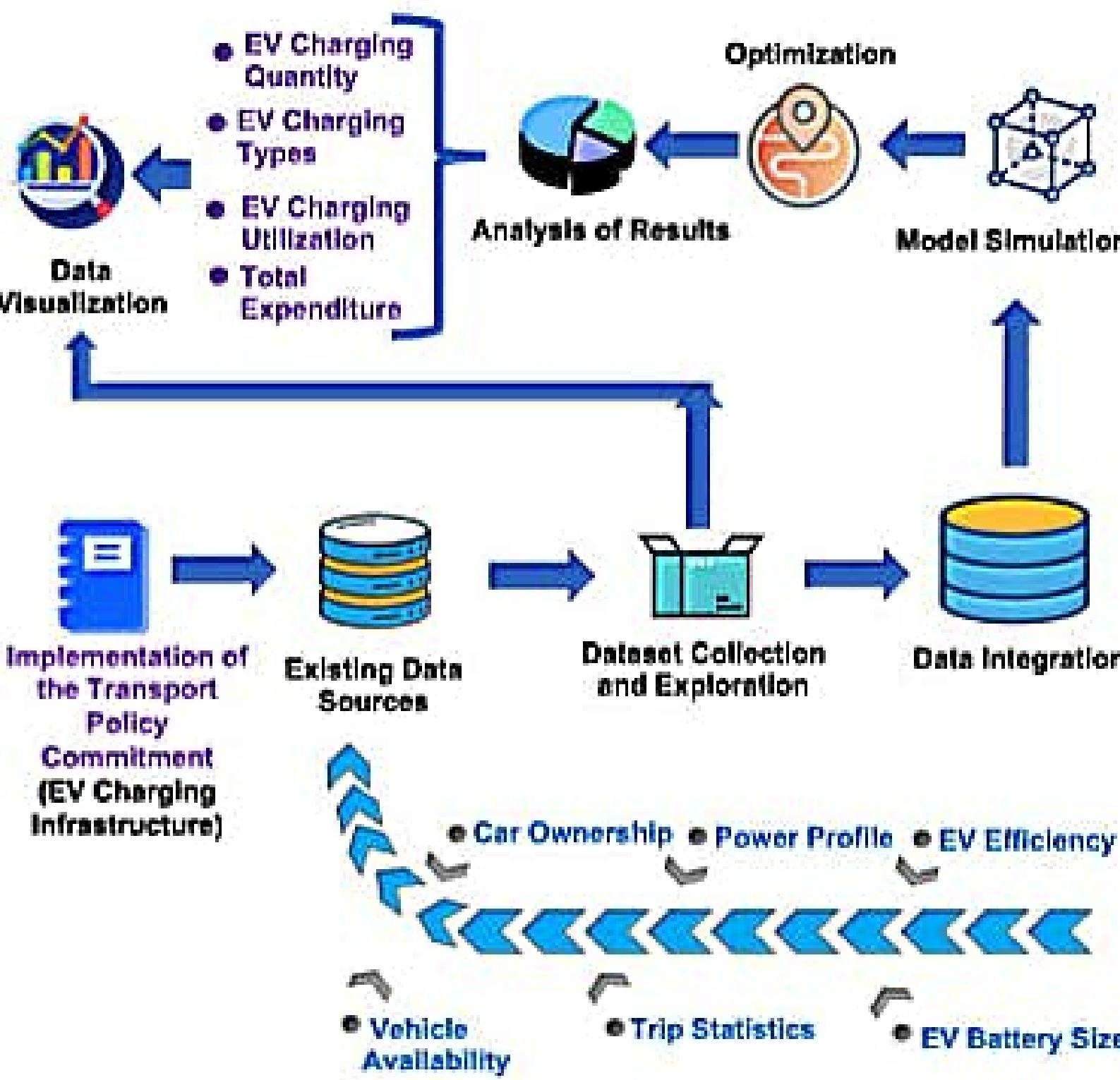
A vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source and has an electric motor instead of an internal combustion engine.

