TABLEAU PROJECT

CAR SALES DASHBOARD

Background: Our company is a car dealership that sells various car models. To effectively track and analyse our sales performance, we need a comprehensive Car Sales Dashboard in Power BI.

Objective: The objective of this project is to design and develop a dynamic and interactive Car Sales Dashboard using Power BI. The dashboard will visualize critical KPIs related to our car sales, helping us understand our sales performance over time and make data-driven decisions.

Problem Statement 1: KPI's Requirement

The dashboard should provide real-time insights into key performance indicators (KPIs) related to our sales data. This will enable us to make informed decisions, monitor our progress, and identify trends and opportunities for growth.

1. **Sales Overview**:
    - Year-to-Date (YTD) Total Sales
    - Year-over-Year (YOY) Growth in Total Sales
2. **Average Price Analysis:**
    - YTD Average Price
    - YOY Growth in Average Price
3. **Cars Sold Metrics:**
    - YTD Cars Sold
    - YOY Growth in Cars Sold

Problem Statement 2: Charts Requirement

1. **YTD Sales Weekly Trend:** Display a line chart illustrating the weekly trend of YTD sales. The X-axis should represent weeks, and the Y-axis should show the total sales amount.
2. **YTD Total Sales by Body Style:** Visualize the distribution of YTD total sales across different car body styles using a Pie chart.
3. **YTD Total Sales by Color:** Present the contribution of various car colors to the YTD total sales through a donut chart.
4. **YTD Cars Sold by Dealer Region:** Showcase the YTD sales data based on different dealer regions using a bar chart to visualize the sales distribution geographically.
5. **Company-Wise Sales Trend in Grid Form:** Provide a tabular grid that displays the sales trend for each company. The grid should showcase the company name along with their YTD sales figures.

QUESTIONS

(1) The Questions I Was Interested in Answering

For this project, I aimed to answer the following key questions to enhance data-driven decision-making in car sales:

- What is the total Year-to-Date (YTD) sales, and how has it grown compared to the previous year (YoY growth)?
- What is the average selling price of cars, and how has it changed over time?
- How many cars have been sold so far, and how does it compare to previous periods?
- What are the sales trends on a weekly basis?
- Which car body styles generate the highest revenue?
- Which car colors contribute the most to overall sales?
- How do sales vary across different dealer regions?
- What are the company-wise sales trends, and which brands are performing best?

(2) The Steps I Took

To develop an interactive and insightful Tableau dashboard, I followed these key steps:

1. **Data Collection & Preparation**
   - Gathered raw sales data, including sales transactions, car models, prices, dealer locations, and time stamps.

o   Cleaned and transformed the data to remove inconsistencies, handle missing values, and structure it appropriately for analysis.

2. Calculated Fields Development in Tableau

o   I wrote the codes in Tableau when I created calculated fields for:

- Year-to-Date (YTD) Total Sales
- Year-over-Year (YOY) Growth in Total Sales
- YTD Average Price
- YOY Growth in Average Price
- YTD Cars Sold
- YOY Growth in Cars Sold

3. Dashboard Design & Development

o   Designed an interactive Tableau dashboard with a user-friendly interface.

o   Implemented a filter panel to allow dynamic analysis based on date, transmission type, body style, engine, and gender.

o   Created visualizations, including:

- Line chart for YTD sales weekly trends.
- Pie chart for YTD sales by body style.
- Donut chart for YTD sales by color.
- Bar chart for YTD cars sold by dealer region.
- Grid view for company-wise sales trends.

4. Testing & Optimization

o   Validated the dashboard against expected results to ensure accuracy.

o   Optimized visualizations for performance and readability.

(3) My Key Takeaways

- Data visualization enhances decision-making – The dashboard provides an at-a-glance understanding of sales performance, making it easier to identify trends and opportunities.
- Automating data calculations improves efficiency – Using calculated fields in Tableau streamlined the analysis process and ensured real-time insights.
- Sales trends vary by multiple factors – Different body styles, colors, and dealer regions significantly impact total revenue, which can guide targeted sales strategies.
- YoY growth and pricing trends are critical – Monitoring these KPIs helps assess market demand and pricing strategies for improved profitability.

- **Dynamic filtering is essential** – Providing interactive filters allows users to explore data based on specific parameters, making the dashboard a valuable tool for various stakeholders.