



Exploring Northwind Dataset Sales

Sales Data Analysis

Members

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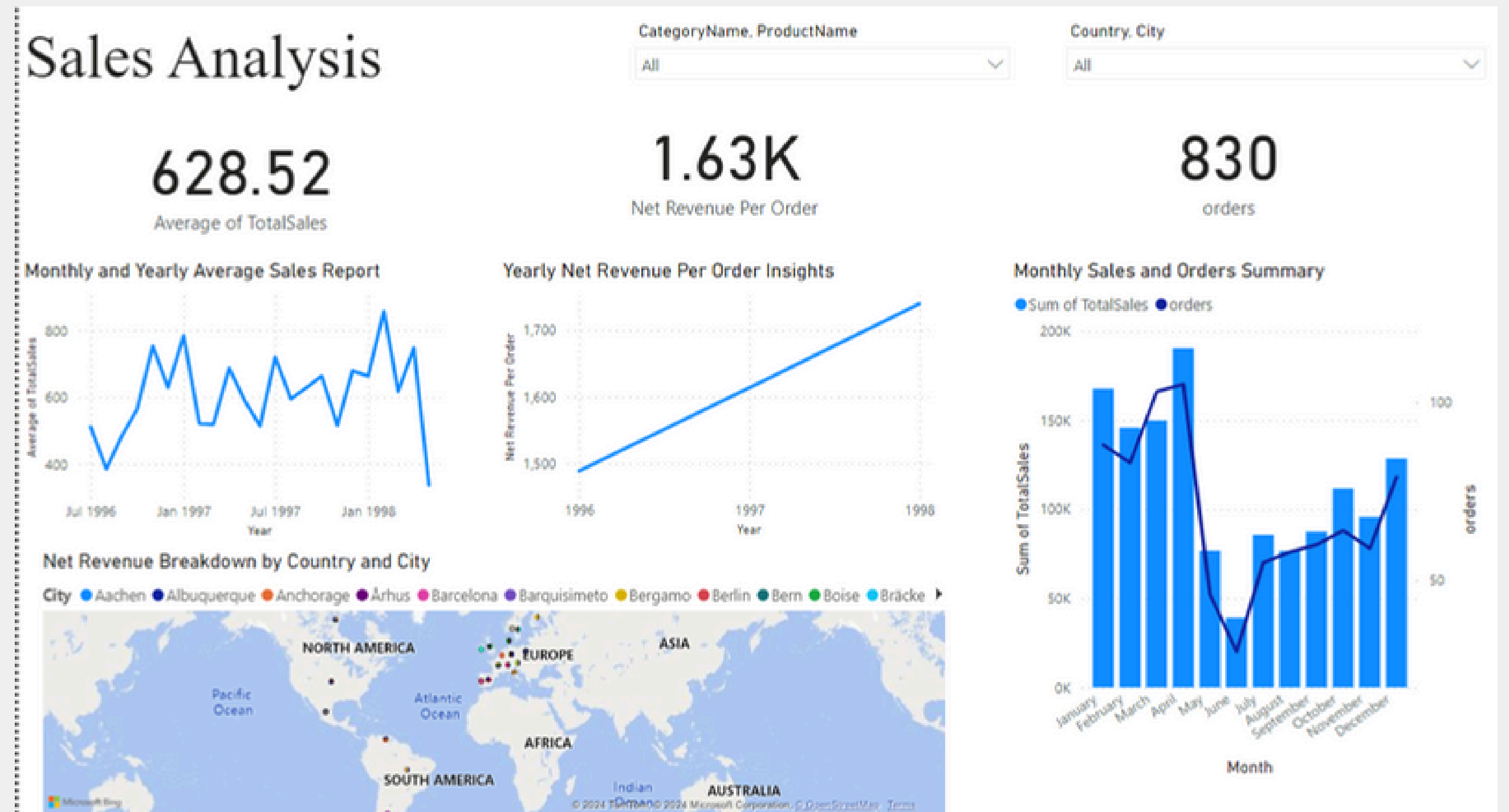
About Dataset

The Northwind database contains the sales data for a fictitious company called “Northwind Traders” which import and exports specialty foods from around the world. It contains thirteen tables.

These are categories, customers, customercustomerdemo, customer_demographics, employees, employee_territories, orderdetails, orders, products, region , shippers, suppliers and territories.

DASHBOARD OF SALES ANALYSIS

Analyze sales data to understand trends, customer preferences, and sales performance over time.

