Car Sales Dashboard

Power BI Project
Created by Siddhesh Sable

Summary

- Problem: Sales data scattered across systems with no real-time visibility

- Solution: Built an interactive Power BI dashboard with 12+ KPIs and 6 visuals

- Tools Used: Power BI, Power Query, DAX

- Outcome: Enabled real-time tracking, YOY analysis, and region-wise insights

Project Objective

- To design a dynamic Power BI dashboard that provides real-time car sales insights through meaningful KPIs and interactive visuals for data-driven decision-making.

KPIs Tracked

- ☑ **Sales Metrics**
- **Year-to-Date (YTD) Total Sales**
- **Month-to-Date (MTD) Sales**
- **Year-over-Year (YOY) Growth**
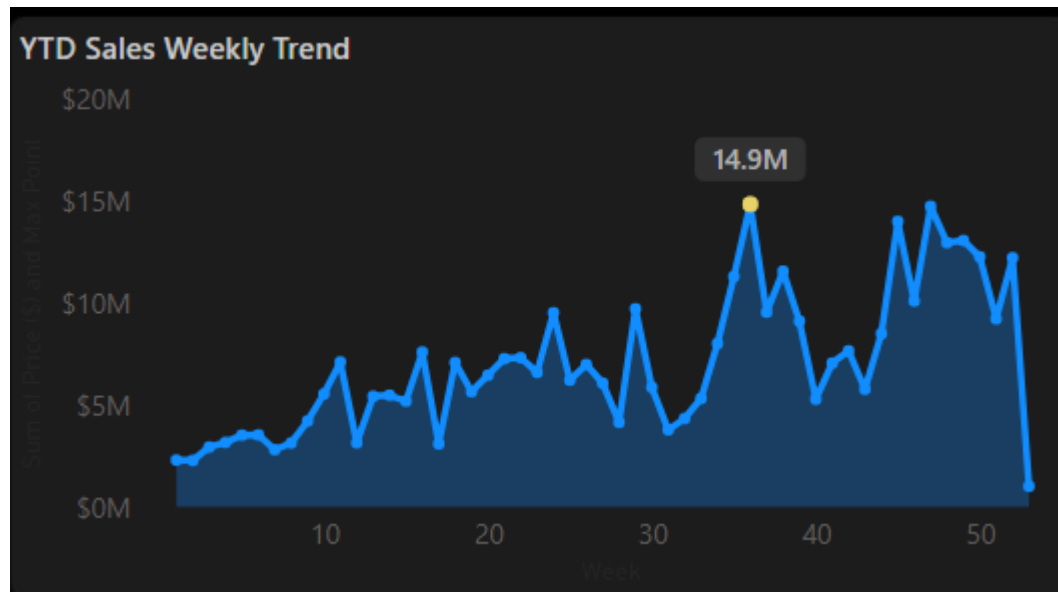- **YTD vs Previous YTD (PTYD)**

- ☑ **Average Price Metrics**
- **YTD Average Price**
- **MTD Average Price**
- **YOY Growth in Price**
- **YTD vs PTYD Average Price**

- ☑ **Cars Sold Metrics**
- **YTD Units Sold**
- **MTD Units Sold**
- **YOY Growth in Sales Volume**
- **YTD vs PTYD Sales**

