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Global Superstore Performance Analysis

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AGENDA

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OVERVIEW

This project focuses on analyzing the Global Superstore dataset using Power BI to uncover critical insights related to sales, profits, shipping costs, and customer behavior. The dataset includes various fields such as order details, customer information, product categories, and financial metrics.

By leveraging Power BI's visualization tools, we aim to create an interactive dashboard that highlights key performance indicators (KPIs) like total sales, profit margins, shipping costs, and customer segmentation. The report will allow business users to drill down into specific regions, segments, and products to make data-driven decisions that improve profitability and operational efficiency.

INTRODUCTION

The Global Superstore dataset provides a comprehensive view of a retail business's sales, shipping, and customer operations across different regions and segments. With data covering various aspects such as order details, customer demographics, product categories, and financial metrics, it offers an excellent opportunity to analyze the business's performance and identify areas for optimization.

OBJECTIVE

The objective of this project is to conduct a comprehensive analysis of the Global Superstore dataset to gain valuable business insights that can drive informed decision-making. Specifically, the project aims to:

- Evaluate Sales Performance
- Profitability Assessment
- Order and Sales Trends
- Actionable Insights

DATASET

The Global Superstore dataset contains transactional data from a retail superstore, providing a comprehensive view of sales, customer demographics, and operational metrics. Key columns in the dataset include:

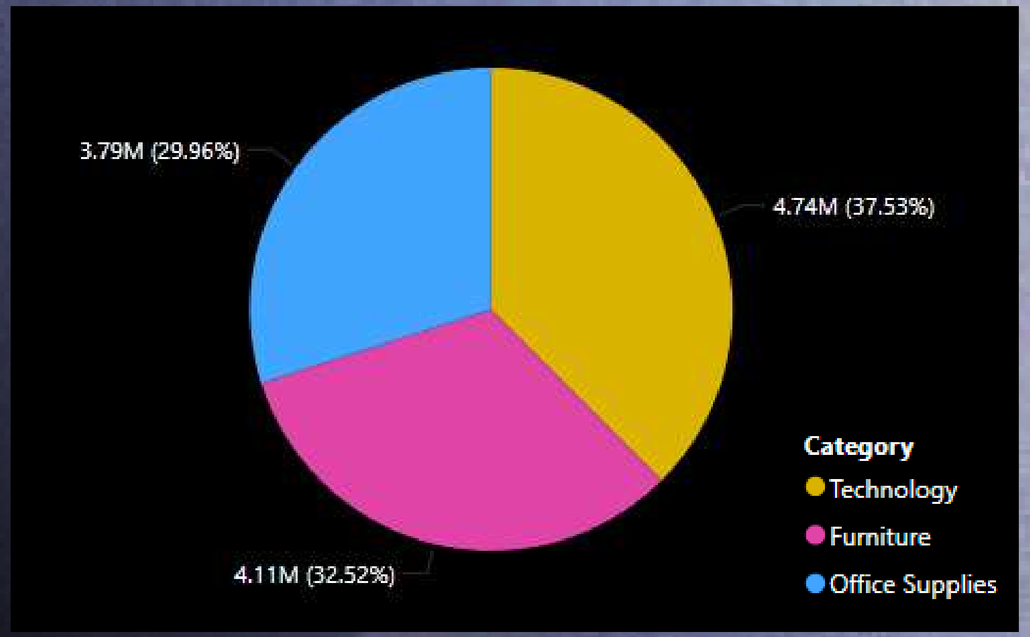
- Order ID: Unique identifier for each order.
- Order Date: Date the order was placed.
- Ship Date: Date the order was shipped.
- Customer ID: Unique identifier for each customer.
- Customer Segment: Classification of customers (e.g., Consumer, Corporate, Home Office).
- Region: Geographic location of the customer (e.g., city, state, country).
- Product Category and Sub-Category: Classification of products sold.
- Sales: Total sales amount for each order.
- Profit: Profit generated from each order.
- Shipping Cost: Cost incurred for shipping the order.

This dataset enables analysis of sales performance, profitability, customer behavior, and logistical efficiency, making it a valuable resource for decision-making and strategic planning in retail operations.

INSIGHTS

Total Sales by Product Category

I**nsight:** This shows the total sales for each product category.



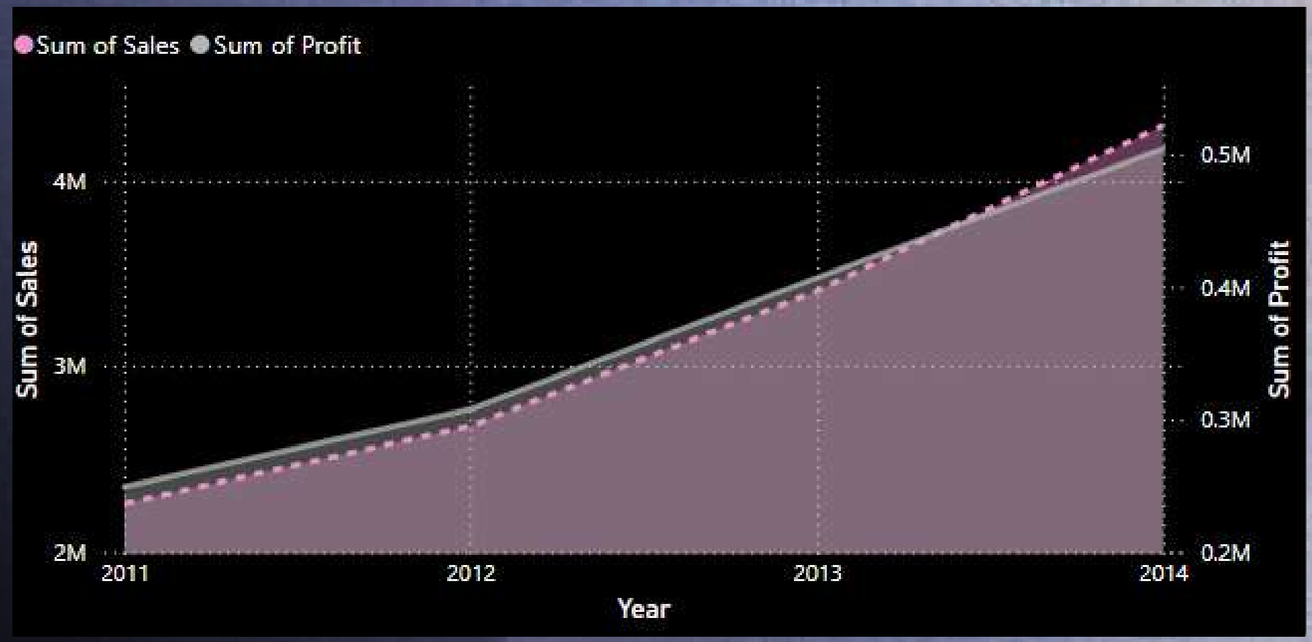
SQL Query

```
SELECT category, SUM(sales) AS total_sales
FROM superstore
GROUP BY category
ORDER BY total_sales DESC;
```

INSIGHTS

Sales and Profit Trend Over Time

Insight: Shows the trend of sales over time (by order year).



