SALES ANALYSIS FOR HYPERMART

Objective of the Analysis

The main aim of this report is to understand how Hypermart is performing in terms of sales, profit, customer behaviour, and regional trends.

We also wanted to find areas where we can grow more and improve our strategies.

This report is made to help the Sales Manager make better business decisions using the data.

Data Exploration

We started by going through the dataset to understand what kind of information is available.

The data includes details like sales, profit, shipping mode, product categories, customer segments, order and ship dates, region, discount, and quantity sold. These details helped us explore how the business is doing in different areas.

There are no missing values in the given data set .

There are negative profits (loses) as well as profits also .

Discounts range from 0.0 to 0.8 ;

There is large range of sales and quantities

Data Cleaning

Before we could analyze the data, we cleaned it up. Some date formats were inconsistent, so we converted them into proper date format. We also removed outliers from sales values to get a more accurate view. This helped make sure that our analysis is reliable and useful.

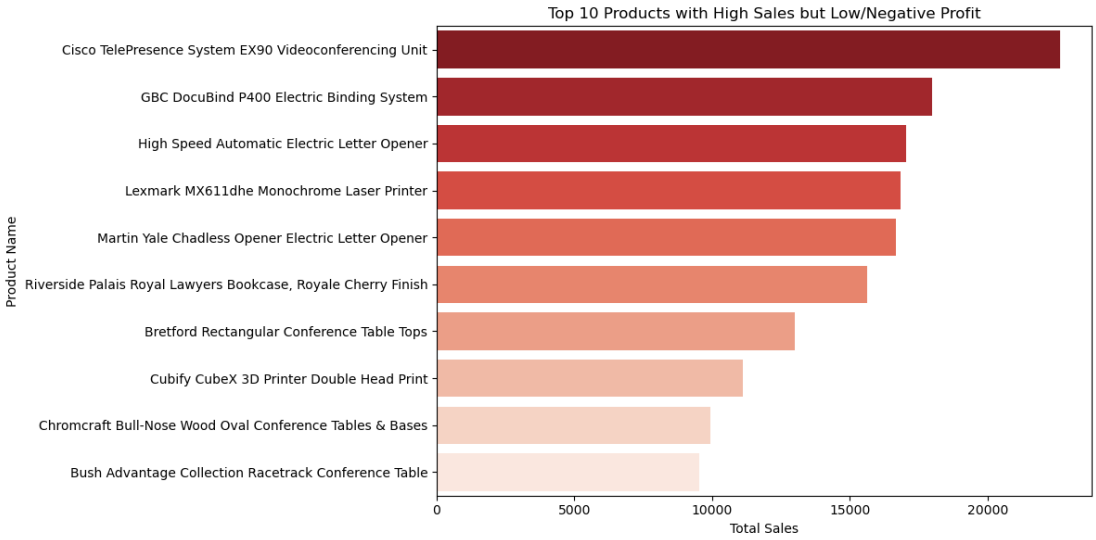
We removed the duplicated data and unnecessary columns.

We check if the data in columns has unique values and then we removed the extra spaces and converted the all data into lowercase for uniform distribution.

Analysis and Insights

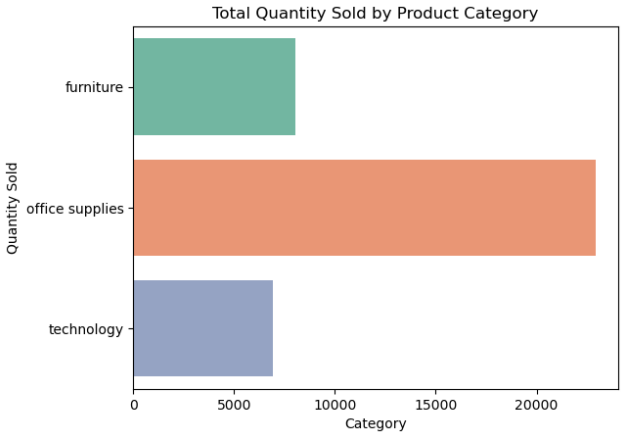
- ## Data Distribution and Trends

1.Top 10 Products with High Sales but Low/Negative Profit



Type of Plot: Bar Plot
Analysis & Observation: Some products have very high sales but give little or no profit. This includes items like "Canon ImageCLASS" and "GBC DocuBind P400."
Business Impact: We are spending a lot to sell these products but not earning much from them. We should review the pricing or cost of these products.

