**Problem Statement**

**G Motors** is an automotive giant from the USA specializing in electric vehicles (EV). In the last 5 years, their market share rose to 25% in electric and hybrid vehicles segment in North America. As a part of their expansion plans, they wanted to launch their bestselling models in India where their market share is less than 2%. Rahul Tendulkar, the chief of G Motors India wanted to do a detailed market study of existing EV/Hybrid market in India before proceeding further. Rahul gave this task to the data analytics team of G motors and Yuzi Pandey is the data analyst working in this team.

**Task:**

Imagine yourself as Yuzi Pandey and perform the following tasks.

Begin your analysis by referring to the

Datasets provided. You can use any tool of your choice (Python, SQL, PowerBI, Tableau, Excel, PowerPoint) to analyze and answer the below questions. Design a Word document with your Questions, Queries and answers. The document should be easy to understand. You can put Excel charts as well in the word document for the respective questions

You will be presenting these insights to the chief Rahul Tendulkar – he appreciates good storytelling and concise presentation.

**Other resources Provided:**

* Dataset required to answer preliminary analysis questions.

● Metadata

# Questions to answer

1. List the top 3 and bottom 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.
2. Find the overall penetration rate in India for 2023 and 2022
3. Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.
4. List the top 5 states having highest number of EVs sold in 2023
5. List the states with negative penetration (decline) in EV sales from 2022 to 2024?
6. Which are the Top 5 EV makers in India?
7. How many EV makers sell 4-wheelers in India?
8. What is ratio of 2-wheeler makers to 4-wheeler makers?
9. What are the quarterly trends based on sales volume for the top 5 EV makers (4-wheelers) from 2022 to 2024?
10. How do the EV sales and penetration rates in Maharashtra compare to Tamil Nadu for 2024?
11. List down the compounded annual growth rate (CAGR) in 4-wheeler units for the top 5 makers from 2022 to 2024.
12. List down the top 10 states that had the highest compounded annual growth rate (CAGR) from 2022 to 2024 in total vehicles sold.
13. What are the peak and low season months for EV sales based on the data from 2022 to 2024?
14. Estimate the revenue growth rate of 4-wheeler and 2-wheelers EVs in India for 2022 vs 2024 and 2023 vs 2024, assuming an average unit price.