SQL Query

```
SELECT order_date, SUM(sales) AS total_sales
FROM  superstore
GROUP BY order_date
ORDER BY order_date;
```

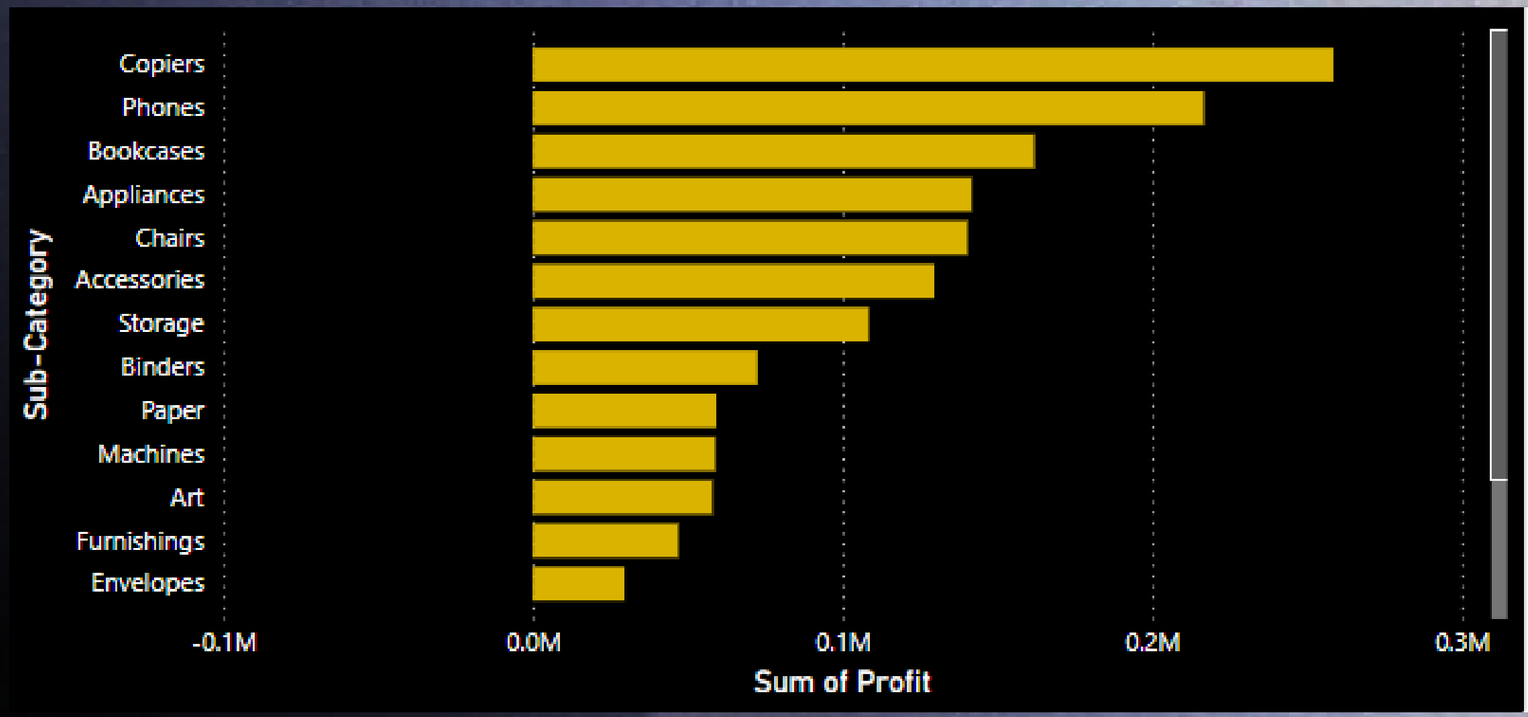
INSIGHTS

Profit Margin by Product Subcategory

I**nsight:** Displays profit by product subcategory.

SQL Query

```
SELECT sub_category, SUM(profit) AS total_profit
FROM superstore
GROUP BY sub_category
ORDER BY total_profit DESC;
```



INSIGHTS

Top 10 Customers by Sales

Insight: Shows the top 10 customers ranked by total sales.

SQL Query

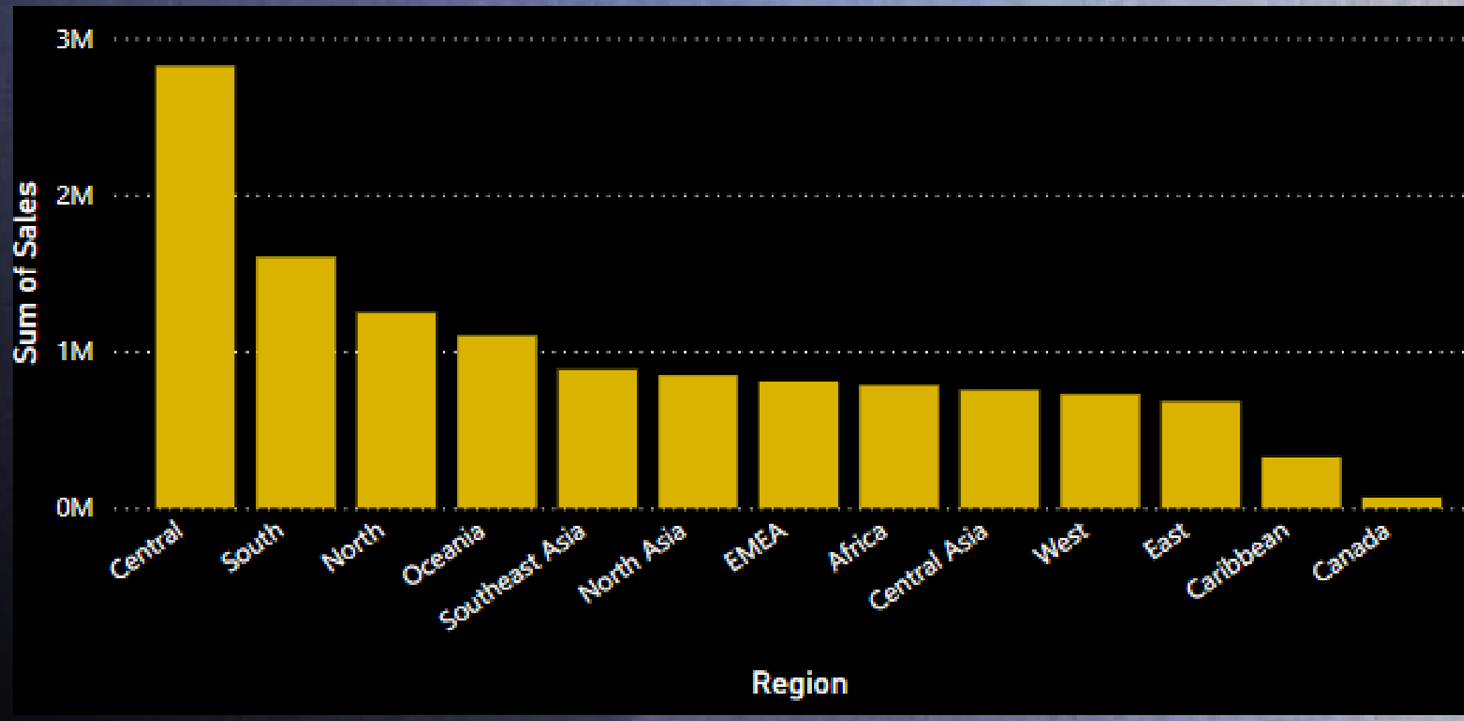
```
SELECT customer_name, SUM(sales) AS total_sales
FROM superstore
GROUP BY customer_name
ORDER BY total_sales DESC
LIMIT 10;
```