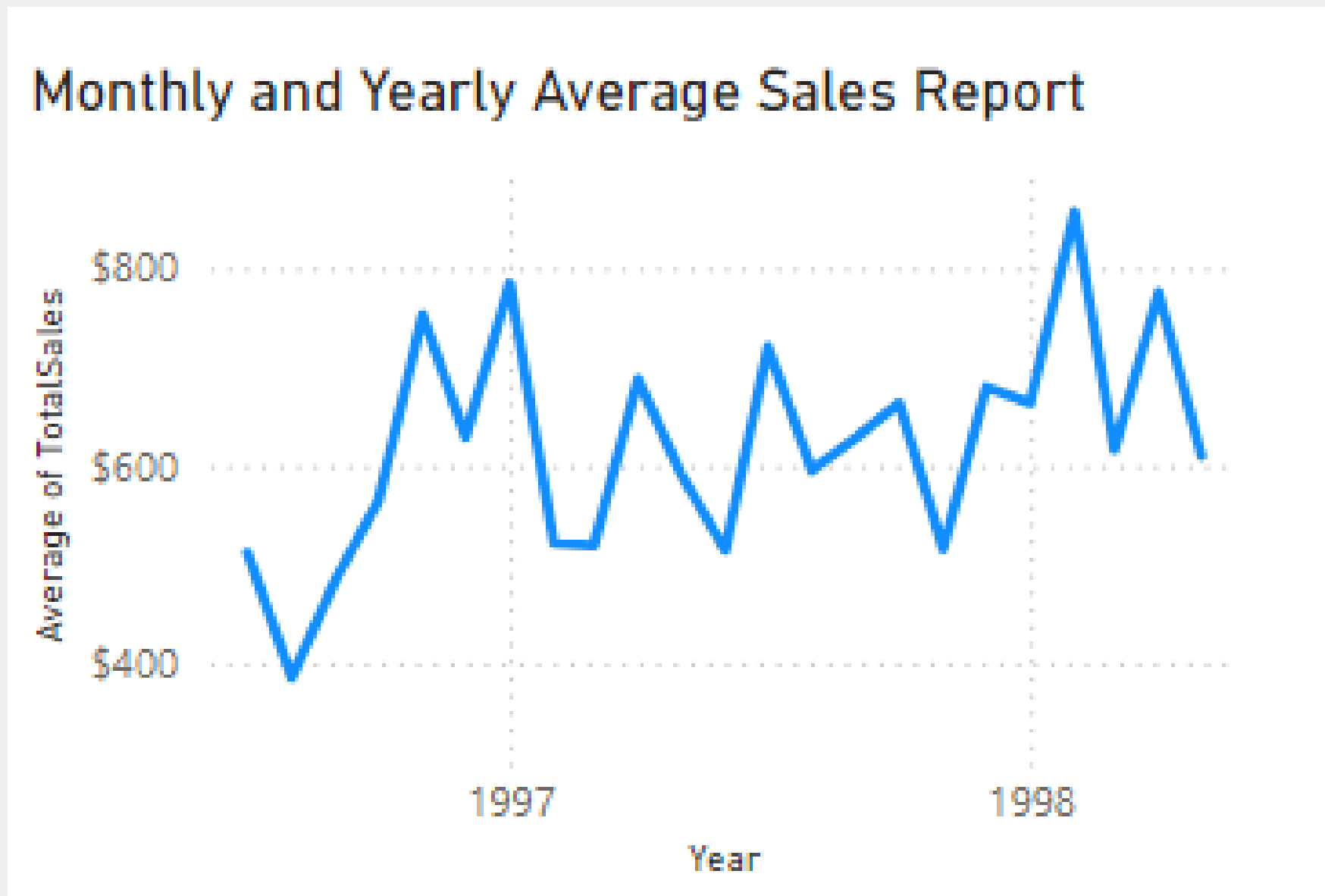


Problems

- What are the total sales for each month over the past year?(
Monthly Sales Trends)
- How has the total sales revenue grown year over year?
(Yearly Sales Growth)

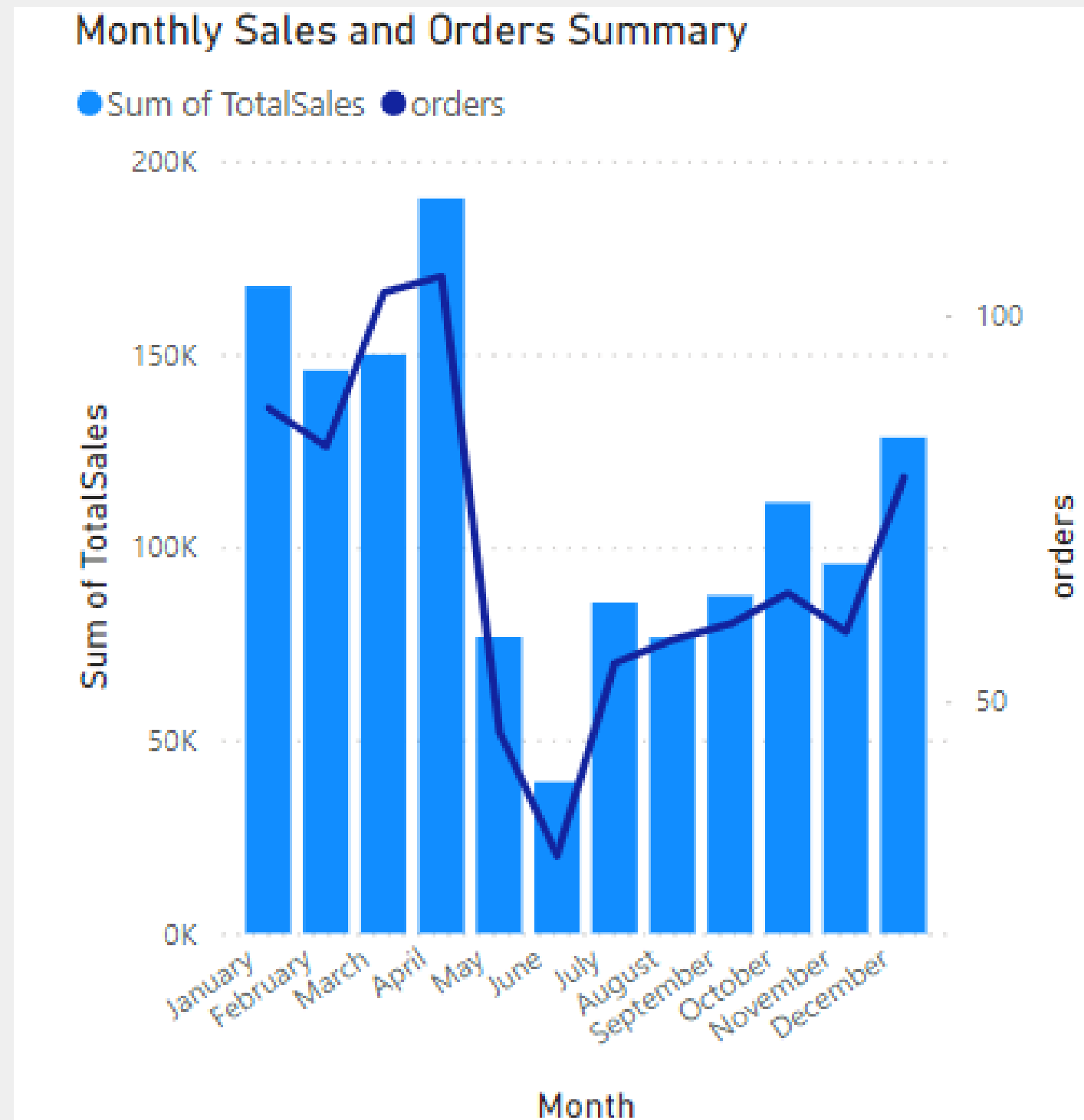


MONTHLY AND YEARLY AVERAGE SALE REPORT



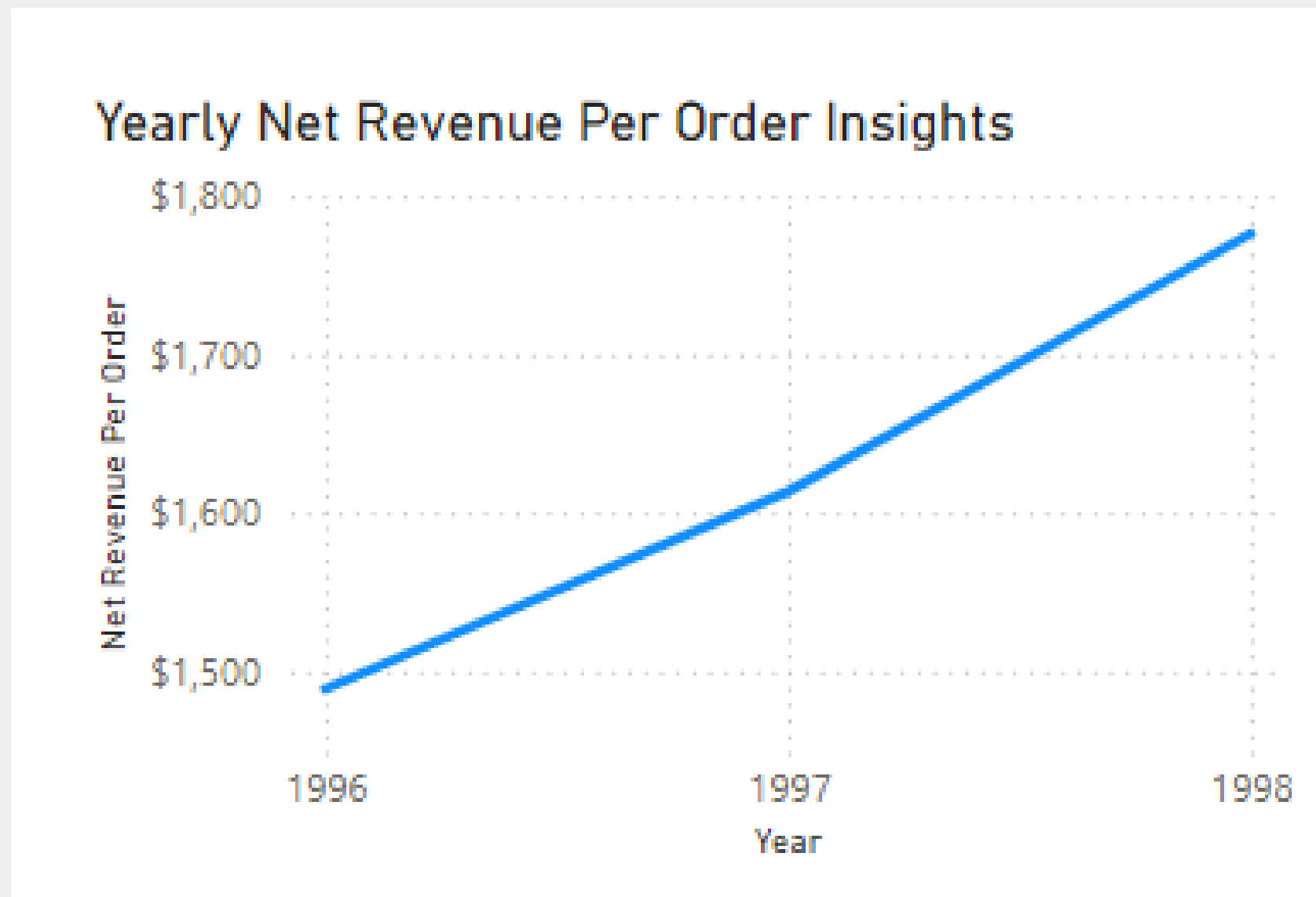
- Average total sale is 629 dollars.
- Highest Average Total sale is 857 dollars in 1998 February.
- Lowest Average Total sale is 386 dollars in 1996 August.