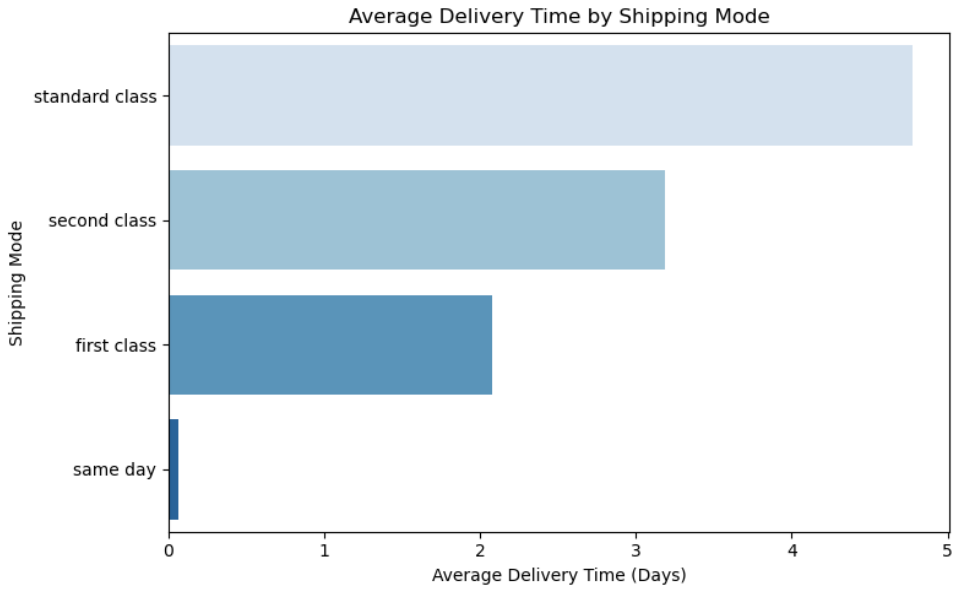
2. Total Quantity sold by product category



Type of Plot: Bar Plot
Analysis & Observation: The office supplies category had the highest number of items sold, followed by furniture.

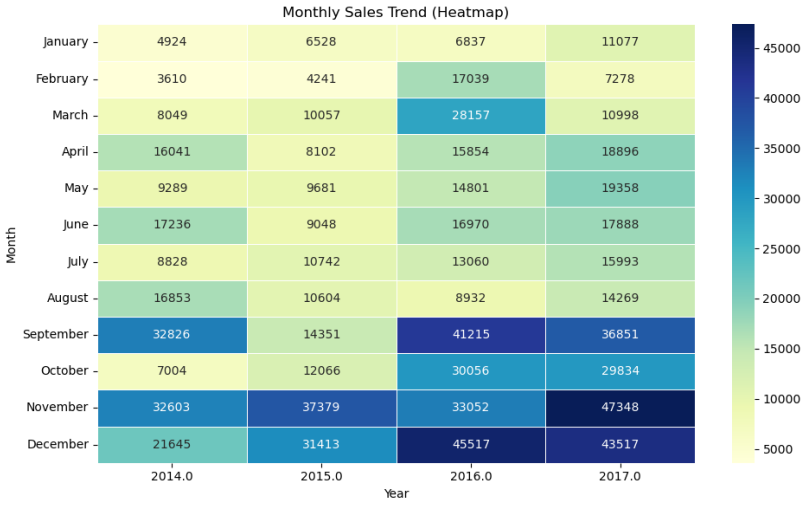
Business Impact: To increase the quantity to be sold ,Technology is a popular category, and we can focus more on promotions here to increase sales further.