Customer Name	Sum of Sales
Bart Watters	32,310.45
Christopher Conant	35,187.08
Fred Hopkins	30,400.67
Greg Tran	35,550.95
Hunter Lopez	30,243.57
Jane Waco	30,288.45
Natalie Fritzler	31,781.26
Sean Miller	35,170.93
Tamara Chand	37,457.33
Tom Ashbrook	40,488.07
Total	**338,878.76**

INSIGHTS

Sales by Region

Insight: Breaks down sales by region.



SQL Query

```
SELECT region, SUM(sales) AS
total_sales
FROM superstore
GROUP BY region
ORDER BY total_sales DESC;
```

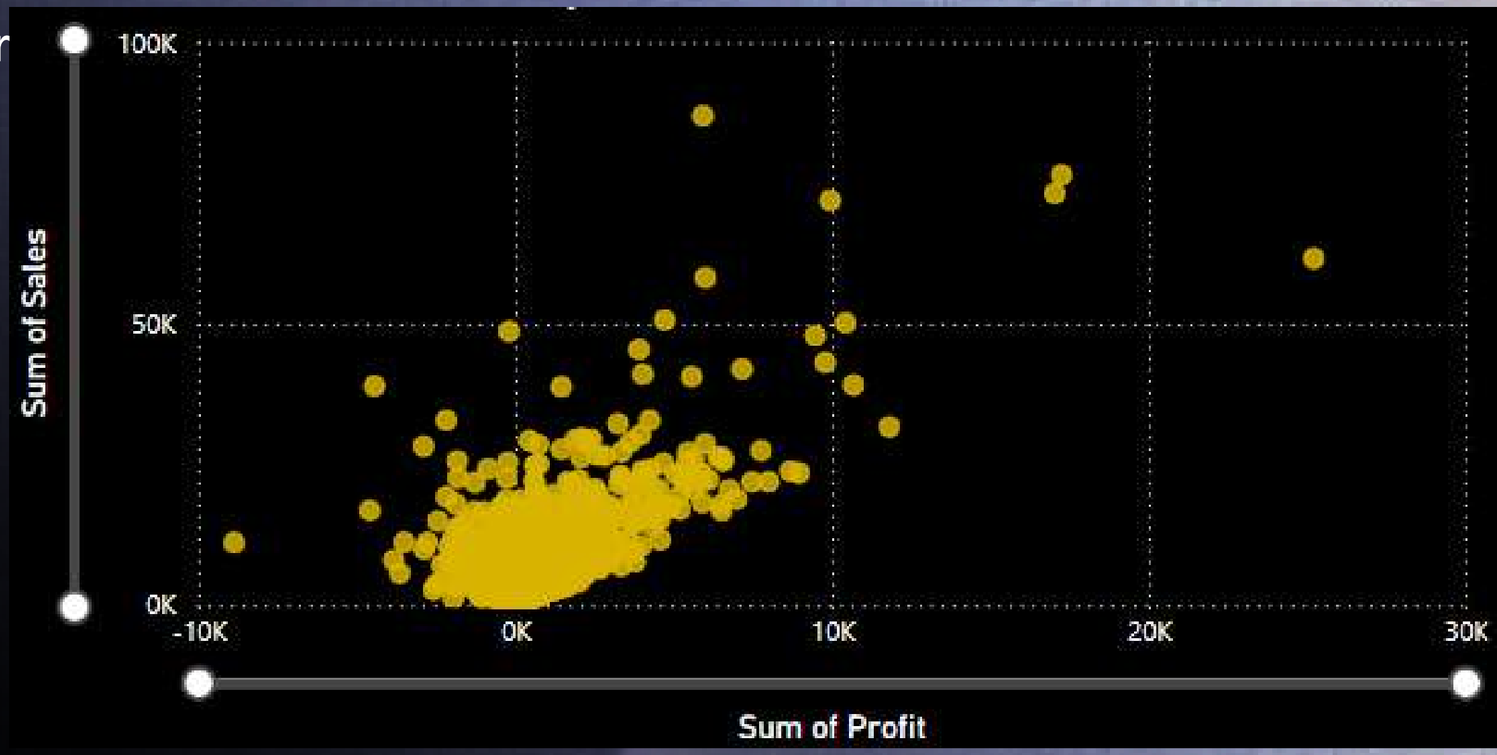
INSIGHTS

Sales vs. Profit

I**nsight:** Compares sales and profit for each product to identify profitable products.