MONTHLY SALES AND ORDER SUMMARY



- Total Orders are 830.
- Highest orders are 105 in April and lowest orders are 30 in June.
- This helps in understanding when sales are highest and planning inventory and promotions accordingly.

YEARLY NET REVENUE PER ORDER INSIGHTS



- Net Revenue per order is 1632 dollars.
- For 1996 Net Revenue Per Order is 1489 dollars.
- For 1997 Net Revenue Per Order is 1614 dollars.
- For 1998 Net Revenue Per Order is 1739 dollars.

NET REVENUE BREAKDOWN BY COUNTRY AND CITY



By knowing the net revenue breakdown by Country and City we will be able to

- Identify which countries and cities are generating the most revenue.
- Compare performance across different regions to understand where this business is thriving or underperforming.



Recommendations

1. Inventory Management

- **Peak Periods:** Ensure sufficient stock.
- **Low Sales:** Use discounts and marketing.

2. Seasonal Alignment

- **Product Launches:** Sync with seasonal demand.
- **Inventory Planning:** Adjust for sales trends.

PRODUCT & CUSTOMER ANALYSIS

Utilize sales data to derive insights into customer preference, product performance, and inventory management for informed decision-making.



Problems





- What is the reorder frequency of each product?
- Total sale of product and which customer bought them?
- Category wise breakdown of products and their total sales?
- Quantity wise breakdown of products, and product category ?



WHAT IS THE REORDER FREQUENCY OF EACH PRODUCT?

41 -- Use: which products are doing good and what products need the

<

Result Grid |   Filter Rows: | Export:  | Wrap Cell Content: 

	ProductName	CategoryName	ReorderCount
▶	Radette Courdavault	Dairy Products	54
	Camembert Pierrot	Dairy Products	51
	Guaran Fantstica	Beverages	51
	Tarte au sucre	Confections	48
	Flotemysost	Dairy Products	42
	Mozzarella di Giovanni	Dairy Products	38
	Sir Rodney's Scones	Confections	38
	Pavlova	Confections	38

Result 6 x

- The results help in understanding the demand pattern for each product by calculating how frequently they need to be reordered.
- For example Dairy products have the highest reorder count, and Confections products being the least reordered.

TOTAL SALE OF PRODUCT AND WHICH CUSTOMER BOUGHT THEM?

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Result Grid				
Filter Rows: <input type="text"/>				
Export: <input type="button" value="Export"/>				
Wrap Cell Content: <input type="button" value="Wrap"/>				
	CategoryID	CategoryName	ProductName	TotalSales
▶	1	Beverages	Cte de Blaye	149984.2
	6	Meat/Poultry	Thringer Rostbratwurst	87736.4
	4	Dairy Products	Radette Courdavault	76296
	4	Dairy Products	Camembert Pierrot	50286
	3	Confections	Tarte au sucre	49827.900000000001
	5	Grains/Cereals	Gnocchi di nonna Alice	45121.2
	7	Produce	Manjimup Dried Apples	44742.6
	6	Meat/Poultry	Alice Mutton	35482.2
Result 2 x				

- Aggregating sales data by product category offers insights into revenue-generating categories, aiding in market trend analysis and resource allocation.
- Cote de Blanc products bringing in the most sale (most revenue) and Konbu bringing in the least sale.

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CATEGORY WISE BREAKDOWN OF PRODUCTS AND THEIR TOTAL SALES?

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Result Grid |   Filter Rows: | Export:  | Wrap Cell Content: 

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Result 2 x

- Aggregating sales data by product category offers insights into revenue-generating categories, aiding in market trend analysis and resource allocation.
- Case in point Beverages being the most sold, and Confections being the least sold.

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QUANTITY WISE BREAKDOWN OF PRODUCTS, AND PRODUCT CATEGORY ?

ProductID	ProductName	CategoryName	Quantity_Present
75	Rhnbru Klosterbier	Beverages	125
40	Boston Crab Meat	Seafood	123
6	Grandma's Boysenberry Spread	Condiments	120
55	Pt chinois	Meat/Poultry	115
61	Sirop d'érable	Condiments	113
33	Geitost	Dairy Products	112
36	Inlagd Sill	Seafood	112
34	Sasquatch Ale	Beverages	111