3. Average Delivery Time by Shipping Mode



Type of Plot: Bar Plot
Analysis & Observation: Standard Class shipping takes the longest time to deliver, while Same Day shipping is the fastest.
Business Impact: Faster shipping may lead to better customer satisfaction, so we should consider using faster modes more often.

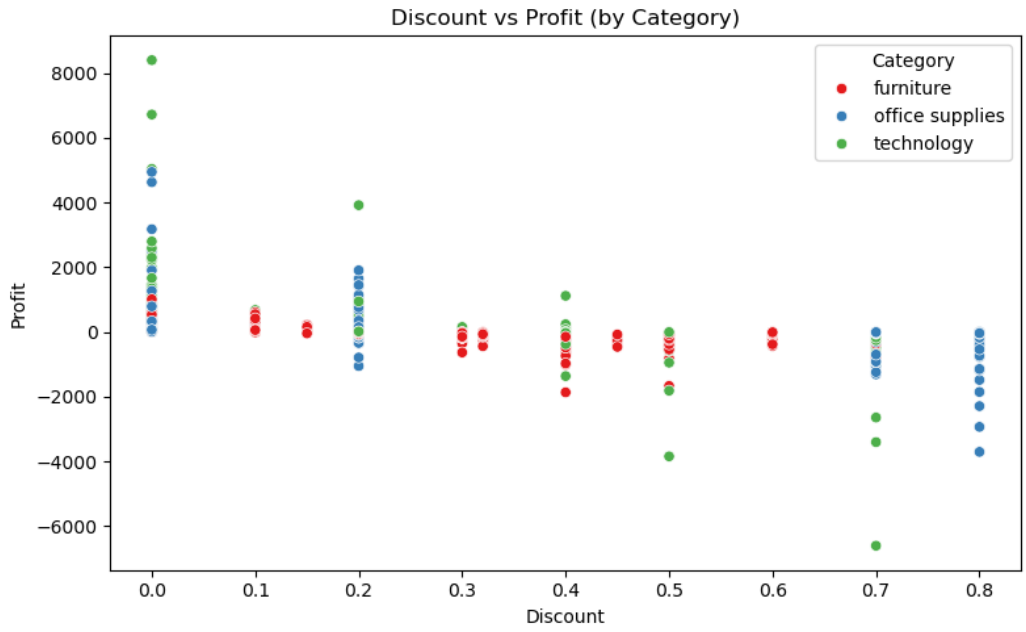
4. Monthly Sales Trend (Heatmap)



Type of Plot: Heatmap
Analysis & Observation: Sales are highest in November and December, possibly due to holiday shopping.

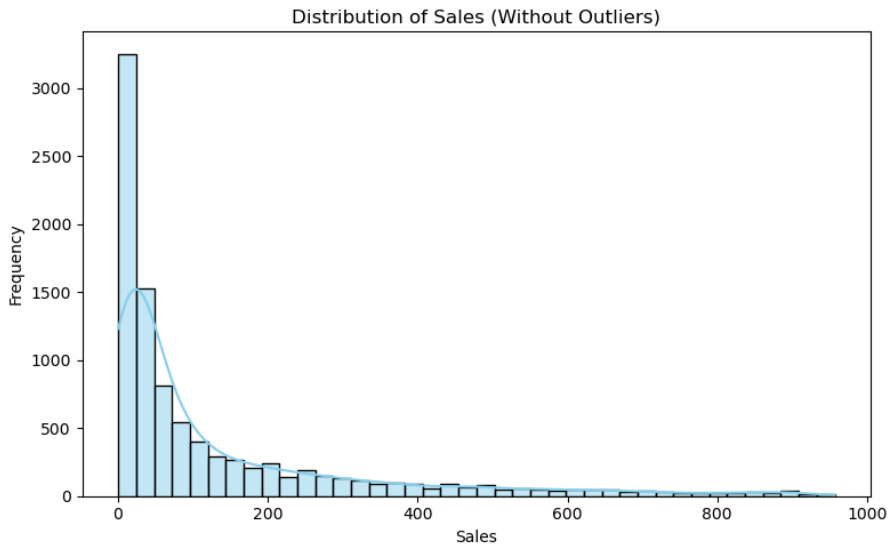
Business Impact: These months are critical for revenue. We should prepare better offers during this period.

