CAR SALES ANALYSIS DASHBOARD

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Project : Power BI

Introduction

In the ever-evolving automotive industry, data plays a pivotal role in understanding market dynamics, consumer behaviors, and the overall health of the sector. The following analysis delves into a comprehensive dataset focused on car sales, aiming to unravel patterns, trends, and insights that can shape strategic decisions for stakeholders.

This dataset encompasses a diverse array of information, including sales figures, regional breakdowns, popular models, and demographic details of buyers. By scrutinizing this wealth of data, we seek to gain a deeper understanding of the factors influencing car sales, identify areas of growth, and provide valuable insights for manufacturers, dealerships, and other key players in the automotive ecosystem.

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
    - Month-to-Date (MTD) Total Sales
    - Year-over-Year (YOY) Growth in Total Sales

- Difference between YTD Sales and Previous Year-to-Date (PTYD) Sales

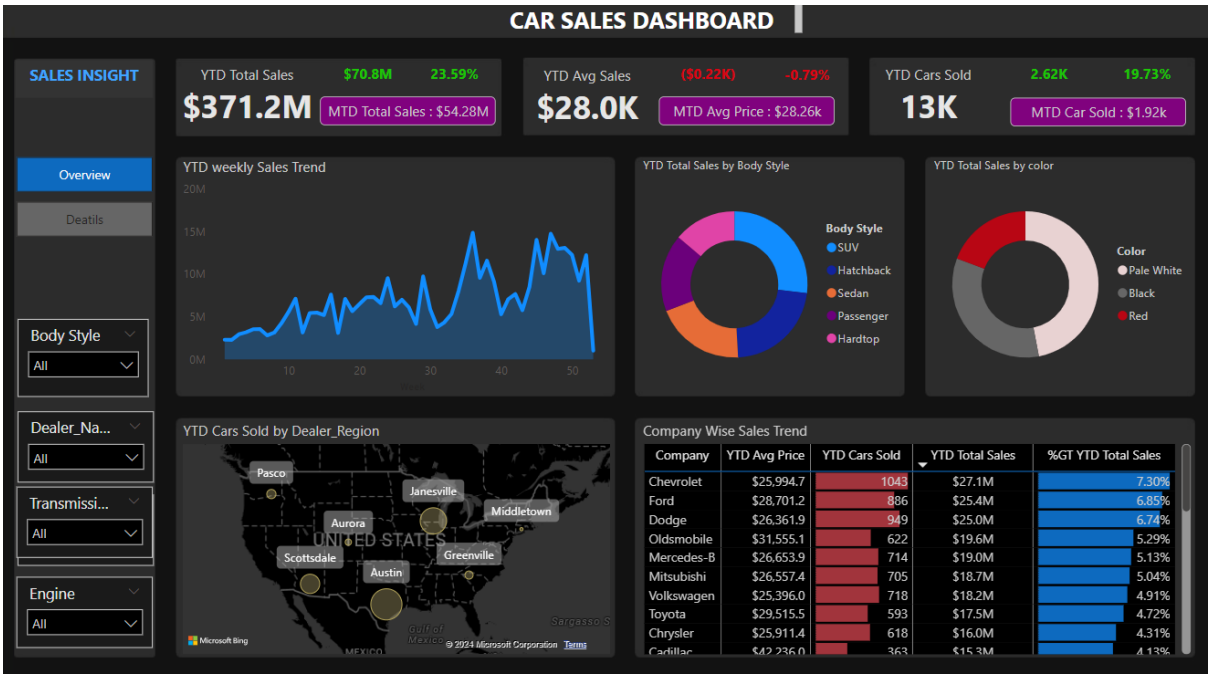
2. **Average Price Analysis:**
    - YTD Average Price
    - MTD Average Price
    - YOY Growth in Average Price
    - Difference between YTD Average Price and PTYD Average Price
3. **Cars Sold Metrics:**
    - YTD Cars Sold
    - MTD Cars Sold
    - YOY Growth in Cars Sold
    - Difference between YTD Cars Sold and PTYD Cars Sold

