**Car Sales Dashboard (Power BI)**

**DAX FUNCTION**

* **Total Sales Calculations -**

1. **YTD Total Sales = TOTALYTD(SUM(car\_data[Price ($)]),'Calender Table'[Date])**
2. **PYTD Total Sales = CALCULATE(SUM(car\_data[Price ($)]),SAMEPERIODLASTYEAR('Calender Table'[Date]))**
3. **Sales Difference = car\_data[YTD Total Sales] - car\_data[PYTD Total Sales]**
4. **Sales Diff Colour = IF(car\_data[Sales Difference]>0,"Green","Red")**
5. **YOY Sales Growth = car\_data[Sales Difference] / car\_data[PYTD Total Sales]**
6. **MTD Total Sales = TOTALMTD(SUM(car\_data[Price ($)]),'Calender Table'[Date])**

* **Average Price Calculations -**

1. **AVG. Price = SUM(car\_data[Price ($)]) / COUNT(car\_data[Car\_id])**
2. **YTD AVG Sales = TOTALYTD([AVG. Price],'Calender Table'[Date])**
3. **PYTD Average Price = CALCULATE([AVG. Price],SAMEPERIODLASTYEAR('Calender Table'[Date]))**
4. **AVR Price Diff = [YTD AVG Sales] - [PYTD Average Price]**
5. **AVG Price Colour = IF([AVR Price Diff]>0,"Green","Red")**
6. **YOY AVG Price Growth = [AVR Price Diff] / [PYTD Average Price]**
7. **MTD AVG Price = TOTALMTD([AVG. Price],'Calender Table'[Date])**

* **Car Sales Calculations –**

1. **YTD Cars Sold = TOTALYTD(COUNT(car\_data[Car\_id]),'Calender Table'[Date])**
2. **PYTD Cars Sold = CALCULATE(COUNT(car\_data[Car\_id]),SAMEPERIODLASTYEAR('Calender Table'[Date]))**
3. **DIFF Cars Sold = [YTD Cars Sold] - [PYTD Cars Sold]**
4. **YOY Cars Sales = [DIFF Cars Sold] / [PYTD Cars Sold]**
5. **MTD Cars Sales = TOTALMTD(COUNT(car\_data[Car\_id]),'Calender Table'[Date])**

**Results & Interpretation –**

**KPIs Interpretations -**

* **Total Sales**

1. **YTD Total Sales – Current year total sales is 371Millions.**
2. **Sales Difference – Sales difference between Current year and previous year is 71 M.**
3. **YOY Sales Growth (%) – Year over year growth percentage is around 23.59% i.e. there is an increase in growth.**

* **Average Price –**

1. **YTD Average Price – Year to Date average price of each car is around 27.99K Dollar.**
2. **Average Price Difference – Average price difference of each car in the current year from the previous year is -223K Dollar.**
3. **YOY Average Price Growth (%) – Year over year average price growth percentage of each car is -0.79%.**
4. **MTD Average Price – Month to date average price of each car is around 28.26K Dollar.**

* **Cars Sales –**

1. **YTD Cars Sales = Year to date sales of the car is around 13K.**
2. **Difference in Cars Sales – There is an increase in the car sales around 2616 cars compared to the previous year cars sold.**
3. **YOY Cars Sales Growth (%) – Year over year cars sales growth percentage is increase by 24.57%.**
4. **MTD Cars Sales – Month to date cars sales is around 1921 cars.**

* **Charts Interpretation –**

1. **YTD Sales Weekly Trend – This area line chart makes it quite evident that Sundays have the largest sales so far this year, followed by Saturdays, and so on.**
2. **YTD Sales by Dealer Region – The dealer region named Austin has the biggest sales year to date, followed by Janesville, Scottsdale, and so on.**
3. **YTD Sales by Body Color – The car body color that has had the biggest sales year to date is pale white, which is followed by black and then red.**
4. **Table Matrix – In the table, I want to include graphical representations of the datasets for the companies with the largest YTD Sales, highest YTD Sales in Cars, and greatest %GT YTD Total Sales.**
5. **YTD Cars Sold by Color – This bar graph makes it evident which automobiles are the most popular so far this year: pale white cars, followed by black and then red cars.**
6. **YTD Sales by Body Style – From this Donut chart, it is clearly visible that cars with SUV body style have the largest year to date sales followed by Hatchback cars and so on.**