Visuals Implemented

1. Line Chart – YTD Sales Weekly Trend:

2. Pie Chart – Sales by Body Style:

YTD Total Sales by Body Style

Body Style
- SUV
- Hatchback
- Sedan
- Passenger
- Hardtop
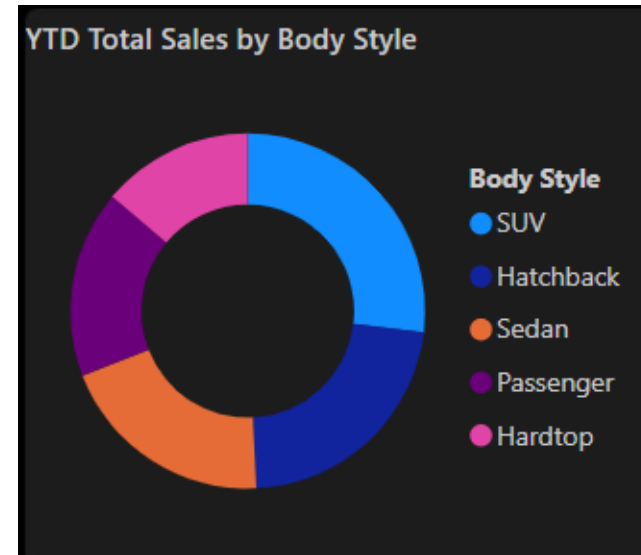
3. Pie Chart – Sales by Color:

YTD Total Sales by Color

Color
- Pale White
- Black
- Red
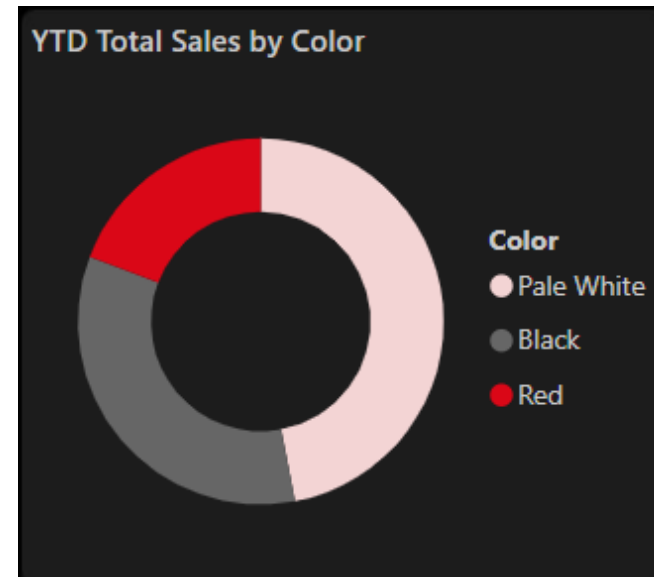
4. Map Chart – Cars Sold by Region:

5. Company Wise Sales Trend:

Company Wise Sales Trend

Company	YTD Avg Price	YTD Cars Sold	YTD Total Sales	%GT YTD Total Sales
Acura	$24.9K	376.0	$9.3M	2.52%
Audi	$22.2K	259.0	$5.8M	1.55%
BMW	$25.7K	445.0	$11.4M	3.08%
Buick	$32.2K	243.0	$7.8M	2.11%
Cadillac	$42.2K	363.0	$15.3M	4.13%
Chevrolet	$26.0K	1043.0	$27.1M	7.30%
Chrysler	$25.9K	618.0	$16.0M	4.31%
Dodge	$26.4K	949.0	$25.0M	6.74%