Problem Statement 2: Charts Requirement

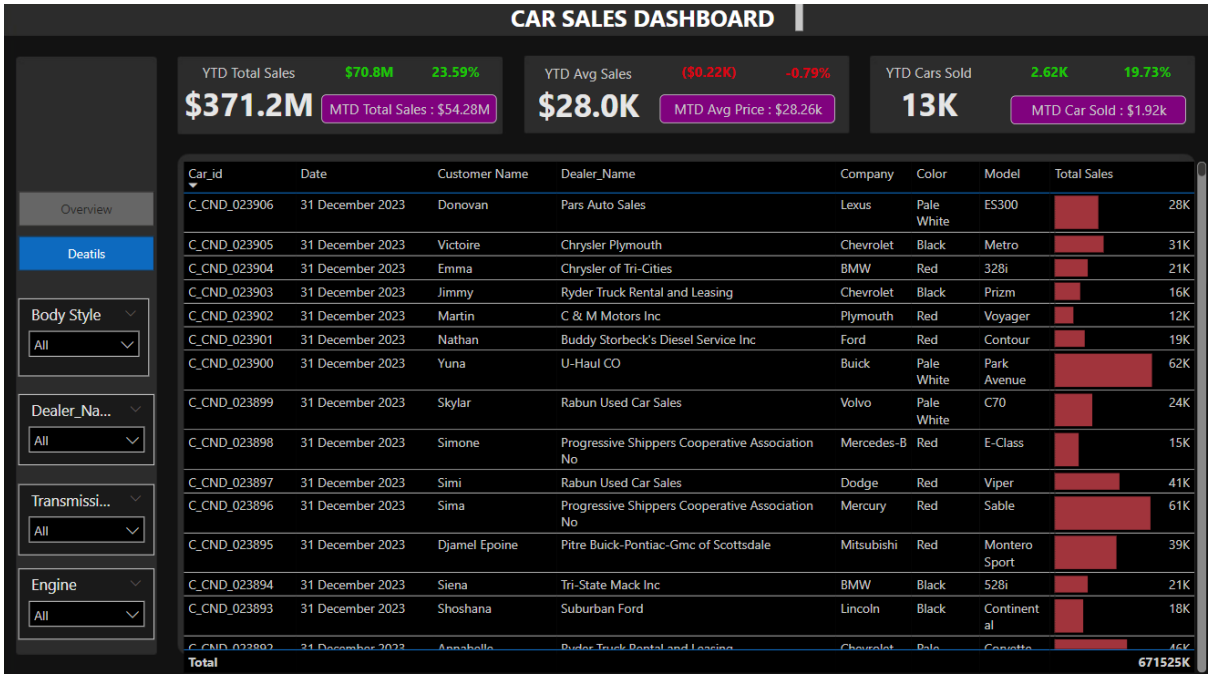
1. **YTD Sales Weekly Trend:** Display a line chart illustrating the weekly trend of YTD sales. The X-axis should represent weeks, and the Y-axis should show the total sales amount.
2. **YTD Total Sales by Body Style:** Visualize the distribution of YTD total sales across different car body styles using a Pie chart.
3. **YTD Total Sales by Color:** Present the contribution of various car colors to the YTD total sales through a pie chart.
4. **YTD Cars Sold by Dealer Region:** Showcase the YTD sales data based on different dealer regions using a map 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.
6. **Details Grid Showing All Car Sales Information:** Create a detailed grid that presents all relevant information for each car sale, including car model, body style, colour, sales amount, dealer region, date, etc

DATA VISUALIZATION

1. Car Sales Overview:



2. Car Sales Details :



KEY INSIGHT

- **Sustained Growth**: Overall car sales have demonstrated a consistent upward trajectory over the past year , indicating a healthy and growing market.
- **Model Dominance:** A few key car models have emerged as clear favorites among consumers, dominating sales charts. This trend highlights the importance of understanding and capitalizing on the appeal of these models.
- **Regional Disparities**: Significant variations in sales performance exist across regions, Austin Region emerging as high-performing markets and others presenting untapped opportunities for growth.
- **Total Sales by Colour:** The sales trends are High for Pale white Colour as we can see in the chart. It means there is a high demand of pale white colour car in the market.
- **Region Impact :** The Austin region contributes the most overall sales.
- **Total Sales by Body style :** The sales trends are the for the SUV body style cars as compare to other body style cars.