SQL Query

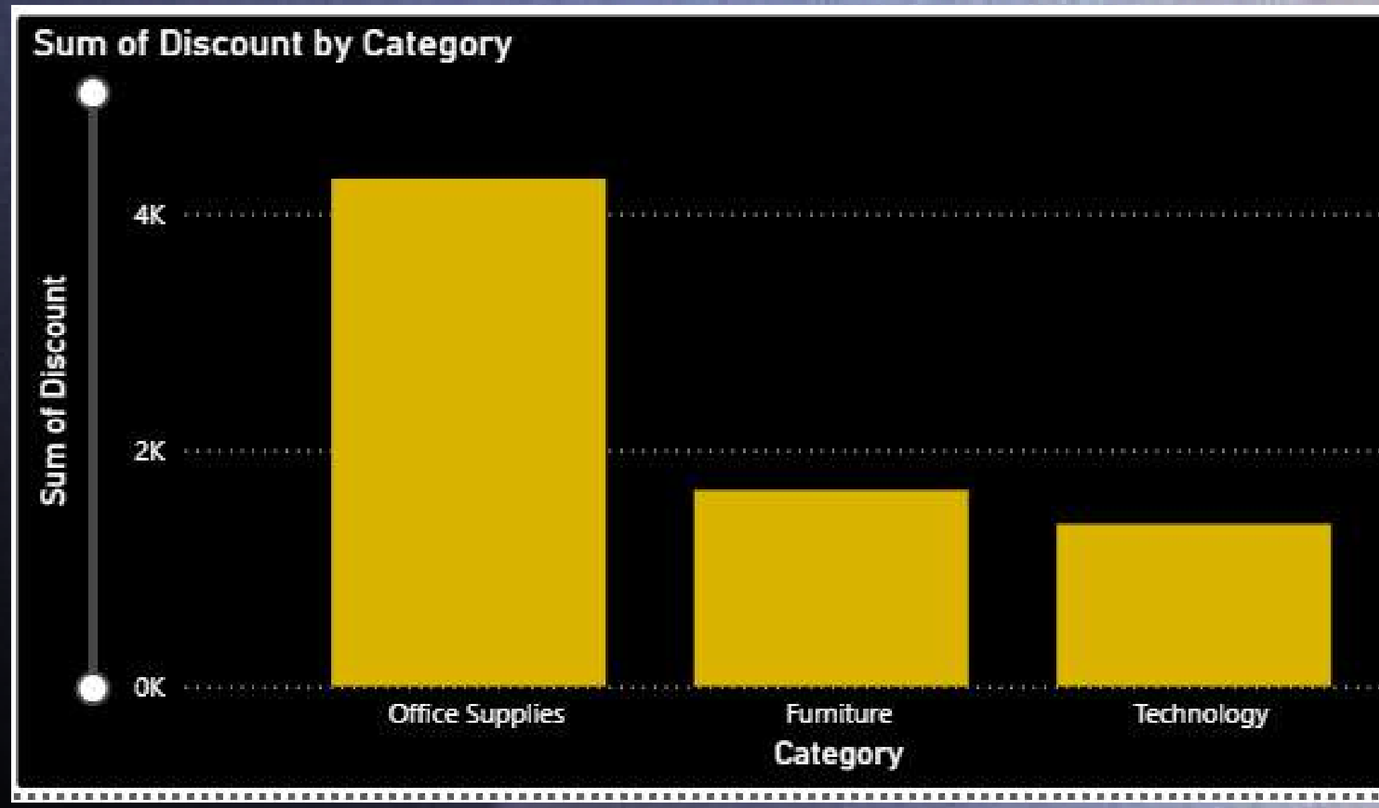
```
SELECT product_name, SUM(sales) AS
total_sales, SUM(profit) AS total_profit
FROM superstore
GROUP BY product_name
ORDER BY total_sales DESC;
```



INSIGHTS

Discounts Given by Product Category

I**nsight:** Shows how discounts are distributed across product categories.



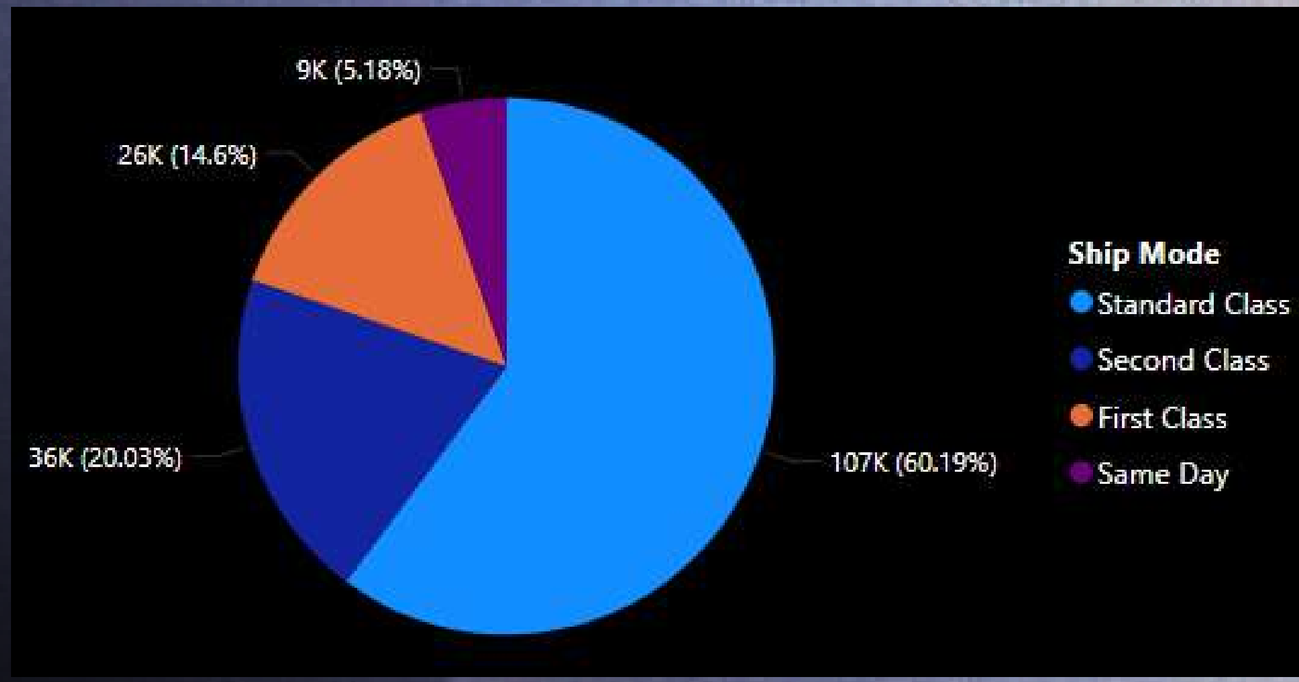
SQL Query

```
SELECT category, SUM(discount) AS
total_discount
FROM superstore
GROUP BY category
ORDER BY total_discount DESC;
```

INSIGHTS

Order Quantity by Ship Mode

I**nsight:** Displays the breakdown of order quantities by different shipping modes.