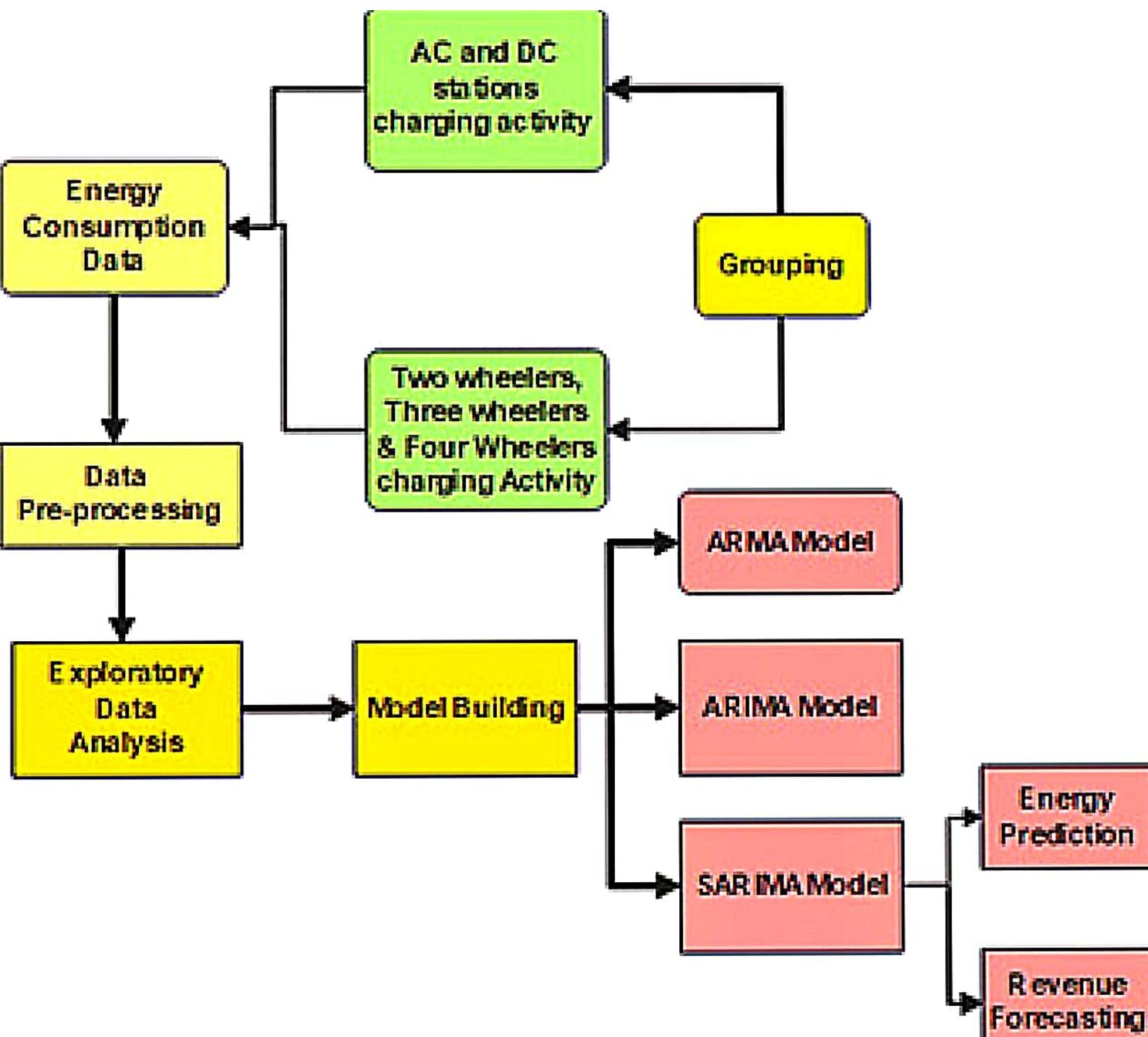
The Electric Vehicle (EV) is not new, but it has been receiving significantly more attention in recent years. Advances in both EV analytics and battery technologies have led to increased automotive market share. However, this growth is not attributed to hardware alone. The modern mechatronic vehicle 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.

The new EV's are combined Electrical storage and propulsion systems with electronic sensors, controls, and actuators, integrated closely with software, secure data transfer to form a comprehensive transportation solution.

## Technical Architecture







### **Electric Vehicle**

- Four Battery Types
- The battery capacity.
- Battery state of charge.

### **Road/User**

- The travel distance.
- Geographic information.
- Origin-Destination matrix.
- The travel starting time.
- EV user convenience.