5. Discount vs Profit (by Category)



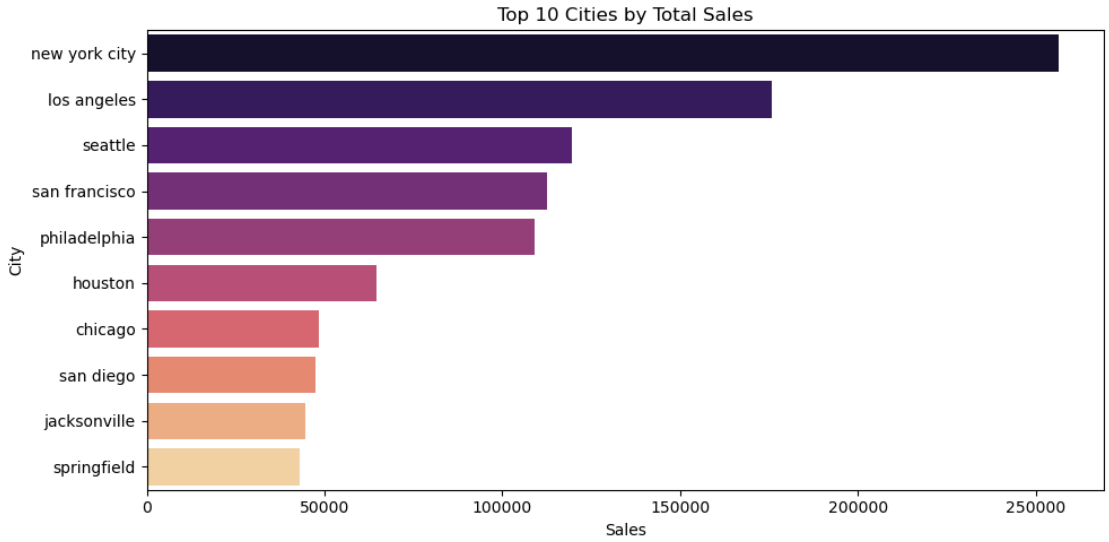
Type of Plot: Scatter Plot
Analysis & Observation: Higher discounts usually lead to lower profit. The effect is clear across all categories.
Business Impact: We need to be cautious while giving large discounts. It can hurt our profit.

6. Distribution of Sales



Type of Plot: Histogram
Analysis & Observation: Most sales are under a certain amount, and very high sales are rare.
Business Impact: We should not rely too much on a few big orders. Instead, aim for more regular sales.