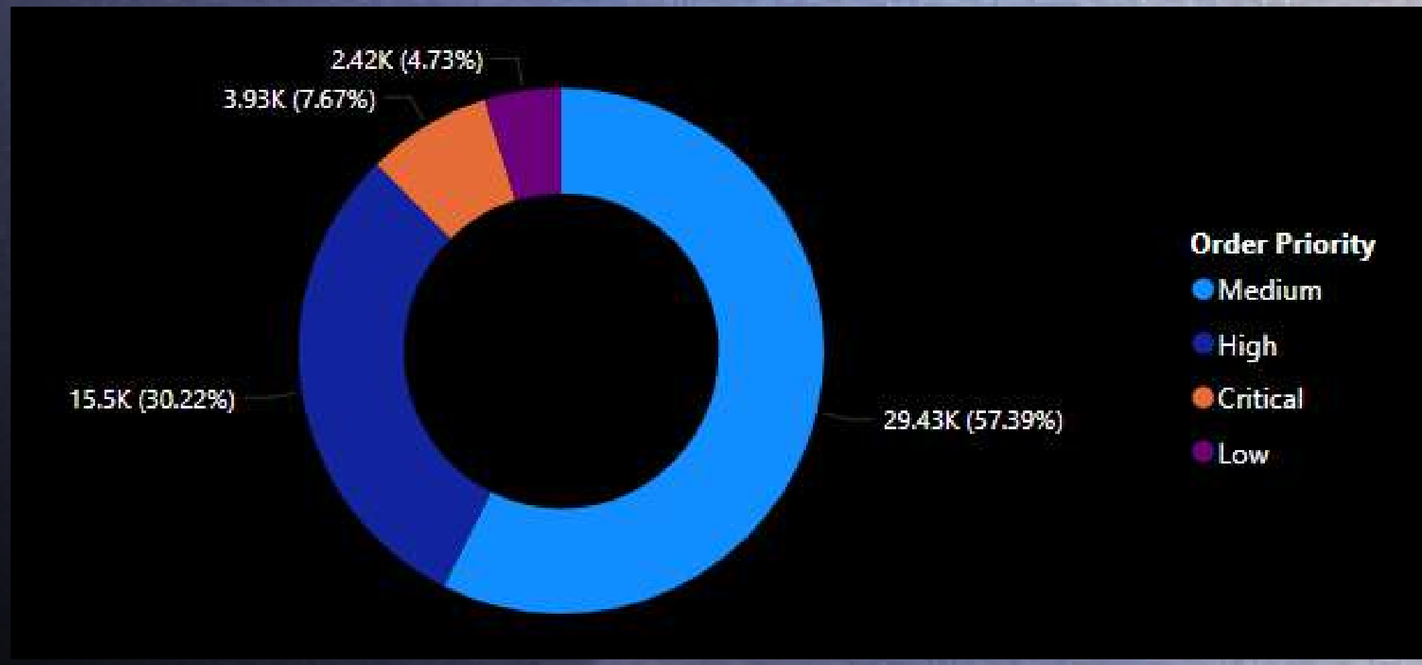
SQL Query

```
SELECT ship_mode, SUM(quantity) AS
total_quantity
FROM superstore
GROUP BY ship_mode;
```

INSIGHTS

Order Priority Breakdown

I**nsight:** Provides insight into how orders are prioritized.



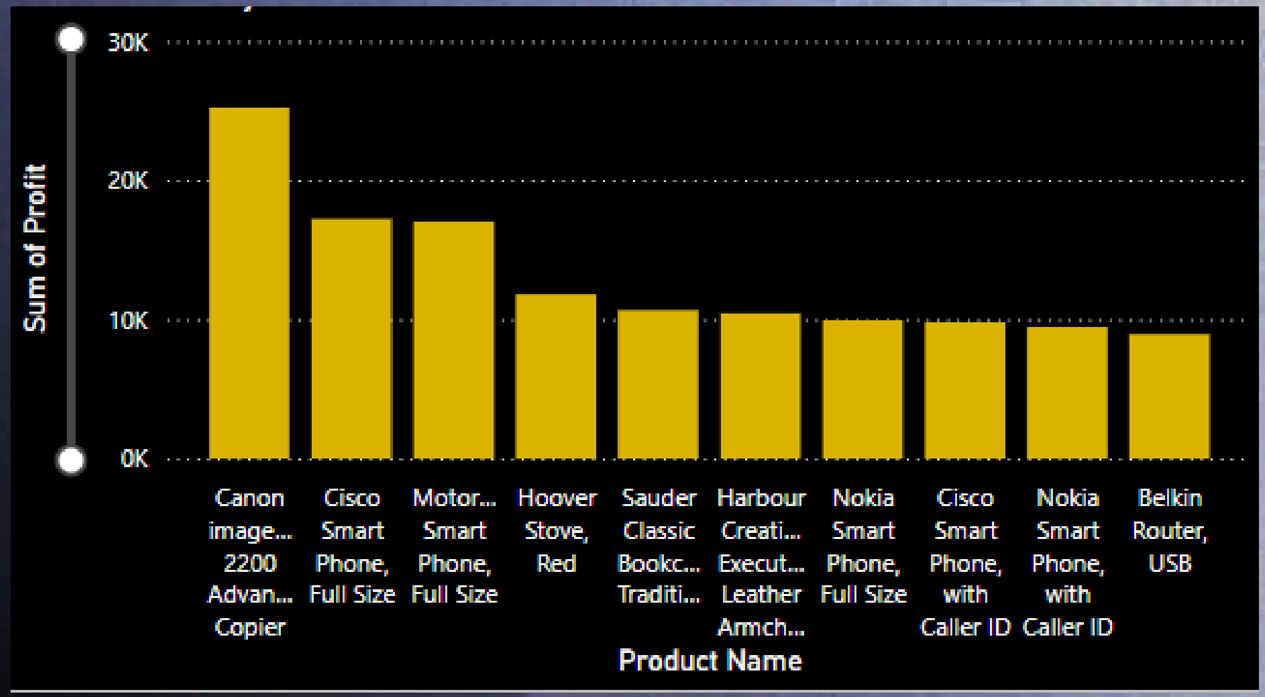
SQL Query

```
SELECT order_priority, COUNT(order_id) AS total_orders
FROM superstore
GROUP BY order_priority;
```

INSIGHTS

Top 10 Products by Profit

Insight: Displays the top 10 most profitable products.



