

Superstore Sales Analysis Report

Executive Summary

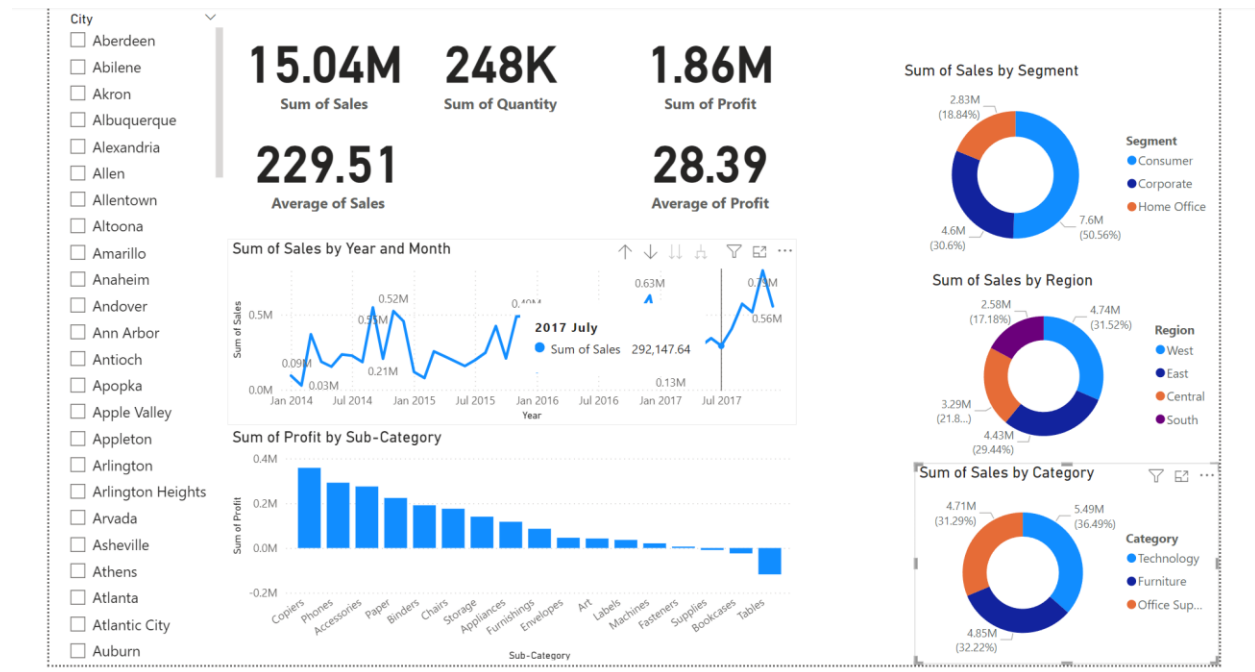
This report provides an analysis of the sales data for a superstore. The dataset contains **65,534** records with information on orders, shipping, customers, products, and financial metrics like sales, discount, and profit. The analysis aims to uncover trends, performance metrics, and insights to aid decision-making.

Data Overview

The dataset includes the following fields:

- **Row ID:** Unique identifier for each row.
- **Order ID:** Unique identifier for each order.
- **Order Date:** The date when the order was placed.
- **Ship Date:** The date when the order was shipped.
- **Ship Mode:** The shipping mode used.
- **Customer ID:** Unique identifier for each customer.
- **Customer Name:** Name of the customer.
- **Segment:** Customer segment (Consumer, Corporate, Home Office).
- **Country:** Country of the order (all orders are from the USA).
- **City:** City of the order.
- **State:** State of the order.
- **Postal Code:** Postal code of the order.
- **Region:** Region of the order (East, West, Central, South).
- **Product ID:** Unique identifier for each product.
- **Category:** Product category (Furniture, Office Supplies, Technology).
- **Sub-Category:** Product sub-category.
- **Product Name:** Name of the product.
- **Sales:** Revenue generated from the order.
- **Quantity:** Number of units sold.
- **Discount:** Discount applied to the order.
- **Profit:** Profit earned from the order.