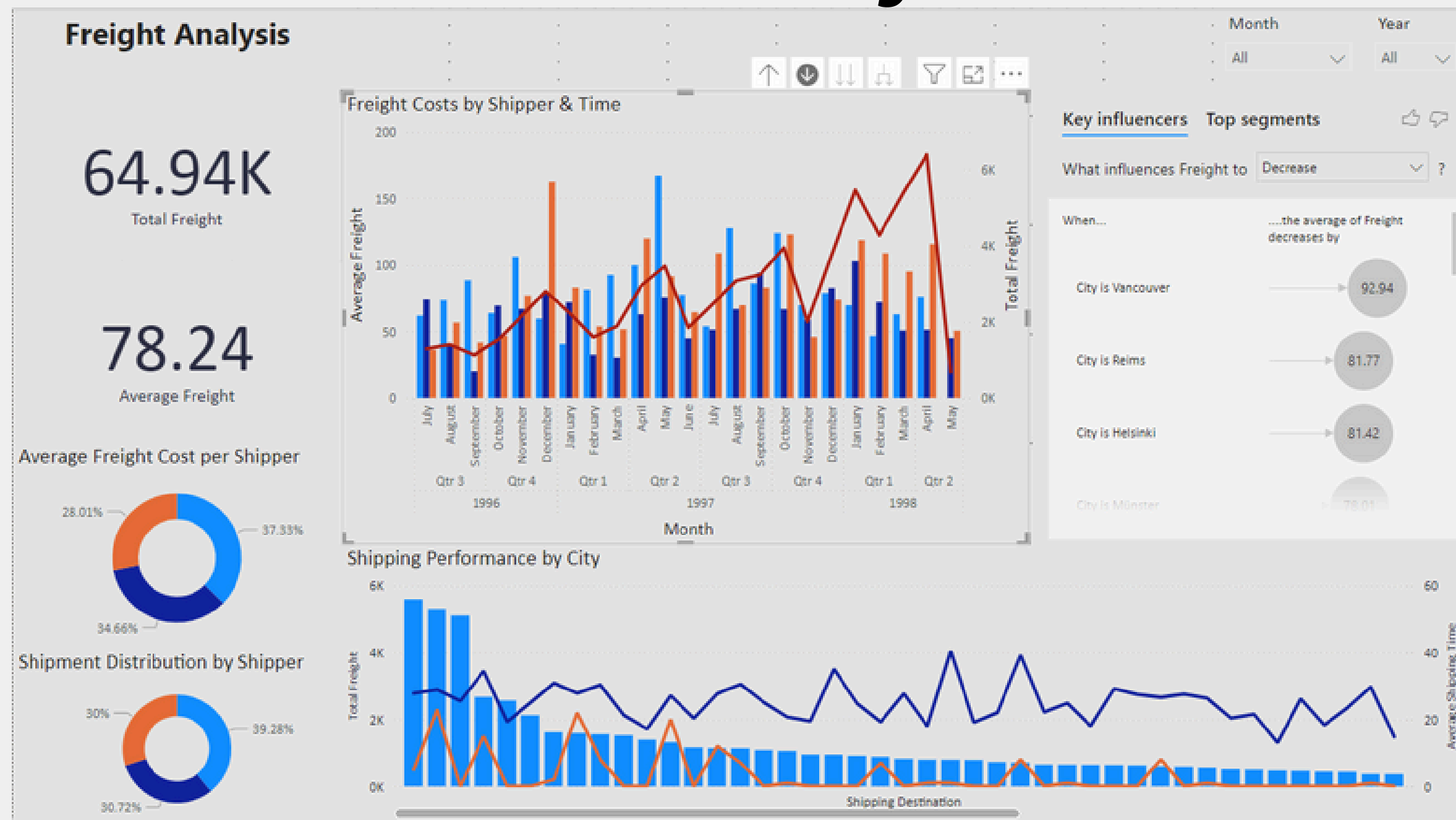
- Monitoring current stock quantities with category information facilitates effective inventory management, enabling businesses to maintain optimal stock levels and identify products requiring replenishment promptly.
- For example Beverages being the highest in stock do not need fast Ghulam Nabi replishment.

RECOMMENDATION

- **Use the reorder frequency data to prioritize inventory management, ensuring that products in high demand are adequately stocked to meet customer needs.**
- **Utilize customer segmentation based on purchasing behavior. Target specific customer groups effectively by tailoring personalized marketing strategies. Consider offering incentives or promotions to encourage repeat purchases from high-value customers.**
- **Capitalize on emerging market trends by allocating resources towards promoting products within these high-performing categories. Maximize profitability by focusing on top-performing product categories.**
- **Maintain optimal stock levels by monitoring current stock quantities. Identify products requiring replenishment promptly to meet customer demand efficiently.**

Freight Analysis

Overview of Shipping Performance and Cost Analysis



Danish Younus Khan

Objectives

- Calculate the average freight cost for each shipper over time.
- Identify trends and cost optimization strategies.
- Assess the cost-effectiveness of different shipping companies.

Shipping Performance Overview

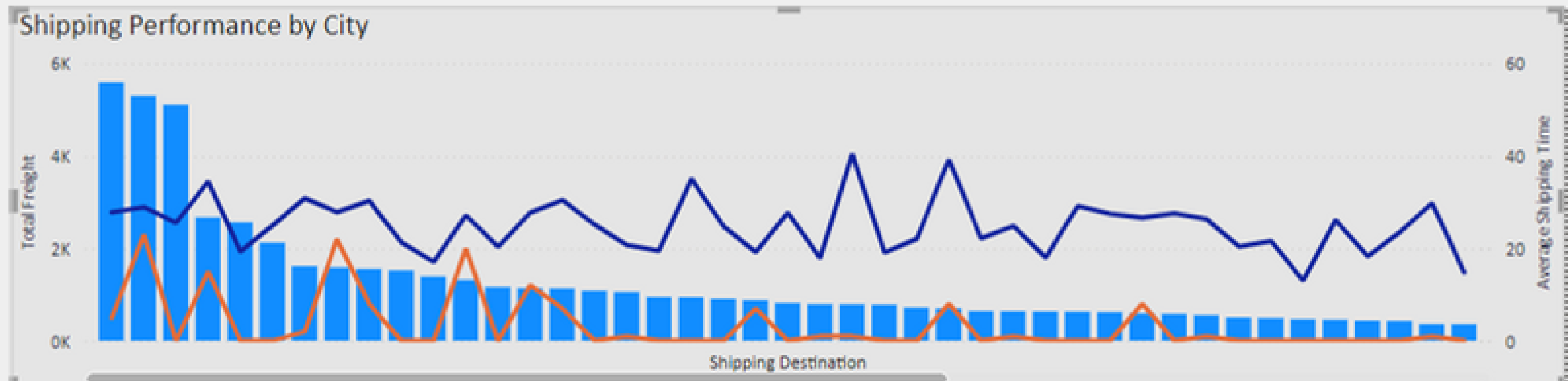
Key Metrics:

- **Days to Destination**
- **Days Late**
- **Freight Cost**

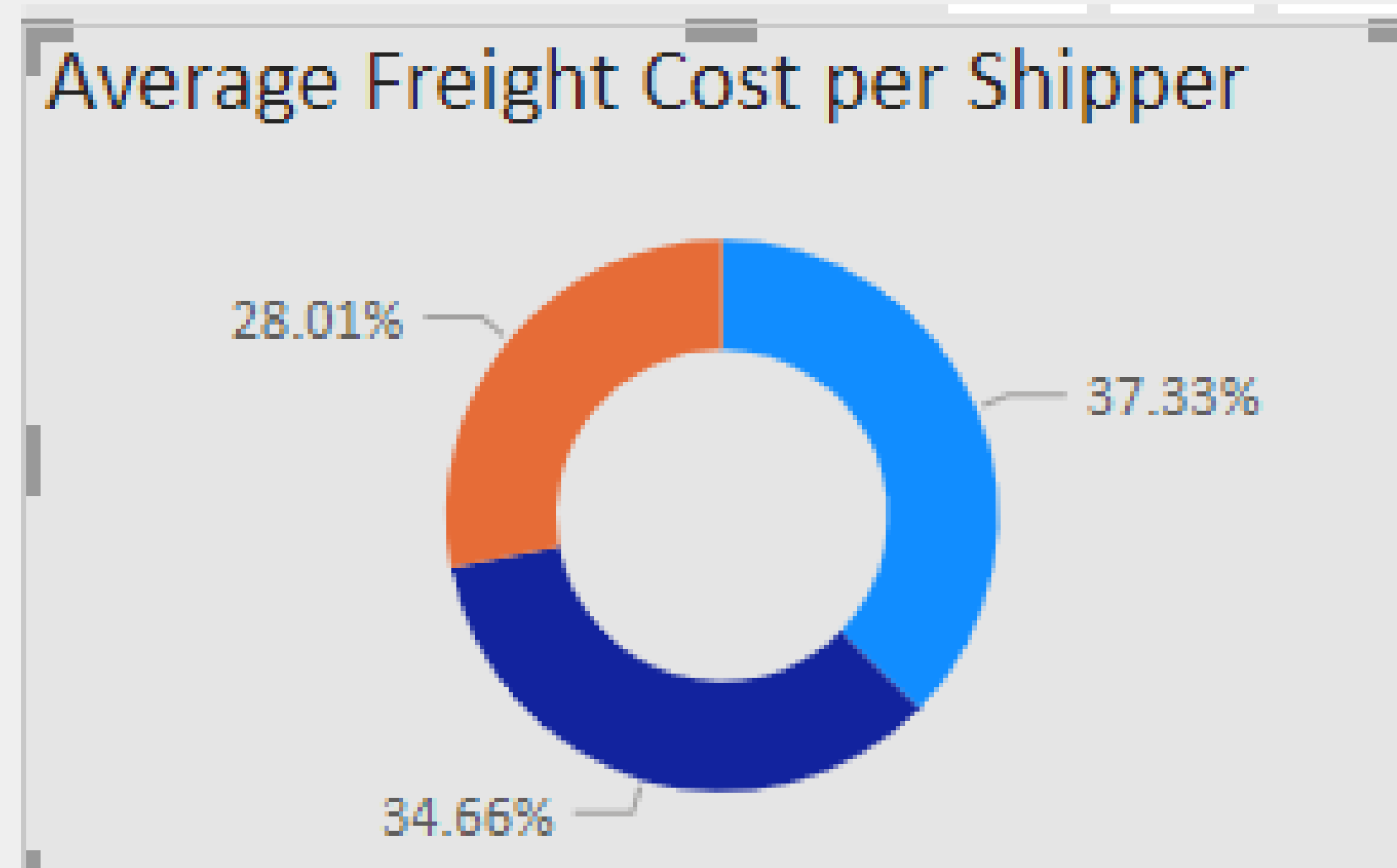
Observations:

- Orders originate from various cities and countries.
- Most orders delivered within a reasonable timeframe.
- Variability in freight costs.