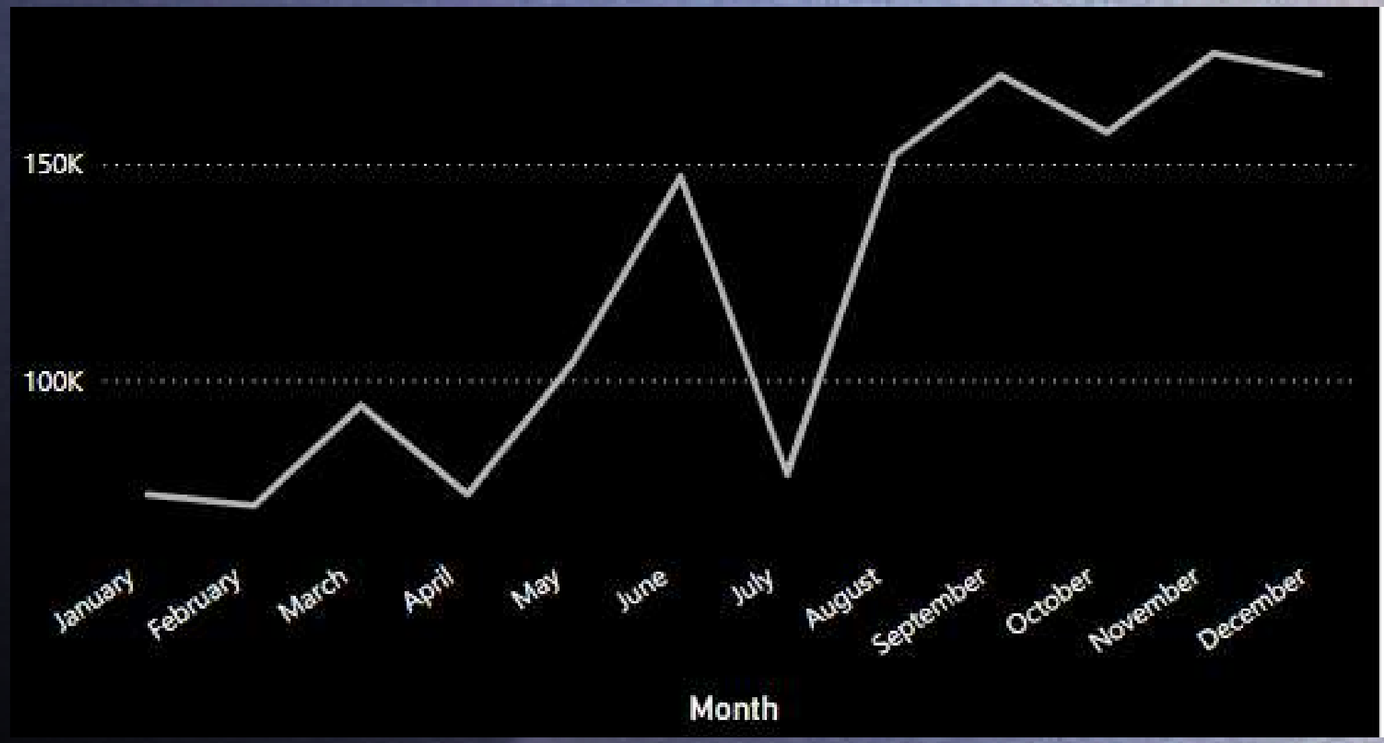
SQL Query

```
SELECT product_name, SUM(profit) AS
total_profit
FROM superstore
GROUP BY product_name
ORDER BY total_profit DESC
LIMIT 10;
```

INSIGHTS

Profit Trend by Month

I**nsight:** Shows the trend of profit over time (grouped by month).



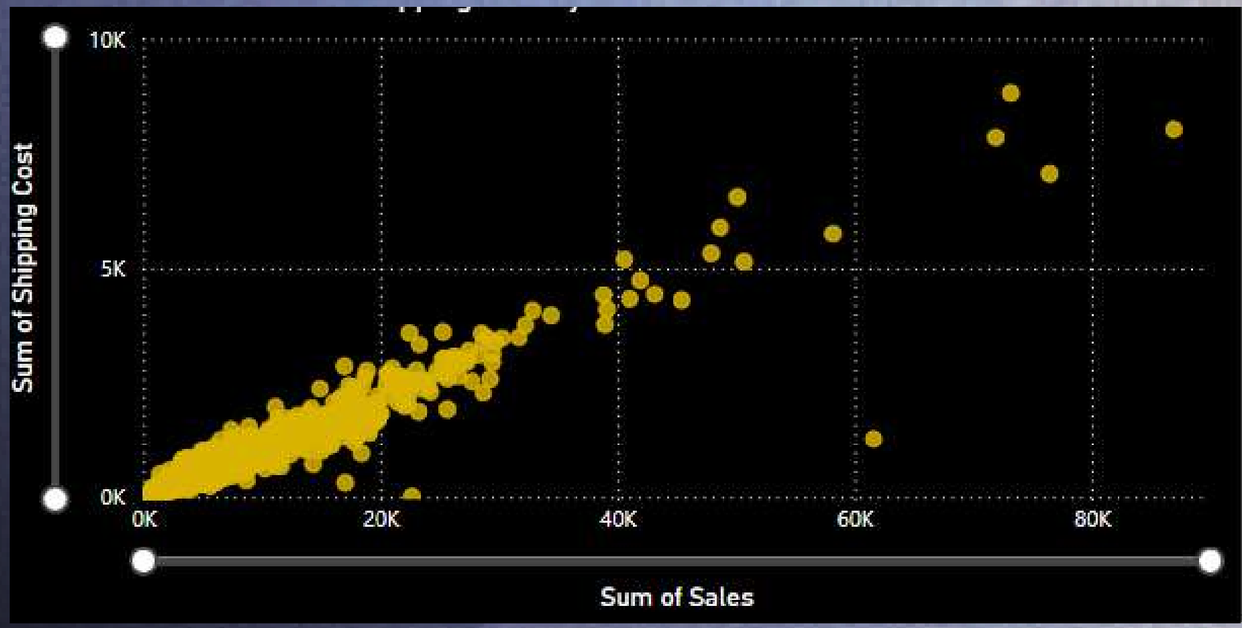
SQL Query

```
SELECT EXTRACT(MONTH FROM order_date)
AS order_month, SUM(profit) AS total_profit
FROM superstore
GROUP BY order_month
ORDER BY order_month;
```

INSIGHTS

Sales vs. Shipping Costs

I**nsight:** Compares sales with shipping costs for each product to identify costly shipping products.