Key Findings



Sales and Profit Analysis

- **Total Sales:** The total sales amount is **\$15,040,854.62**.
- **Total Profit:** The total profit amount is **\$1,860,500.67**.
- **Average Sales per Order:** \$229.51.
- **Average Profit per Order:** \$28.39.
- **Profit Margin:** The overall profit margin is approximately **12.37%**.

Sales by Category

- **Technology:** The highest revenue-generating category with total sales of \$ 5,488,559.00 (36.49% of total sales).
- **Furniture:** Total sales of \$ 4,846,747.19 (32.22% of total sales).
- **Office Supplies:** Total sales of \$ 4,705,548.43 (31.29% of total sales).

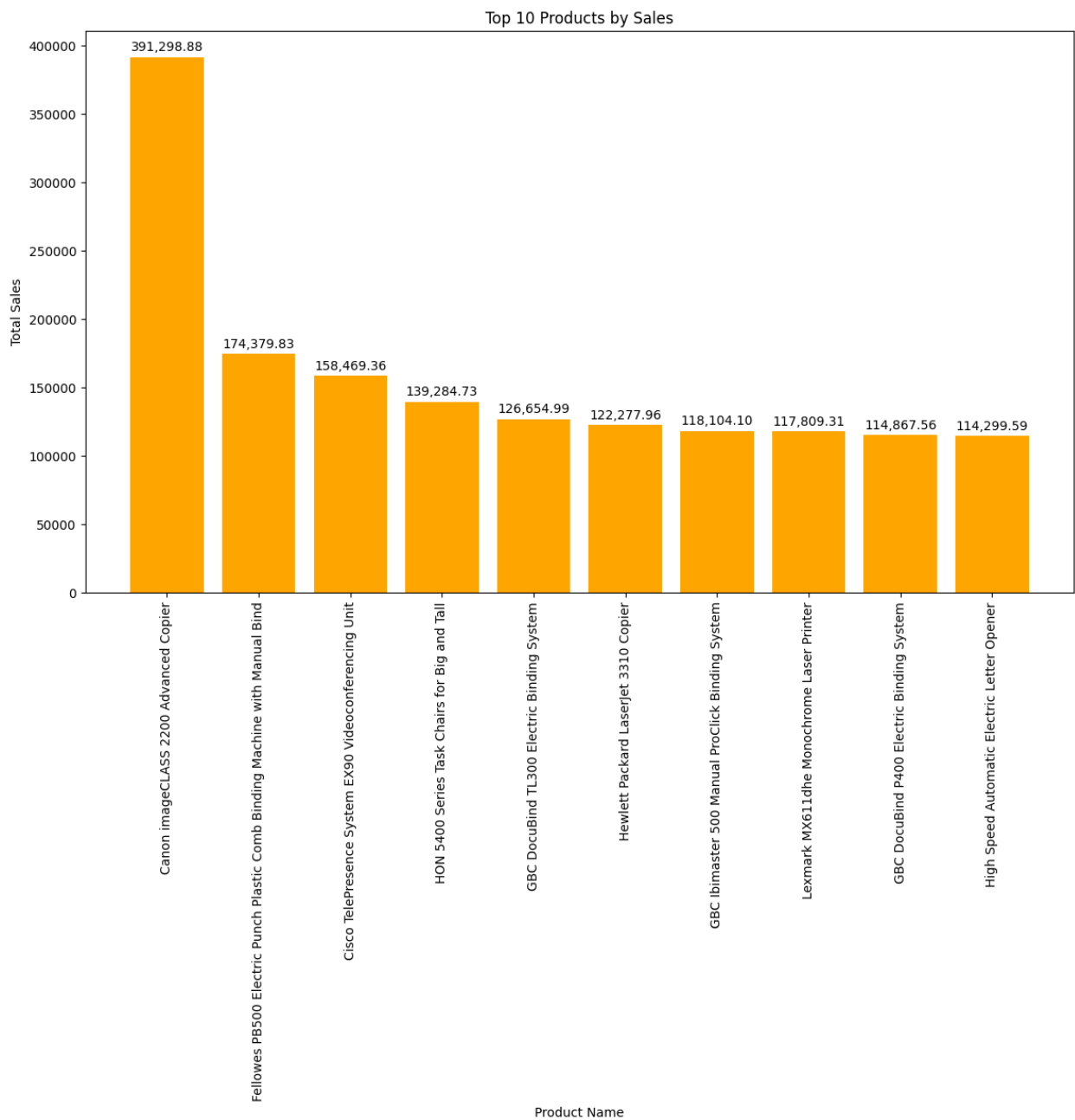
Sales by Region

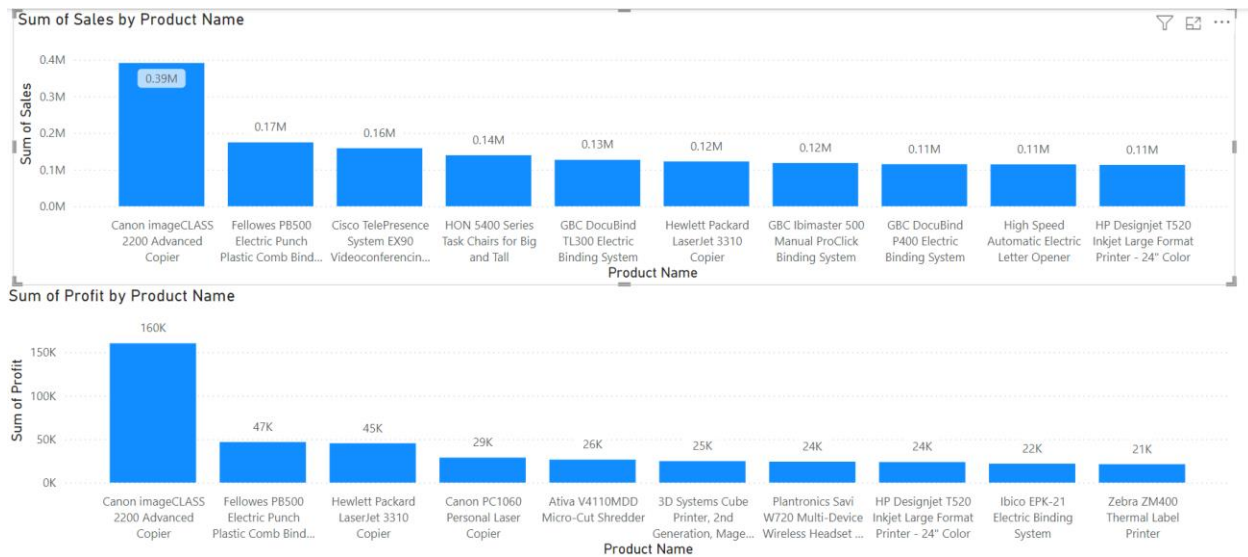
- **West:** The highest sales region with \$ 4.74M (31.52% of total sales).
- **East:** \$4.43M (29.44% of total sales).
- **Central:** \$3.29M (21.8% of total sales).
- **South:** \$2.58M (17.1% of total sales).

Sales by Segment

- **Consumer:** The largest segment with sales of \$7.6M (50.56% of total sales).
- **Corporate:** \$4.6M (30.6% of total sales).
- **Home Office:** \$2.83M (18.84% of total sales).