Freight Cost Analysis

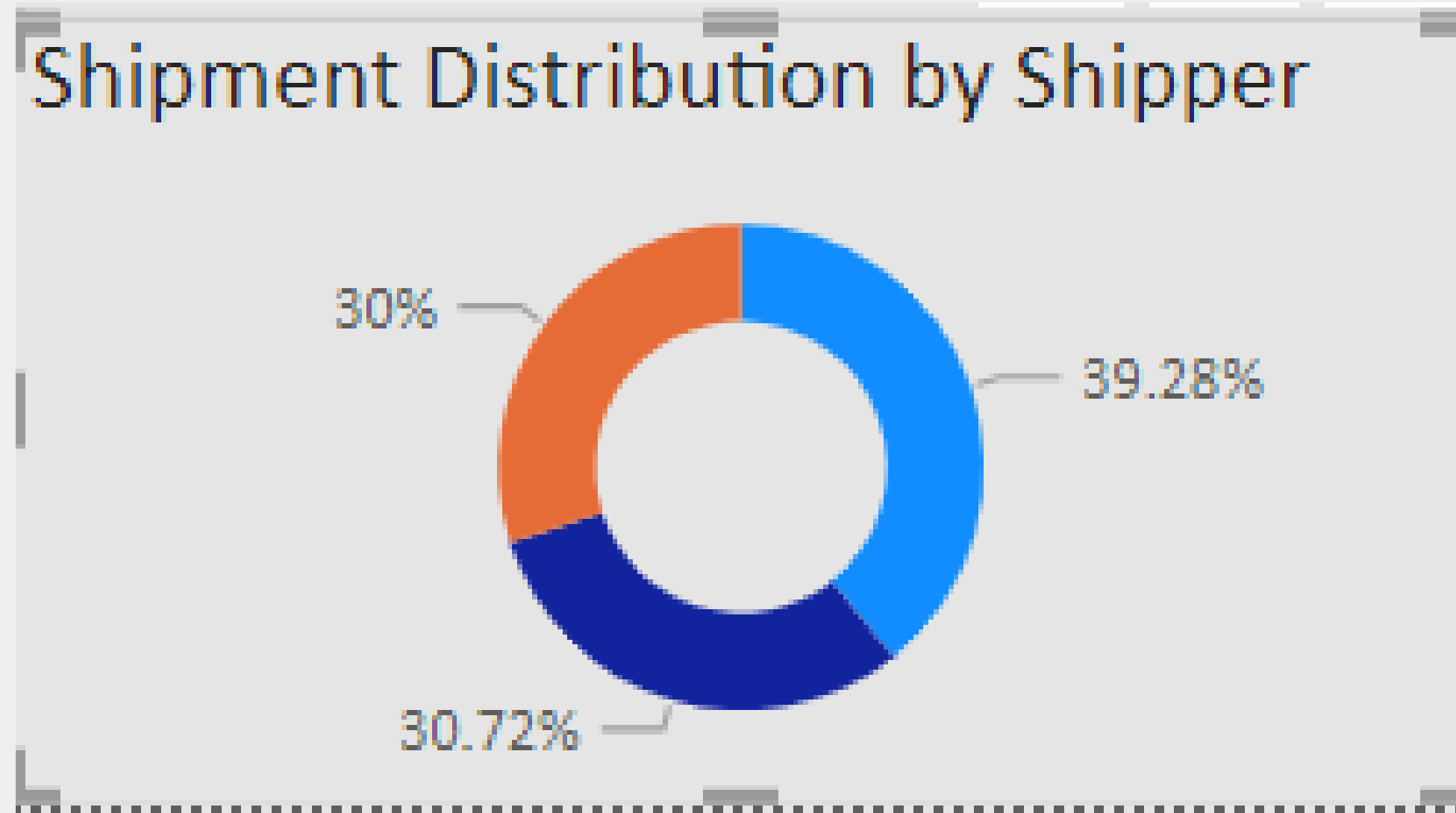


Shipper Comparison

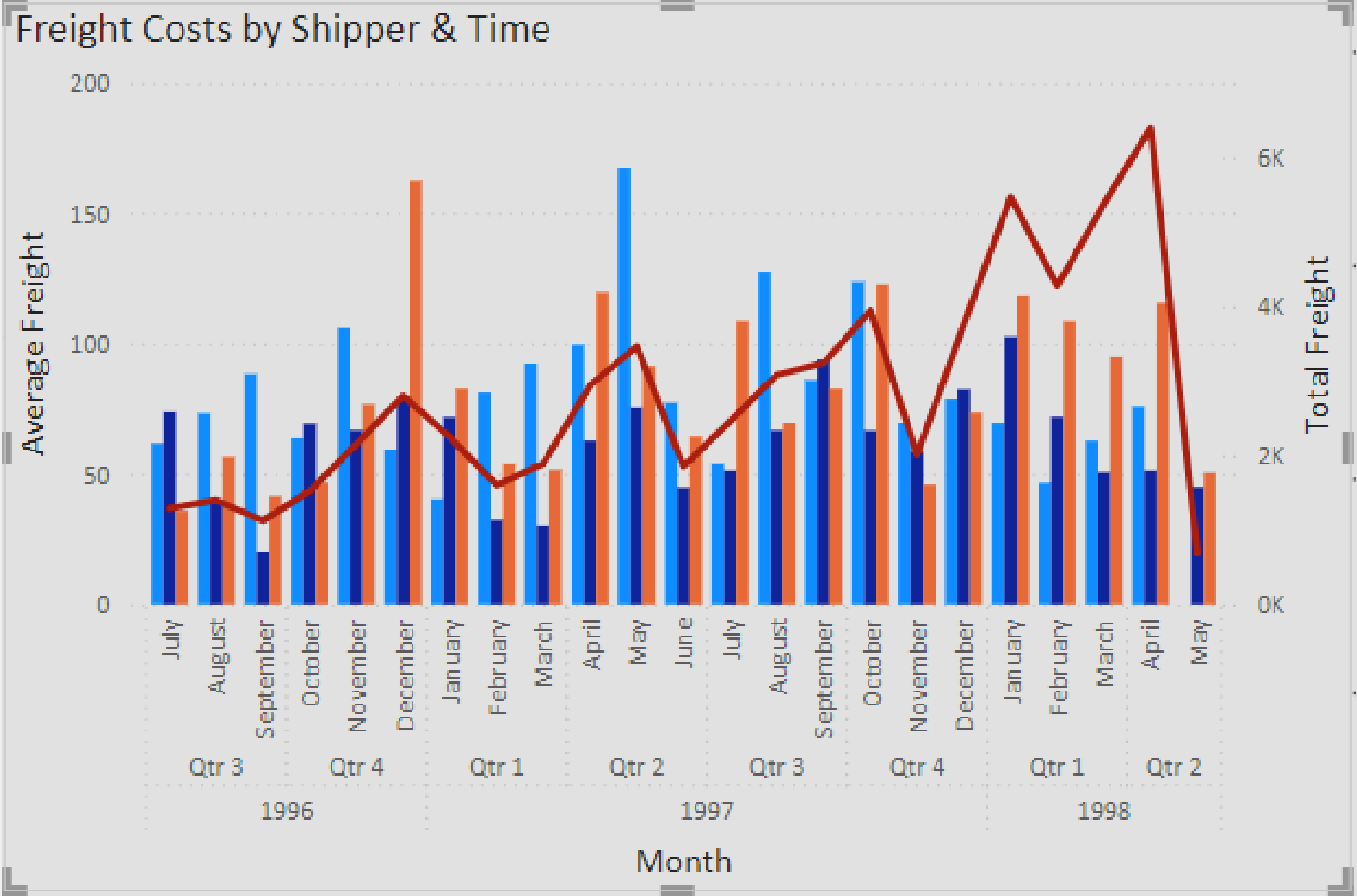


- Federal Shipping: Avg. \$80.44 per shipment
- Speedy Express: Avg. \$65.00 per shipment
- United Package: Avg. \$86.64 per shipment

Freight Cost Variability



MONTHLY FREIGHT COST TRENDS



Recommendations

Cost Optimization:

- Negotiate better rates with high-cost shippers.
- Consider consolidating shipments to reduce costs.

Operational Efficiency:

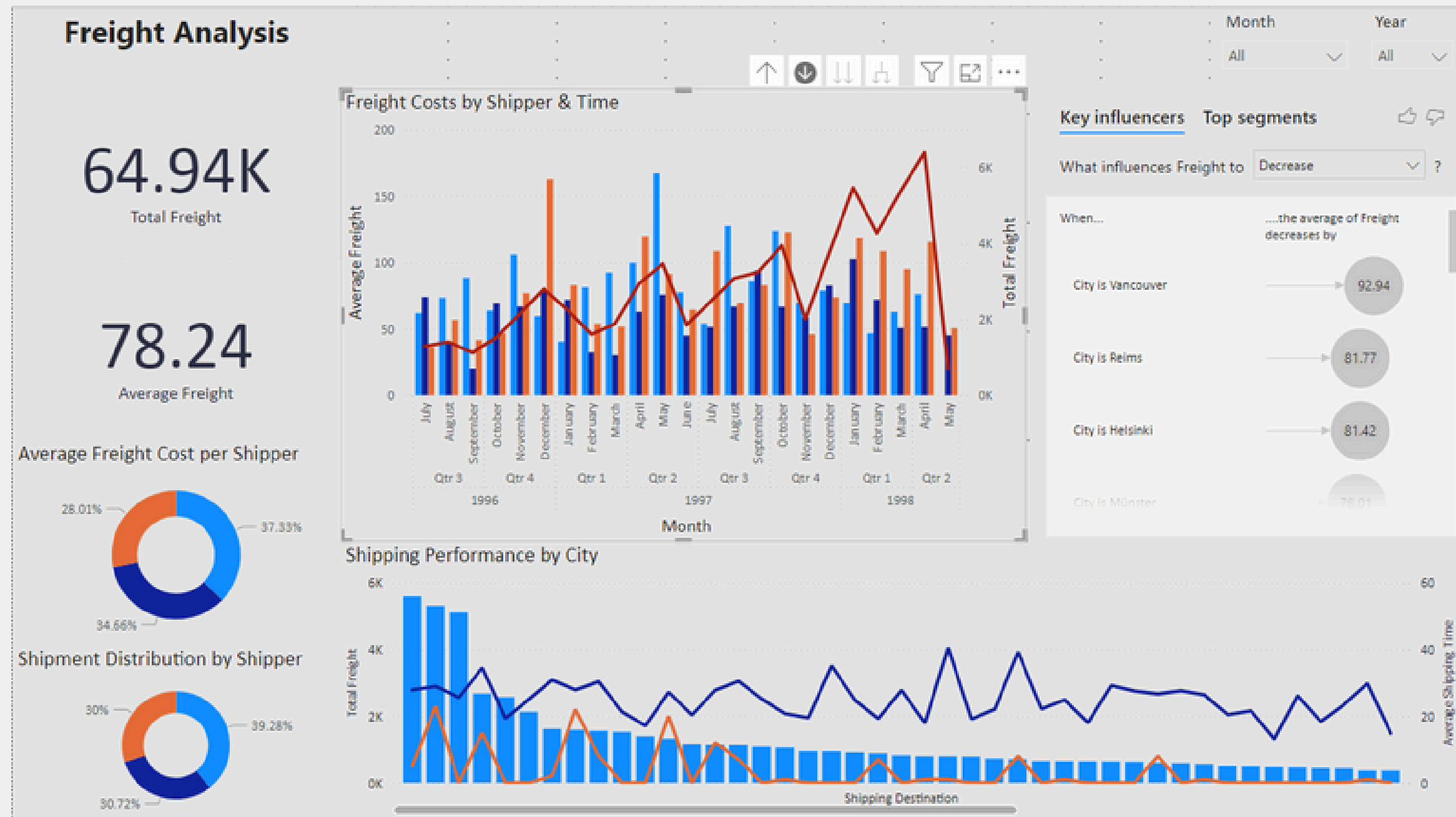
- Investigate and address reasons for high shipping costs in certain months.
- Optimize shipping routes and carrier selection based on cost analysis.