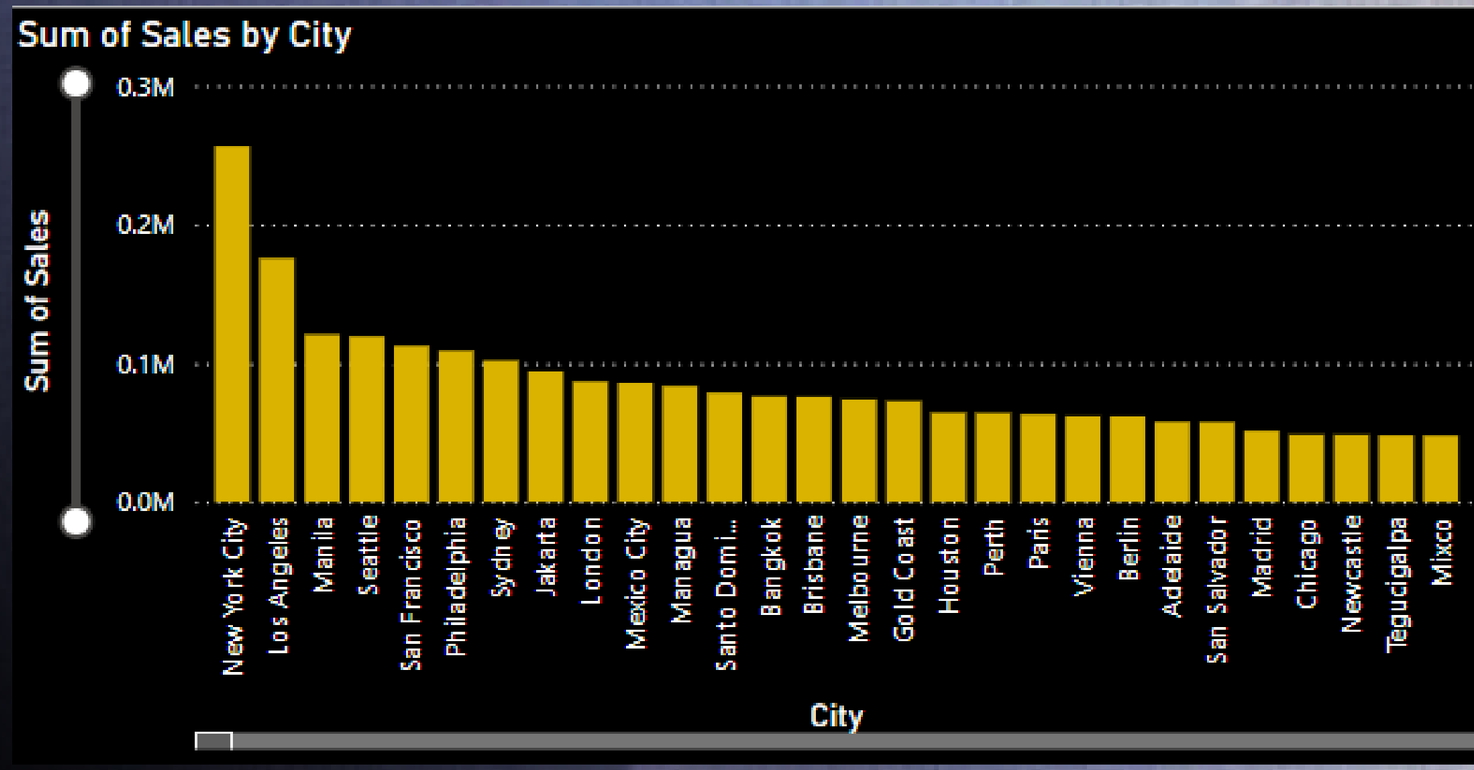
SQL Query

```
SELECT product_name, SUM(sales) AS total_sales,
SUM(shipping_cost) AS total_shipping_cost
FROM superstore
GROUP BY product_name
ORDER BY total_sales DESC;
```

INSIGHTS

Sales by City

Insight: Displays total sales for each city.



SQL Query

```
SELECT city, SUM(sales) AS total_sales
FROM superstore
GROUP BY city
ORDER BY total_sales DESC;
```