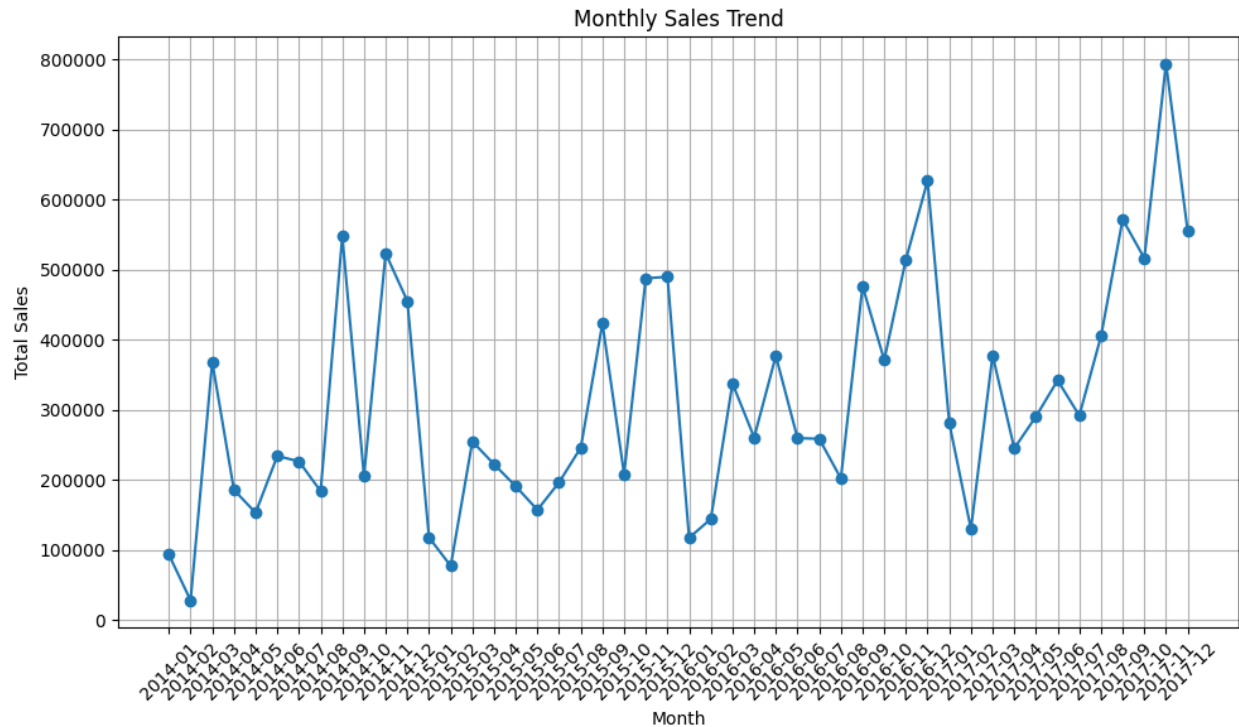
Top Performing Products





- **Best-Selling Product:** 'Canon ImageCLASS 2200 Advanced Copier' with total sales of \$ 391,298.88.
- **Most Profitable Product** 'Canon ImageCLASS 2200 Advanced Copier ' with total profit of \$160K.

Monthly Sales Trend



Seasonal Peaks:

There are noticeable peaks in sales during the holiday seasons, particularly in November and December, which is typical due to increased shopping activity during these months.

Growth Over Time:

Overall, there is a positive trend in sales from 2014 to 2017. The sales figures in the latter part of 2017 are generally higher compared to the early part of 2014, indicating growth in the business.

Monthly Fluctuations:

While there is an overall upward trend, the sales figures do show significant monthly fluctuations. Certain months, such as March, September, and November, consistently show higher sales compared to other months.

Mid-Year Dips:

Sales tend to dip during the mid-year months (June to August). This could be due to seasonal factors or lower consumer spending during these periods.

Actionable Insights:**Focus on Peak Seasons:**

Increase marketing efforts and stock inventory in preparation for the holiday season to capitalize on the increased sales during November and December.