6. Details Grid – All Sales Data:

Car_id	Date	Customer Name	Dealer_Name ▲	Company	Color	Model	Total Sales
C_CND_000001	02 January 2022	Geraldine	Buddy Storbeck's Diesel Service Inc	Ford	Black	Expedition	$26K
C_CND_000015	02 January 2022	Zainab	Buddy Storbeck's Diesel Service Inc	Chrysler	Pale White	Sebring Coupe	$26K
C_CND_000059	04 January 2022	Hershy	Buddy Storbeck's Diesel Service Inc	Mercedes-B	Pale White	C-Class	$12K
C_CND_000091	05 January 2022	Wadia	Buddy Storbeck's Diesel Service Inc	Nissan	Pale White	Maxima	$22.5K
C_CND_000104	06 January 2022	Abel	Buddy Storbeck's Diesel Service Inc	Mercedes-B	Black	SL-Class	$38K
C_CND_000137	12 January 2022	Jada	Buddy Storbeck's Diesel Service Inc	Lexus	Pale White	ES300	$27.25K
C_CND_000194	17 January 2022	Ava	Buddy Storbeck's Diesel Service Inc	Mitsubishi	Black	3000GT	$39K
C_CND_000238	21 January 2022	Adrian	Buddy Storbeck's Diesel Service Inc	Mitsubishi	Pale White	Galant	$36K
C_CND_000244	23 January 2022	Leo	Buddy Storbeck's Diesel Service Inc	Cadillac	Pale White	Eldorado	$31K
C_CND_000275	27 January 2022	Gabrielle	Buddy Storbeck's Diesel Service Inc	Chrysler	Pale White	Sebring Coupe	$46K
C_CND_000319	03 February 2022	Katelyn	Buddy Storbeck's Diesel Service Inc	Mitsubishi	Pale White	Montero Sport	$39K
C_CND_000370	06 February 2022	Heaven	Buddy Storbeck's Diesel Service Inc	Plymouth	Pale White	Prowler	$71.5K
C_CND_000420	08 February 2022	Devin	Buddy Storbeck's Diesel Service Inc	Acura	Pale White	TL	$24K
C_CND_000429	09 February 2022	Michael	Buddy Storbeck's Diesel Service Inc	Mercedes-B	Black	S-Class	$85K
C_CND_000443	09 February 2022	Loreley	Buddy Storbeck's Diesel Service Inc	Mitsubishi	Black	Montero Sport	$45K
C_CND_000463	14 February 2022	Allison	Buddy Storbeck's Diesel Service Inc	Mitsubishi	Black	Eclipse	$27.5K
C_CND_000493	15 February 2022	Lucia	Buddy Storbeck's Diesel Service Inc	Chevrolet	Pale White	Monte Carlo	$21.2K
C_CND_000570	21 February 2022	Lillian	Buddy Storbeck's Diesel Service Inc	Cadillac	Pale White	Seville	$22K
Total							**$6,71,525.465K**

Power BI Workflow:

End-to-End Dashboard Development Process:

1. Data Collection:

- **Connected to the source (Excel)**

- **Analyzed structure of each source table before integrating with Power BI**

2. Data Transformation (Power Query):

- **Cleaned and normalized tables**

- **Removed duplicates and filtered missing values**

3. Data Modeling:

- **Established relationships between fact and dimension tables**

- **Added Date table for time intelligence (YTD, MTD, PTYD)**

4. Measure Creation (DAX):

- Calculated YTD/MTD Sales, YOY Growth, PTYD Differences
- Created dynamic KPIs using CALCULATE, CONCATENATE and FORMAT functions