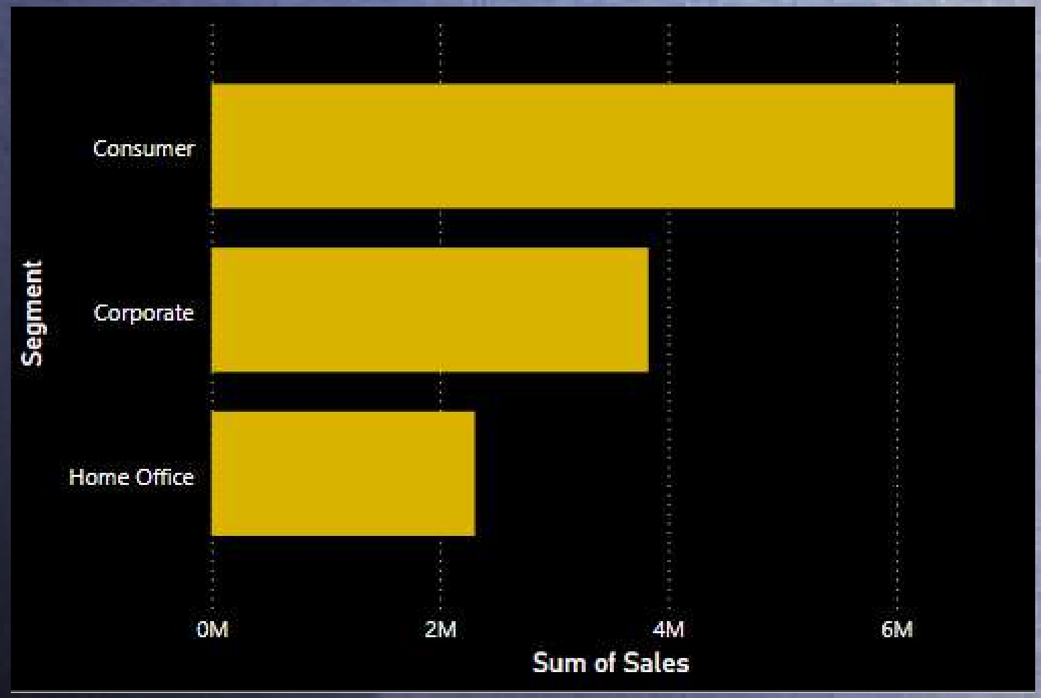
INSIGHTS

Sales Performance by Segment

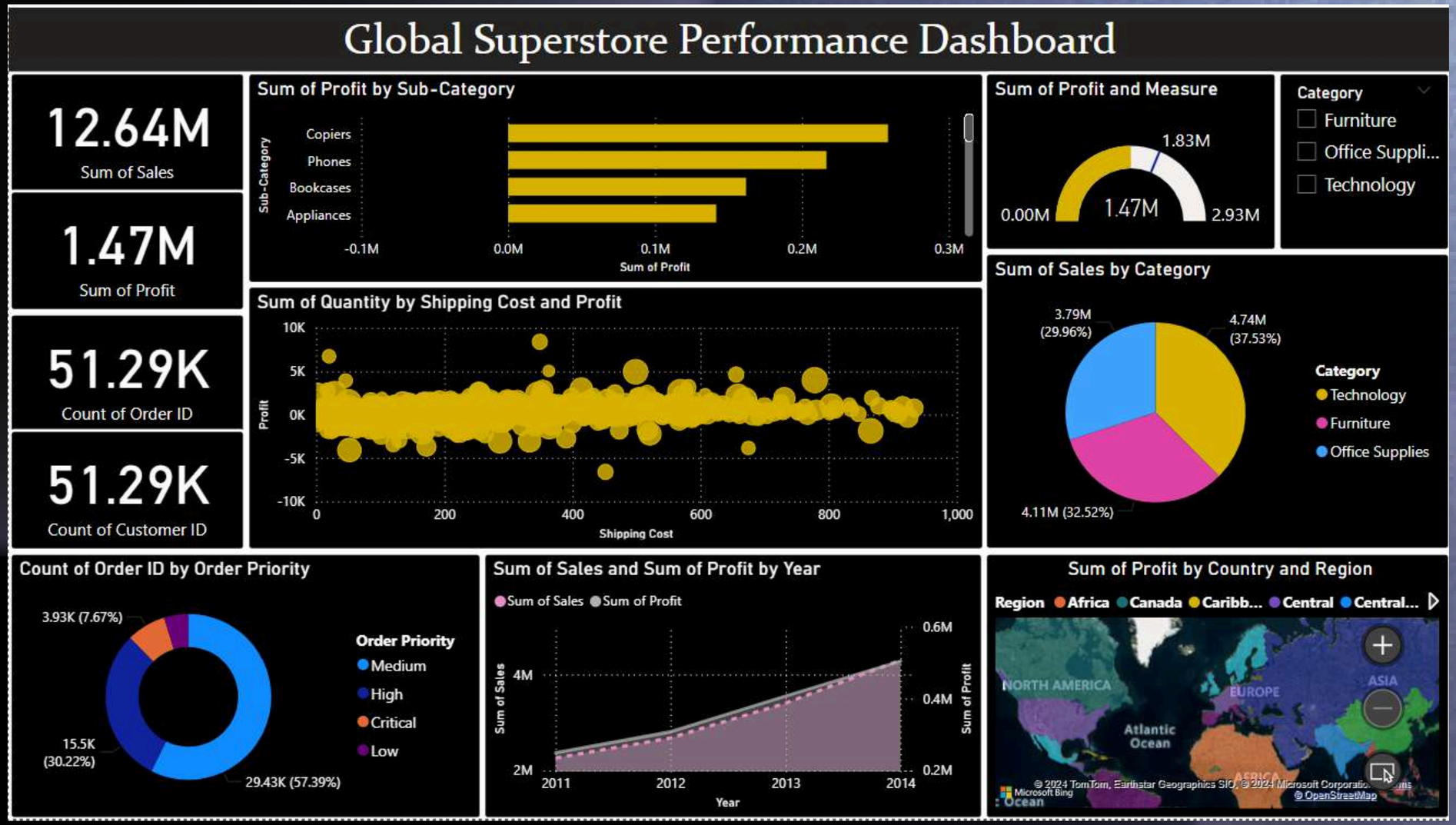
I**nsight:** Compares sales performance across different customer segments.

SQL Query

```
SELECT segment, SUM(sales) AS total_sales
FROM superstore
GROUP BY segment
ORDER BY total_sales DESC;
```



DASHBOARD


Global Superstore Performance Dashboard
12.64M
Sum of Sales
1.47M
Sum of Profit
51.29K
Count of Order ID
51.29K
Count of Customer ID
Sum of Profit by Sub-Category
Copiers
Phones
Bookcases
Appliances
Sub-Category
-0.1M
0.0M
0.1M
0.2M
0.3M
Sum of Profit
Sum of Profit and Measure
1.83M
0.00M
1.47M
2.93M
Category
Furniture
Office Suppli...
Technology
Sum of Quantity by Shipping Cost and Profit
10K
5K
0K
-5K
-10K
Profit
0
200
400
600
800
1,000
Shipping Cost
Sum of Sales by Category
3.79M
(29.96%)
4.74M
(37.53%)
4.11M (32.52%)
Category
Technology
Furniture
Office Supplies
Count of Order ID by Order Priority
3.93K (7.67%)
15.5K
(30.22%)
29.43K (57.39%)
Order Priority
Medium
High
Critical
Low
Sum of Sales and Sum of Profit by Year
Sum of Sales
Sum of Profit
4M
2M
0.6M
0.4M
0.2M
2011
2012
2013
2014
Year
Sum of Profit by Country and Region
Region
Africa
Canada
Caribb...
Central
Central...
NORTH AMERICA
EUROPE
ASIA
Atlantic
Ocean
AFRICA
Ocean
© 2024 TomTom, Earthstar Geographics SIO, © 2024 Microsoft Corporation
Microsoft Bing
© OpenStreetMap

RECOMMENDATION

Sales Department

- **Focus on High-Performing Products:** Emphasize marketing and sales efforts for the top-selling products identified in the dashboard. Implement targeted promotions or bundled offers to increase their appeal further.
- **Enhance Regional Sales Strategies:** Invest more in high-sales regions and explore growth opportunities in underperforming regions by adjusting regional sales strategies based on specific preferences and trends.

Marketing Department

- **Leverage Customer Segmentation:** Tailor marketing campaigns based on customer segments (e.g., Consumer, Corporate, Home Office). Focus on providing personalized experiences to high-value customer segments for better engagement and conversion.

RECOMMENDATION

- **Promote Popular Product Categories:** Based on category-wise sales analysis, prioritize marketing for high-demand categories. Run campaigns to increase awareness of underperforming categories in regions where they show potential.
- **Seasonal Campaigns:** Use sales trend analysis to identify peak periods and plan marketing campaigns around those times to maximize seasonal demand.

Finance Department

- **Profit Margin:** Focus on product categories and regions with lower profit margins. Adjust pricing or negotiate better supplier deals to improve margins in these areas.

RECOMMENDATION

- **Cost Control on Shipping**: Based on shipping cost analysis, identify regions with high shipping expenses relative to sales. Explore options to reduce shipping costs, such as optimizing delivery routes or adjusting minimum order values for free shipping.

Customer Service Department

- **Prioritize High-Value Customers:** Offer personalized support to high-value customers identified in the analysis to increase loyalty and repeat purchases.
-
- **Improve Service in High-Return Regions:** Identify any regions with frequent returns or customer service complaints and focus on improving service quality and satisfaction in those areas.

VALUABLE ASPECTS

- **Regional Sales:** Major sales come from the U.S. and Europe; focusing marketing here can drive growth.
- **Profit by Category:** Office Supplies and Furniture are profitable; adjust costs for low-margin categories.
- **Sales Trends:** Sales peak seasonally; aligning campaigns with these peaks can boost revenue.
- **Top Products:** A few products dominate sales; maintaining stock is critical to avoid losses.
- **Customer Segments:** The Consumer segment leads in sales; retention efforts here can sustain growth.
- **Discount Impact:** High discounts reduce profit; optimizing discount strategy can increase margins.

CONCLUSION

The analysis of the Global Superstore dataset has provided actionable insights for improving various business areas. Utilizing Power BI visualizations, we identified key sales trends, profit margins, and customer segments, highlighting opportunities to focus on high-performing regions and profitable product categories to boost revenue. Optimizing shipping costs and order prioritization can also lead to significant savings while enabling tailored marketing strategies.

Overall, this project offers Global Superstore a data-driven approach to decision-making, with an interactive Power BI dashboard that tracks key metrics and performance. By leveraging these insights, the organization can better align resources and strategies to meet market demands and enhance efficiency.