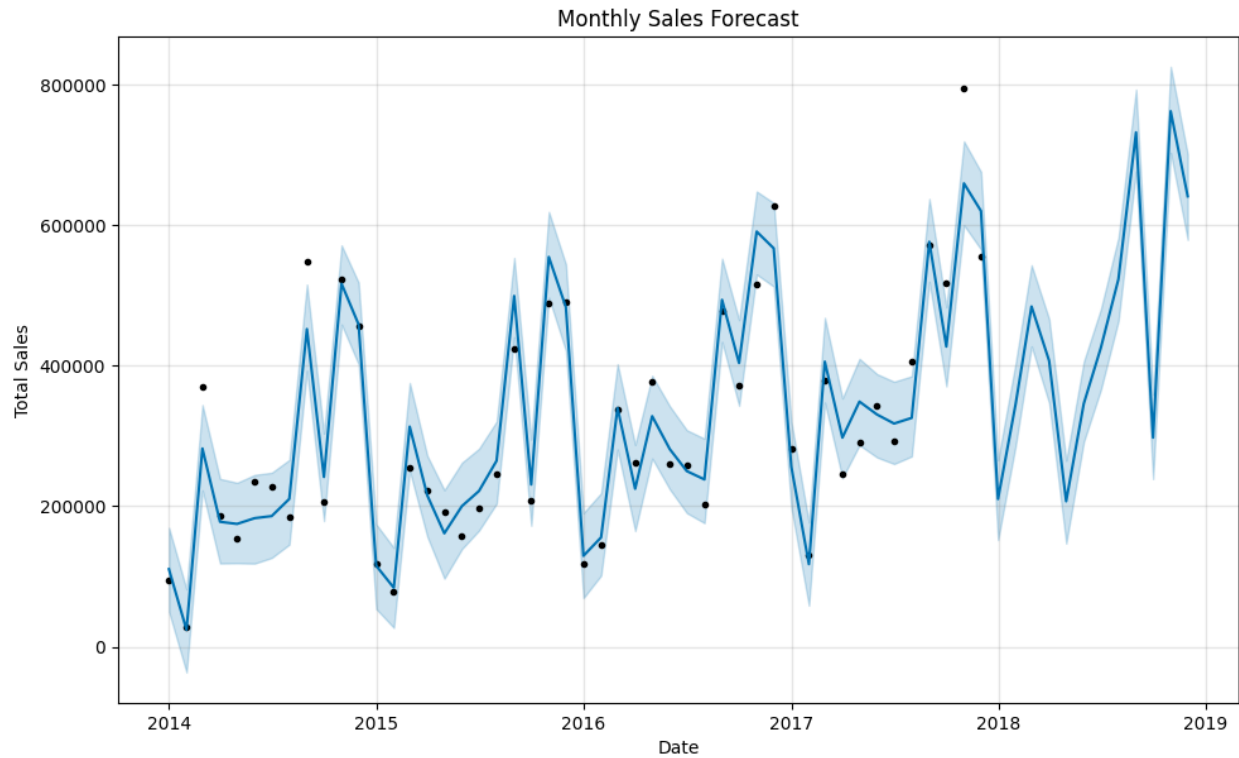
Investigate Mid-Year Dips:

Conduct further analysis to understand the reasons behind the mid-year sales dips and explore strategies to boost sales during these months.

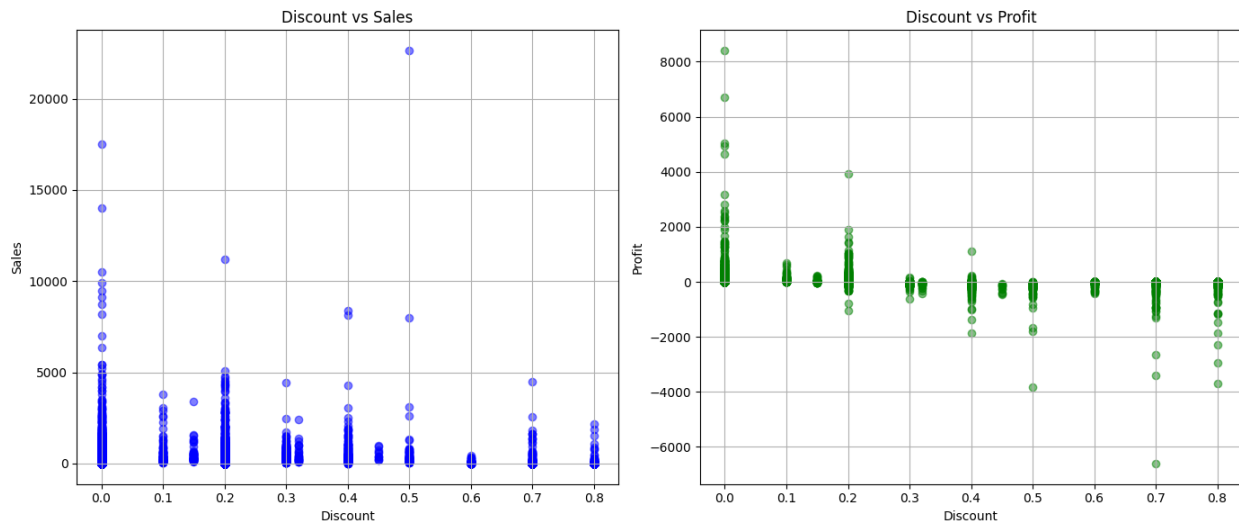
Sustaining Growth:

Continue to identify and invest in the factors contributing to the overall growth trend to sustain and accelerate this growth in the future.

Sales Forecasting



Discount Analysis



- **Average Discount:** 16.0%.
- **Impact of Discounts:**

Correlation between Discount and Sales: -0.03

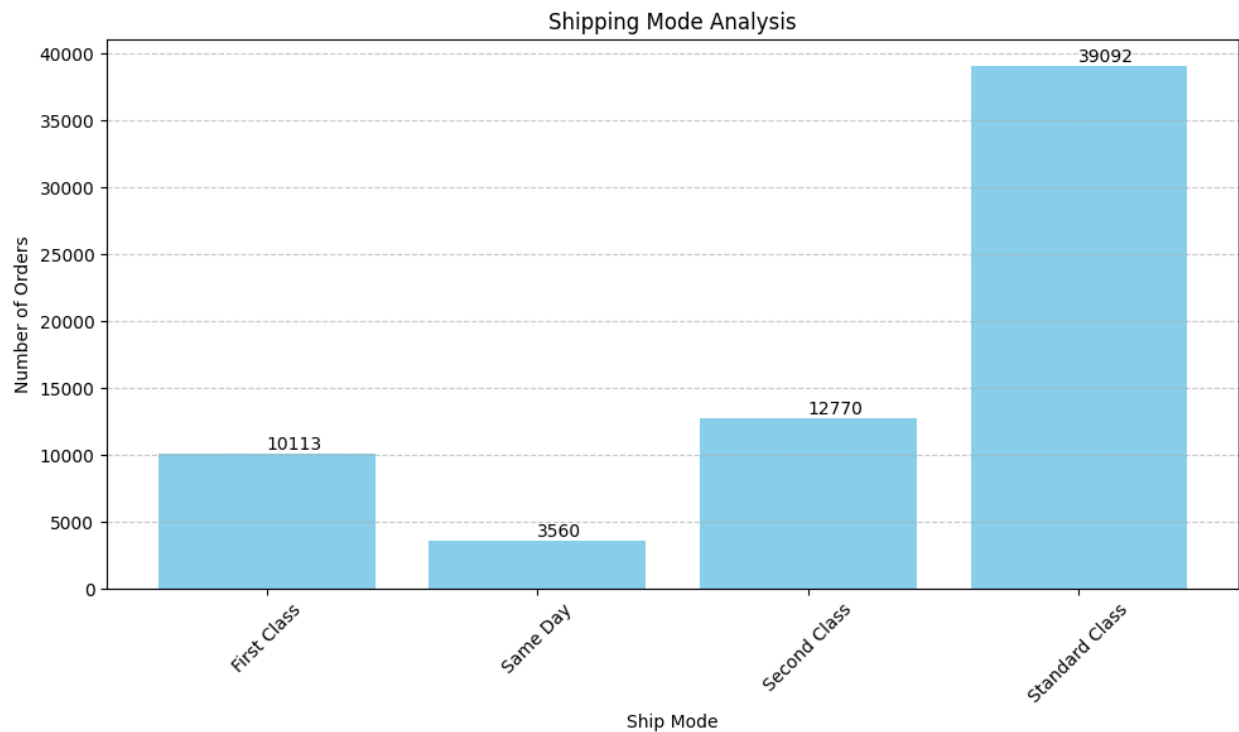
Correlation between Discount and Profit: -0.22