5. Visualization Layer

- Designed charts, KPI cards, and interactive filters
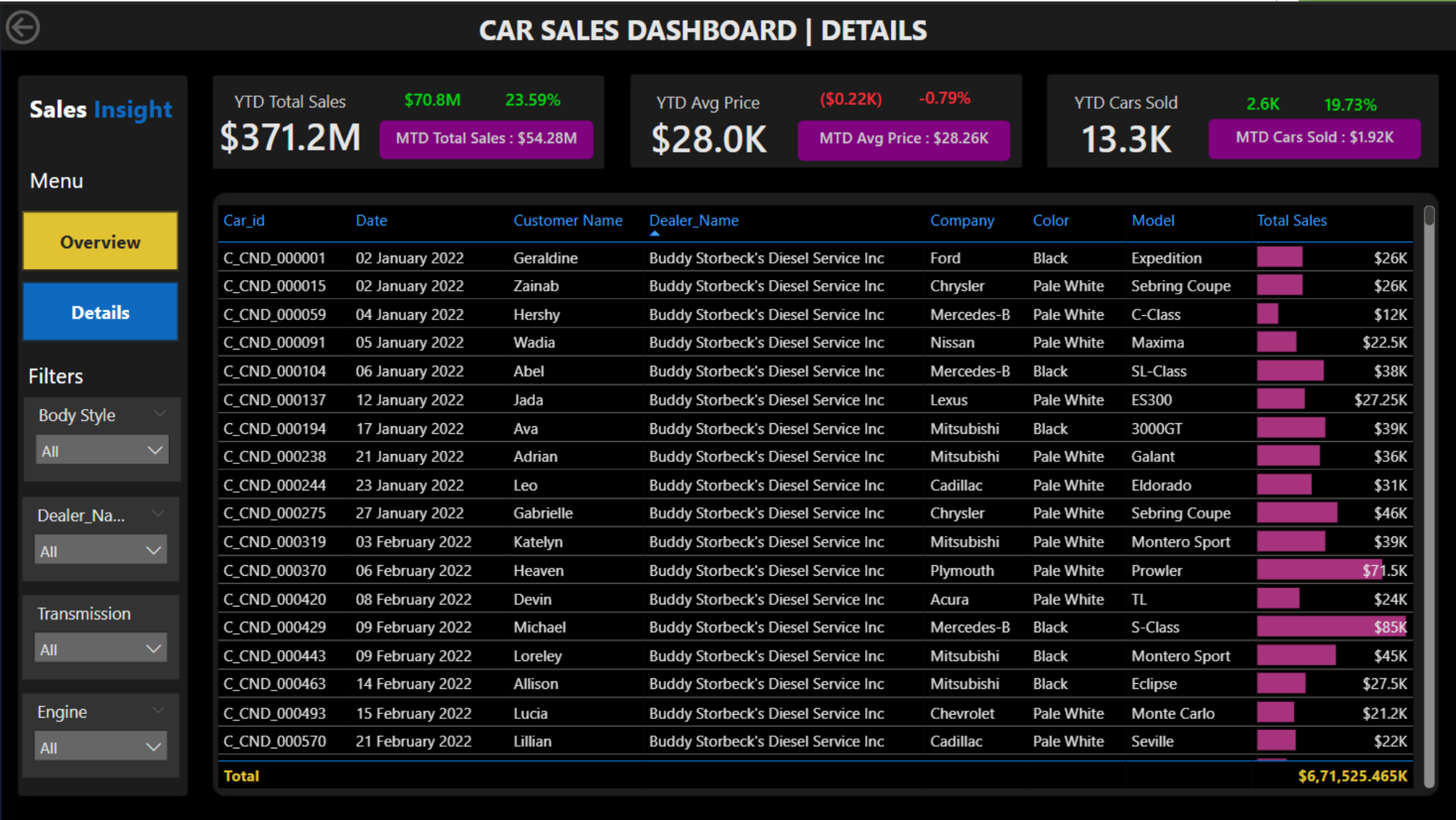- Ensured visuals are responsive across slicers

6. Dashboard Design & Usability

- Chose intuitive visuals to enhance readability
- Organized KPIs by theme: Sales, Price, Volume
- Used Slicers for a guided user experience