Performance Monitoring:

- Regularly monitor shipping performance metrics.
- Use insights to make data-driven decisions for logistics operations.

Freight Analysis

Overview of Shipping Performance and Cost Analysis



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Objectives of the Freight Analysis

- **Calculate the average freight cost for each shipper over time.**
- **Identify trends and cost optimization strategies.**
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Shipping Performance

Overview

Key Metrics:

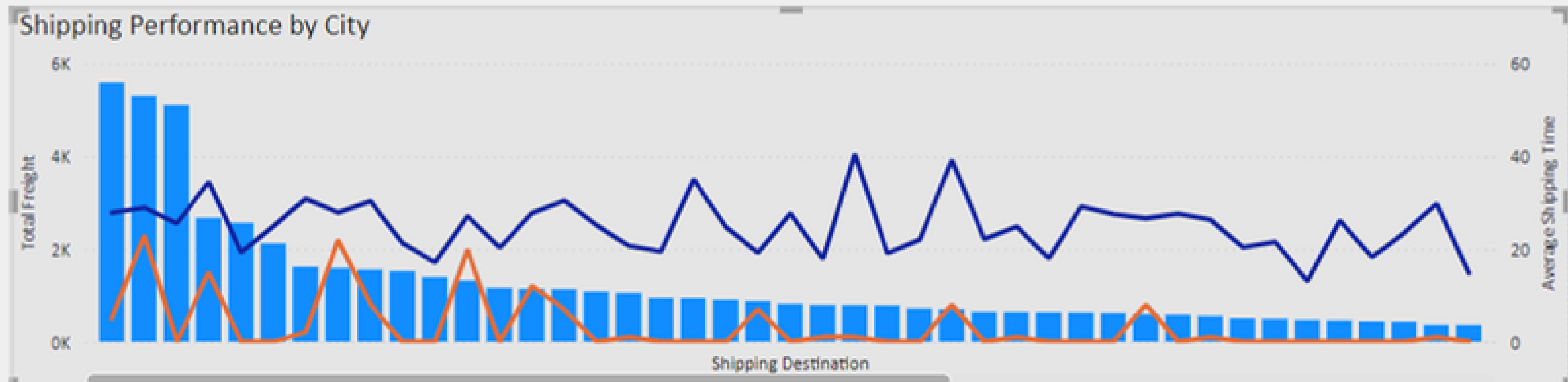
- **Days to Ship**
- **Days Late**
- **Freight Cost**

Observations:

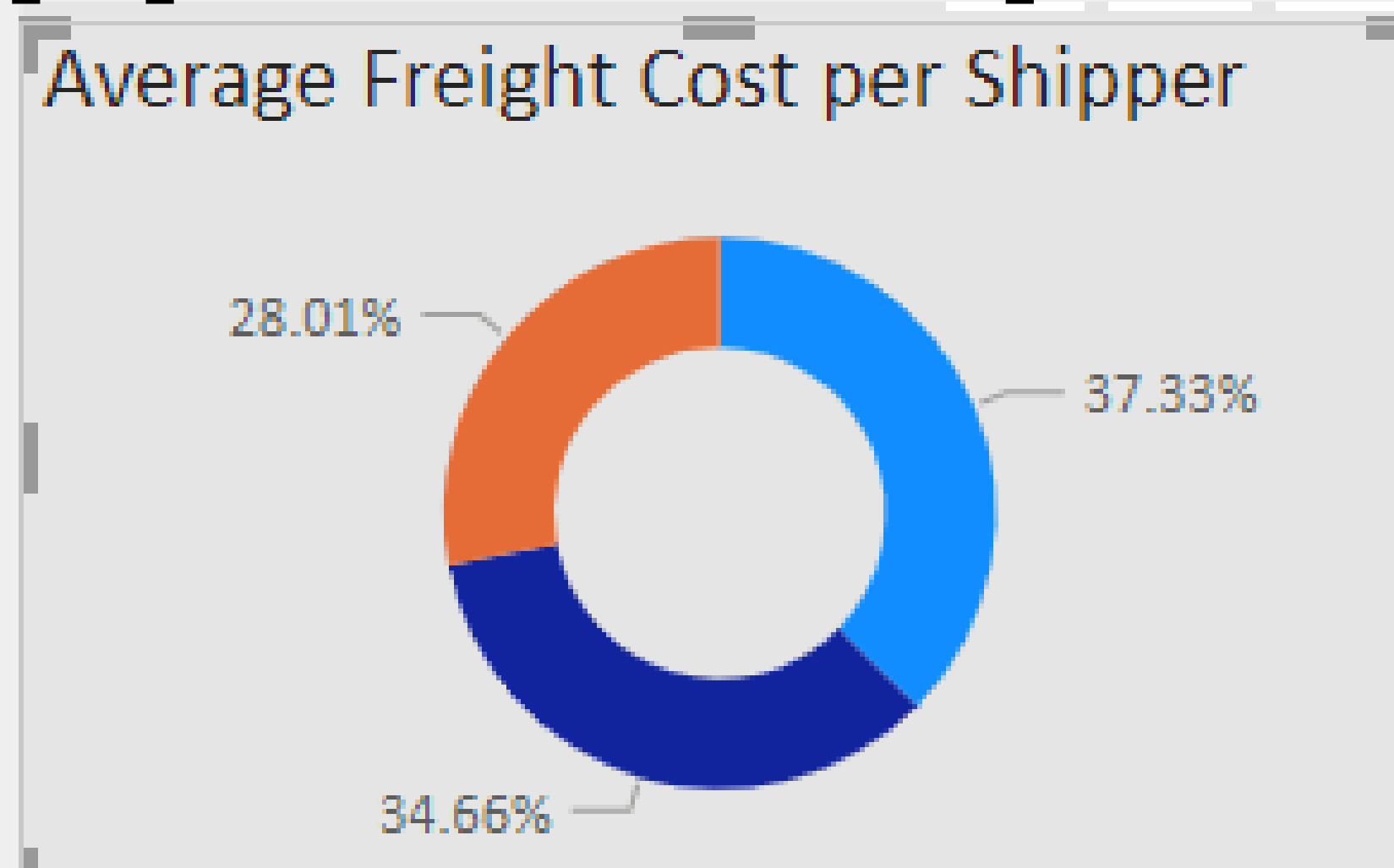
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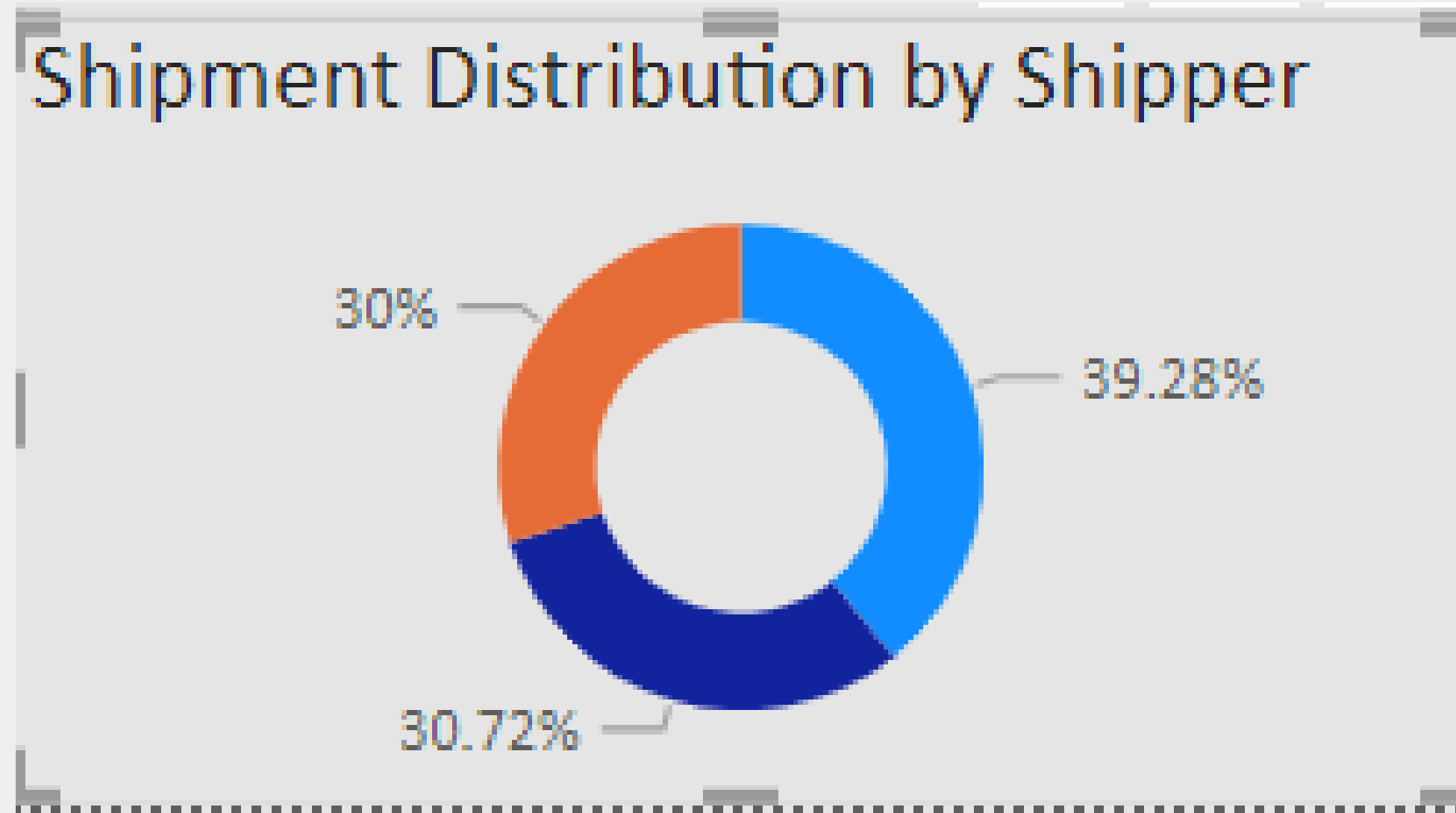