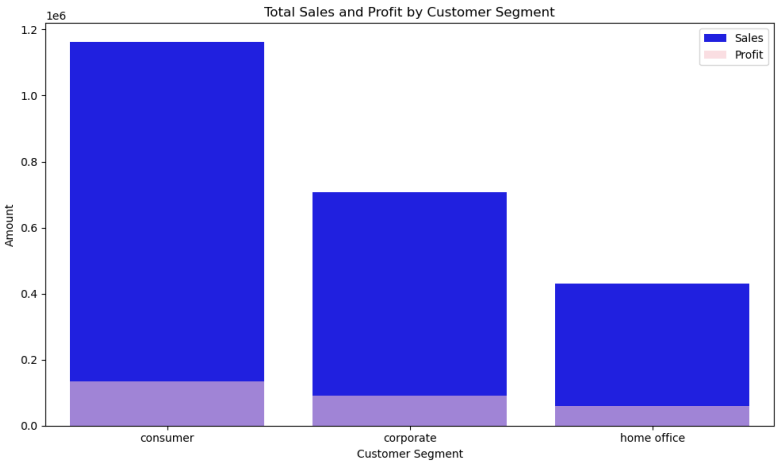
7. Top 10 Cities by Total Sales



Type of Plot: Bar Plot
Analysis & Observation: Cities like New York and Los Angeles have the highest total sales.
Business Impact: These cities are strong markets. We can try similar marketing in other cities to boost sales.

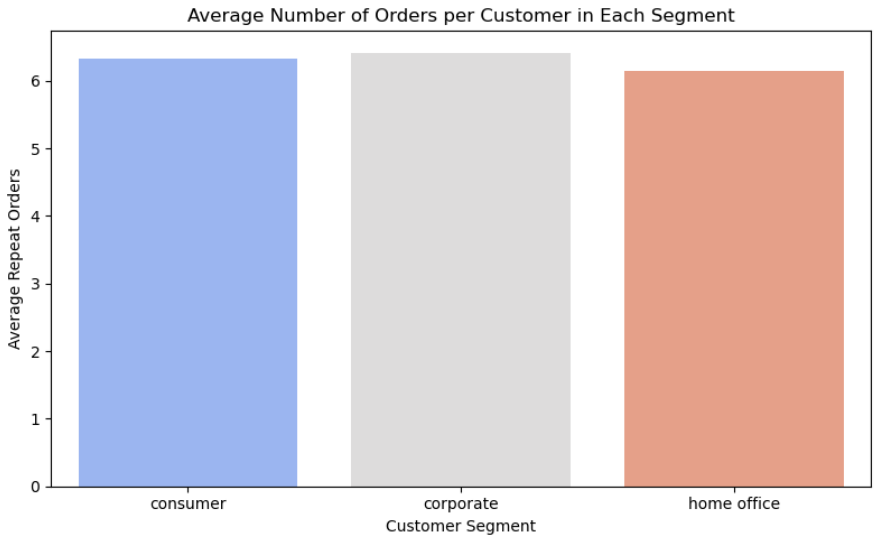
- **customer Segmentation & Regional Insights**

1.Total Sales and Profit by Customer Segment



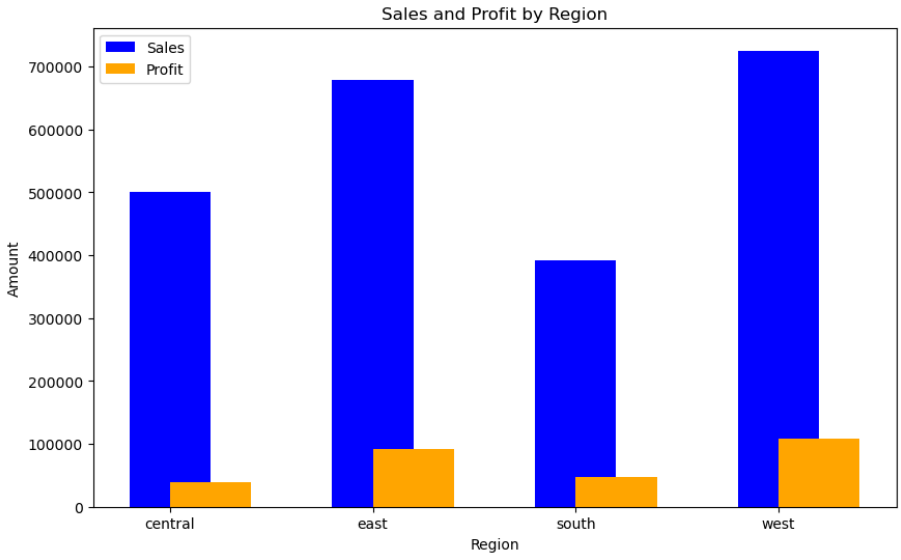
Type of Plot: Grouped Bar Plot
Analysis & Observation: The Consumer segment gives the highest sales and profits.
Business Impact: Focus on consumer segment like before .along with that we can even focus on corporate customer segment as it has almost the same profit as consumer to increase our business.