Average Sales and Profit by Discount Level:

	Discount	Sales	Profit
0	0.00	226.74	66.90
1	0.10	578.40	96.06
2	0.15	529.97	27.29
3	0.20	209.08	24.70
4	0.30	454.74	-45.68
5	0.32	536.79	-88.56
6	0.40	565.13	-111.93
7	0.45	498.63	-226.65
8	0.50	892.71	-310.70
9	0.60	48.15	-43.08
10	0.70	97.18	-95.87
11	0.80	56.55	-101.80

- **Sales and Discount:** The extremely weak negative correlation suggests that changes in discount levels have minimal impact on sales volume. This could indicate that factors other than discount levels play a more significant role in influencing sales.
- **Profit and Discount:** The weak negative correlation implies that while higher discounts may lead to reduced profits, the impact is not very pronounced. This suggests that other factors besides discounts are also crucial in determining profitability.

Shipping Mode Analysis



- **Standard Class:** Most common shipping mode with 39,092 orders.
- **Second Class:** 12,770 orders.
- **First Class:** 10,113 orders.
- **Same Day:** 3,560 orders.

Customer Insights

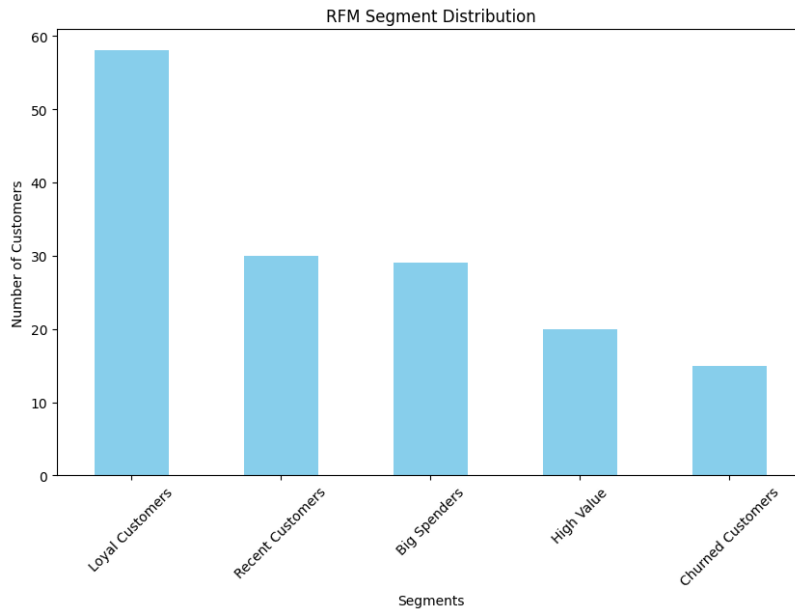
Customer Segments: RFM Segment Distribution

RFM Segment Details:

	Recency	Frequency	Monetary
Segment			
Big Spenders	16.48	22.79	6,164.34
Churned Customers	313.67	22.60	7,484.07
High Value	18.05	5.40	447.70
Loyal Customers	475.41	5.03	498.47
Recent Customers	125.33	5.60	613.40

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'111': 'High Value',  
'411': 'Loyal Customers',  
'144': 'Big Spenders',  
'444': 'Low Value',  
'311': 'Frequent Buyers',
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```
'311': 'Recent Customers',  
'444': 'Churned Customers'
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Recommendations

1. **Optimize Inventory:** Focus on maintaining sufficient inventory levels for top-performing products and categories, especially in high-sales regions like the West and East.
2. **Targeted Marketing:** Increase marketing efforts towards the Consumer segment and in the West region to maximize sales growth.
3. **Discount Strategies:** Evaluate the effectiveness of current discount strategies to improve profit margins while maintaining sales volumes.
4. **Shipping Efficiency:** Analyze shipping performance to identify opportunities for cost reduction and improved customer satisfaction, particularly in Standard Class.