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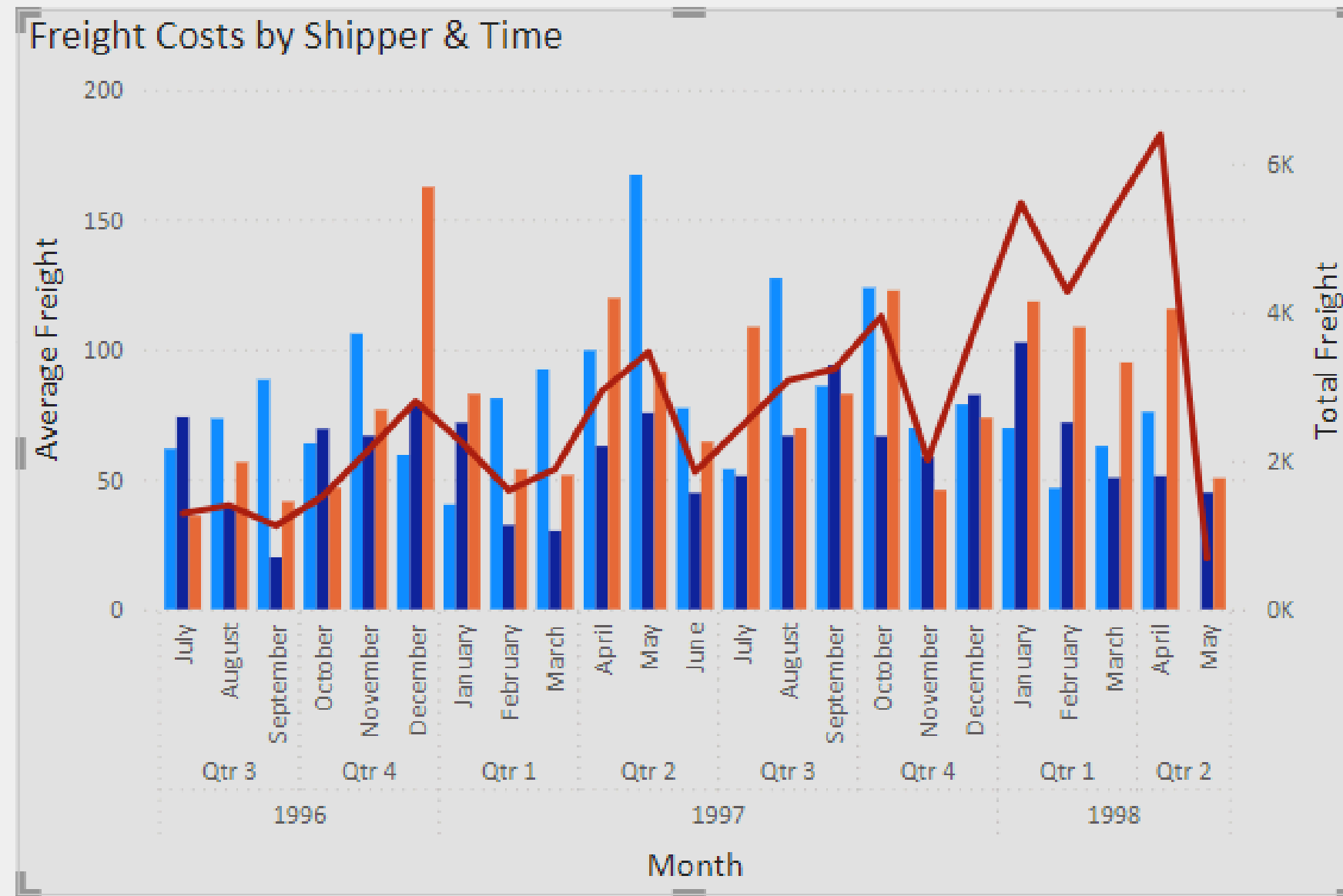


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Monthly Freight Cost Trends



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Conclusion

Summarize key findings from the freight analysis.

- Emphasize the potential impact on cost savings and operational efficiency.
- Highlight next steps for implementing recommendations.

Q&A