2. Average Number of Orders per Customer in Each Segment



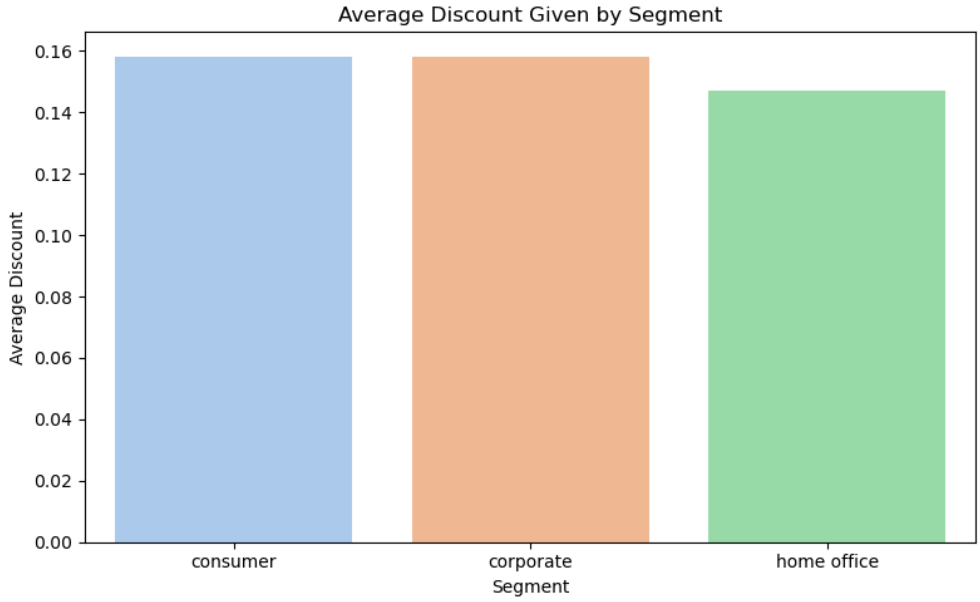
Type of Plot: Bar Plot
Analysis & Observation: corporate customer segment have the highest repeat purchases.
Business Impact: These customers are loyal. We can build stronger relationships with them.

3. Sales and Profit by Region



Type of Plot: Grouped Bar Plot
Analysis & Observation: The West region brings in the most sales and profit.
Business Impact: Focus on expanding in regions like Central and South to balance the growth.

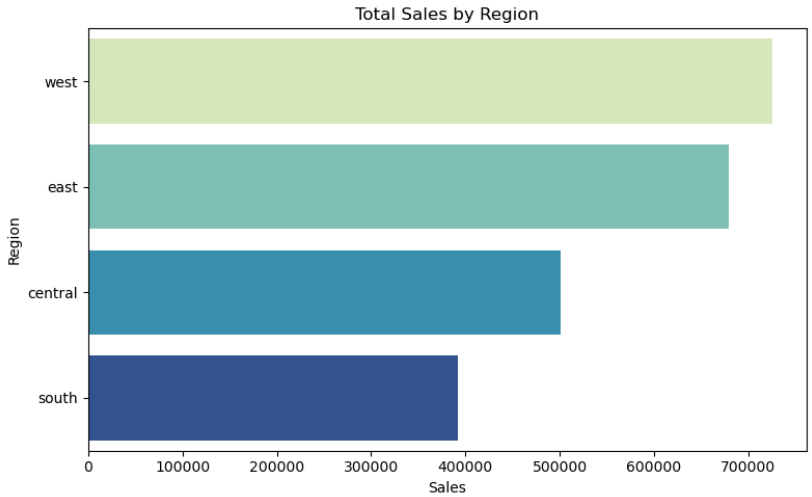
4. Average Discount Given by Segment



Type of Plot: Bar Plot
Analysis & Observation: Consumer and corporate segments get the highest average discount.
Business Impact: These discounts might need to be controlled for better profit.