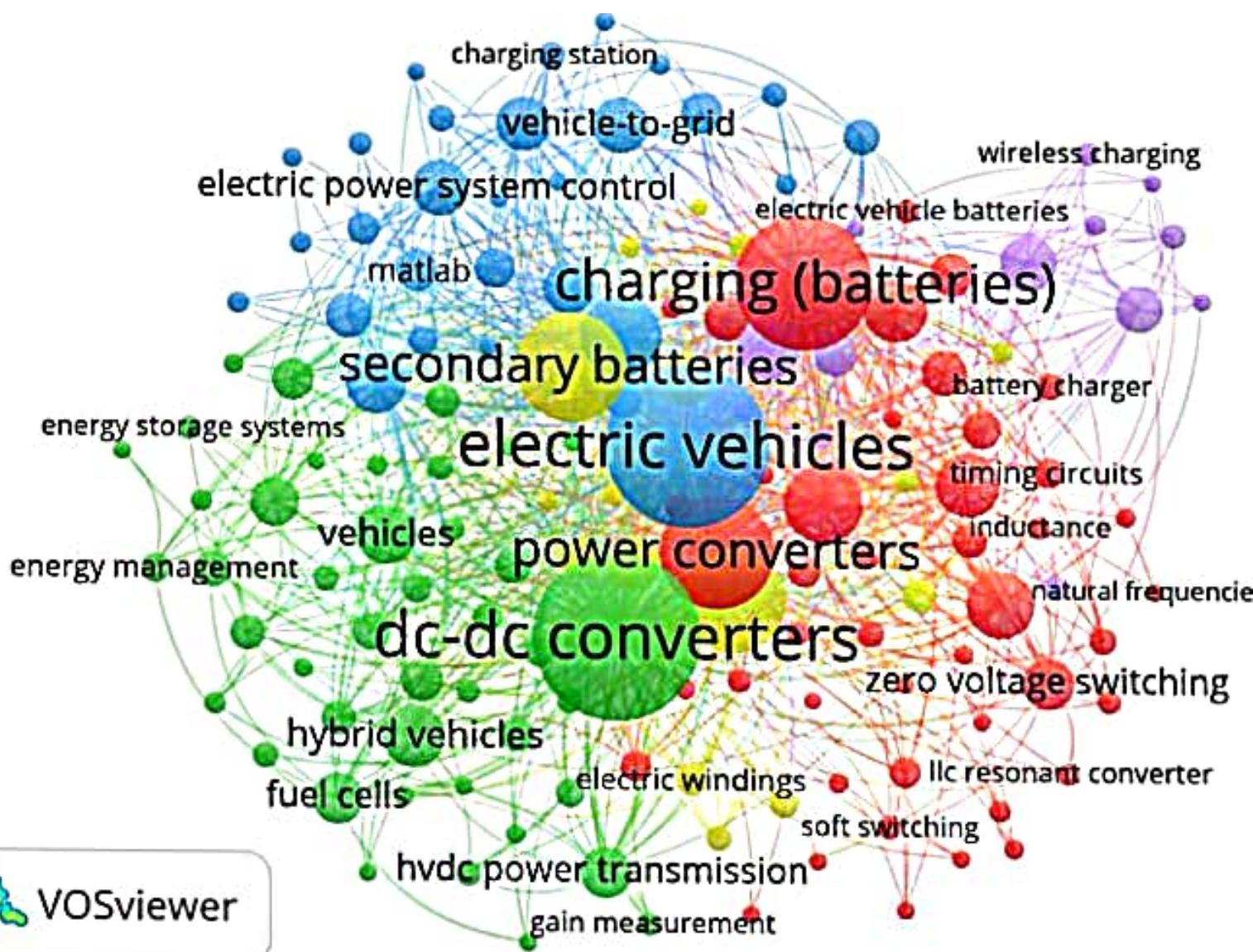


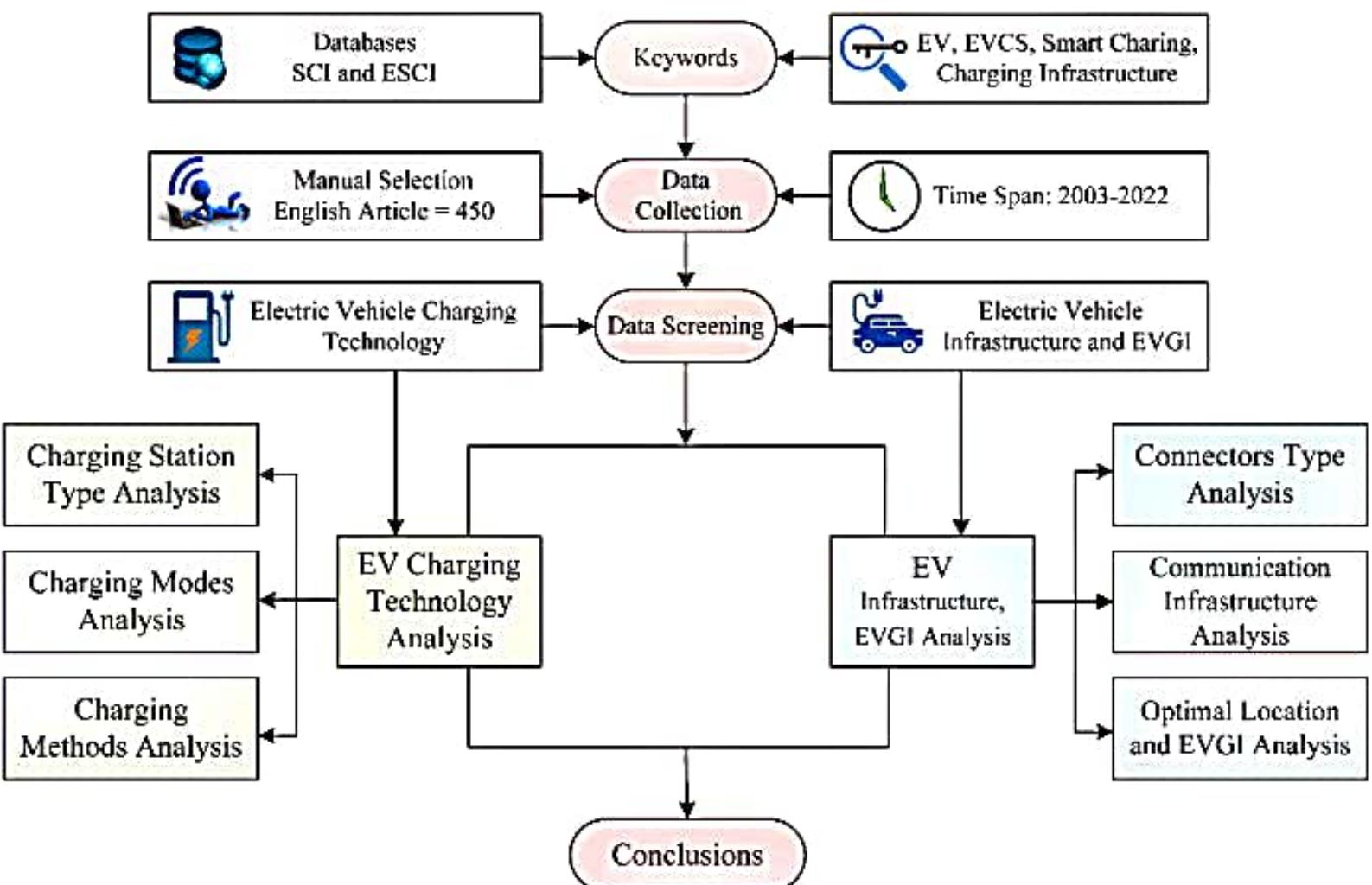
### **Station owner**

- Installation cost.
- Operation cost.
- Station utilization factor.

### **Environment**

- Carbon dioxide emission.





# Electric Cars Analytics Dashboard

Different Brands of Electric Cars Globally



Different Electric Cars Brands In India



Brands according to Bodystyle



Top 10 most efficient EV Brands



**BodyStyle**  
Cabin  
Hatchback  
Liftback  
MPV  
Pickup  
Sedan  
SPV  
Station  
SUV

**Brand**  
Audi  
BMW  
Byton  
Ford  
Jaguar  
Mercedes  
Nissan  
Porsche  
Tesla  
Volvo

**Car**  
Null  
Audi E-Tron  
Audi E-Tron GT  
BMW iX  
BYD E6  
Hyundai Kona Electric  
Jaguar I-Pace  
Mercedes-Benz EQC  
MG 25 EV  
Porsche Taycan  
Tata Nexon EV  
Tata Nexon EV Max  
Tata Tigor EV