Dashboard Preview:
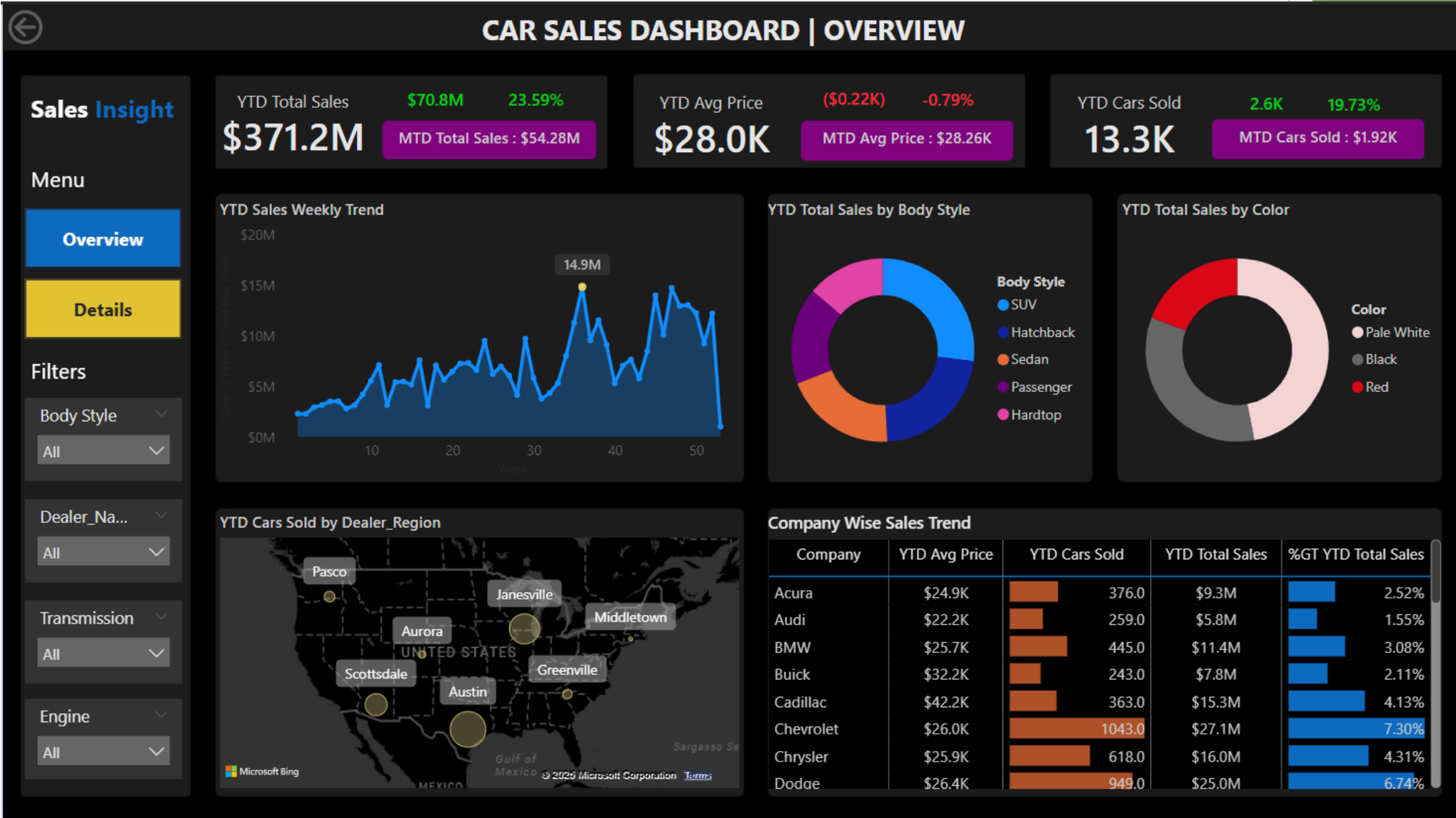
Details View:

Key Insights

🔍 **Summary:**

1. **Total Sales (YTD):** $371.2M

2. **YOY Growth (Sales):** +23.59%

3. **Avg Price (YTD):** $28,000 | **YOY Change:** -0.75%

4, **Cars Sold (YTD):** 13,300 units | **YOY Growth:** +24.57%

📊 **Additional Insights:**

1. **Weekly Peaks:** Weeks 39, 46, and 50

2. **Top Body Style:** SUVs

3. **Best-Selling Color:** Pearl White (11.2K), then Black and Red

4. **Top Region:** Austin (4,135 units)

5. **Top Brands:**

   Chevrolet (1,819),Dodge (1,671),Ford (1,614),Volkswagen (1,333),

   Mercedes-Benz (1,285)

Impact and Next Steps

Business Impact:

- Enabled informed regional strategies
- Improved price benchmarking
- Faster executive-level reporting

Next Steps:

- Add mobile-optimized view
- Implement performance alerts
- Expand to post-sales service metrics

Conclusion:

This dashboard provides a data-driven overview of the dealership's performance and empowers decision-making across key areas:

Strong Sales Momentum: $371M in YTD sales with a 23.6% increase in volume.

Product & Customer Insights: SUVs and Pale White vehicles lead in customer preference.

Regional Excellence: Austin emerges as the highest-performing region.

Brand Performance: Chevrolet, Dodge, and Ford top sales contributions

Strategic Opportunities: Targeted marketing, pricing optimization, and refined inventory planning.

By aligning insights with focused solutions, this dashboard serves as a foundation for sustained growth, improved efficiency, and more informed strategic direction.

Thank You!

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