- # Growth Opportunities & Market Expansion

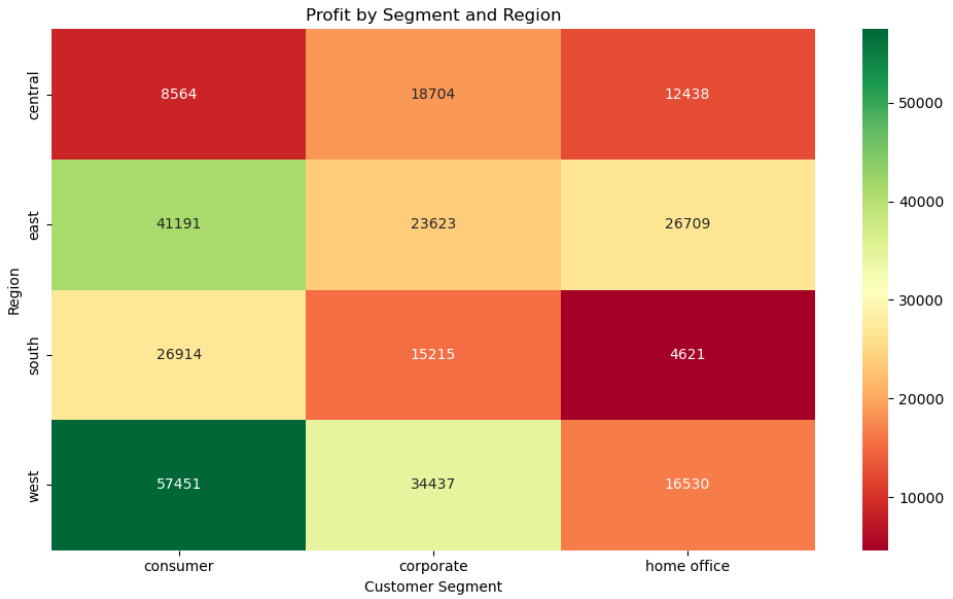
1. Total Sales by Region



Type of Plot: Bar Plot
Analysis & Observation: The West region has the highest total sales, while Central and South regions are behind.

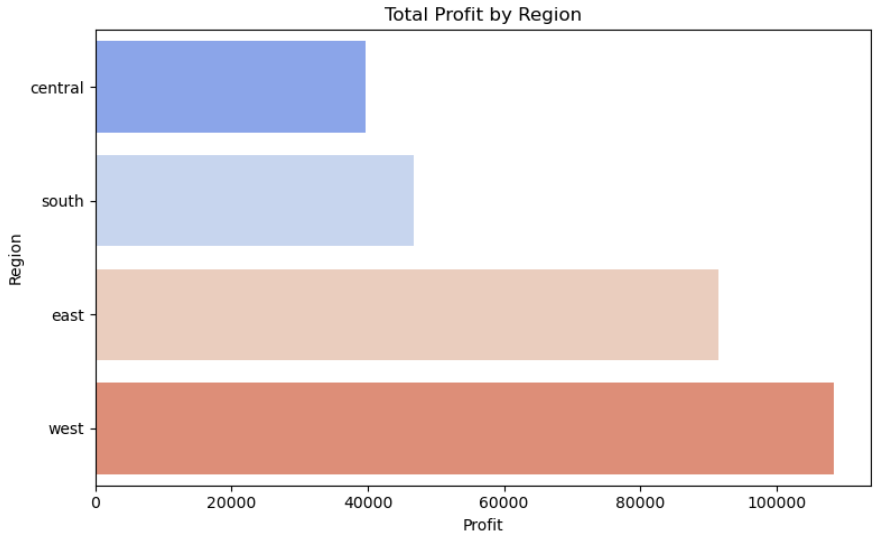
Business Impact: Try to improve sales in underperforming regions through offers or marketing.

2. Profit by Segment and Region



Type of Plot: Heatmap
Analysis & Observation: Some regions like South have lower profit across all segment and corporate and homeoffice has low profits.
Business Impact: These regions(south) need focused marketing and better offers to increase profit .we need to check for corporate as well as homeoffice for increasing the profits in all the regions

3. Total Profit by Region



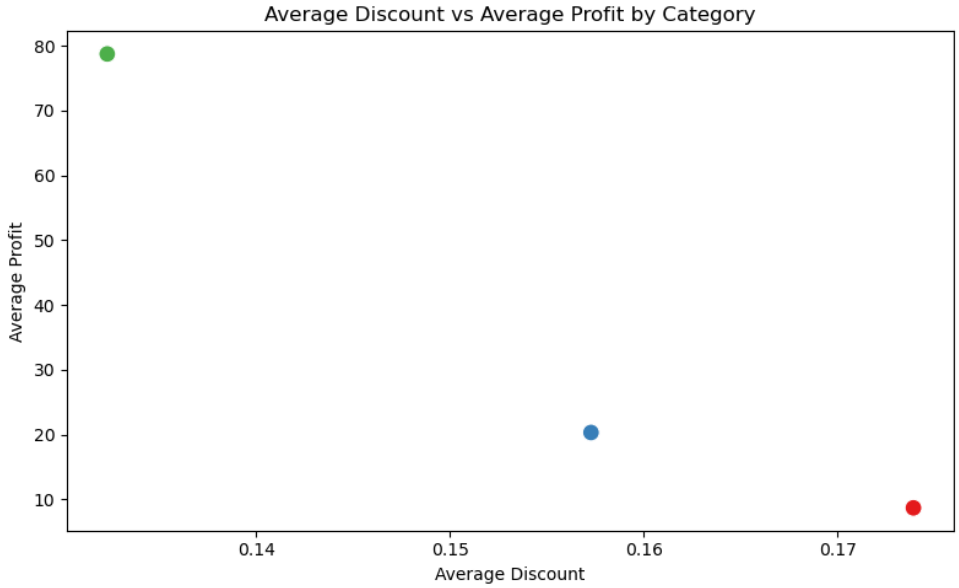
Type of Plot: Bar Plot
Analysis & Observation: West region again stands out with high profit. Central region has the lowest.

Business Impact: Central region has untapped potential. With better strategies, profit can go up.

4. Delivery Time vs Profitability

Type of Plot: Scatter Plot
Analysis & Observation: Longer delivery times often show lower profits.
Business Impact: Reducing delivery time can improve customer satisfaction and boost profit.

5. Average Discount vs Average Profit by Category



Type of Plot: Scatter Plot
Analysis & Observation: Furniture category has high discount but low profit.
Business Impact: Discounting this category too much is hurting profit. Strategy needs review.

6. Quantity Sold vs Profit

Type of Plot: Scatter Plot
Analysis & Observation: Higher quantities sold do not always mean higher profit.
Business Impact: We must balance between quantity and profit. Selling more should not reduce overall profit.

Conclusion

From this analysis, we learned that while Hypermart is doing well in areas like office supplies and in the West region, there are also challenges. Some products are selling a lot but not giving us profit. Discounts are reducing our earnings, especially in some categories. There are also regions that are not doing as well as they could.

To improve, we should:

- Cut back discounts where they hurt profit.
- Focus more on profitable customer segments.

- Improve delivery times.
- Target weaker regions with better strategies.

By following these steps, we can grow more, earn better, and serve our customers in a smarter way

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