

2024

SUPERSTORE

SALES

REPORT

• The goal of this project is to analyze the data and identify insights that can help the company improve its business performance.

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Problem Statement

The Superstore dataset, encompassing sales and profit data across diverse product categories and regions, presents an opportunity for analysis to identify crucial insights for improving business performance. The overarching goal of this project is to leverage data-driven approaches to address key questions and provide actionable recommendations to optimize the company's product offerings, thereby enhancing revenue and profitability.

•The Superstore dataset provides sales and profit data for a variety of products across different categories and regions.

By answering these questions, we hope to provide recommendations for the company on how to optimize its product offerings and improve its revenue and profitability.

AIM OF THIS REPORT

Specifically, we aim to answer questions such as: which product categories are the most profitable? Which regions have the highest sales and profit? What are the most profitable products?

RESEARCH QUESTIONS

1. • Which product categories have the highest profit margins in the Super Store?
2. • Are there any significant differences in sales between the East region and other regions?
3. • How do sales vary by product category during different months of the year?
4. • What is the rate of returned products for orders with same-day shipping compared to other shipping options?
5. • How do sales and profit vary by product category on weekdays compared to weekends?

Assumptions :

- The superstore dataset contains a representative sample of all transactions conducted by the store during the time period covered by the dataset.
- The superstore dataset covers a sufficient time period to allow for the identification of trends or patterns in sales and profitability.
- The Super Store dataset is not impacted by any significant outliers or anomalies that could skew the results of any analysis conducted on the dataset.

METHODOLOGY:

☀ DATA COLLECTION:

Acquired the Superstore dataset from Kaggle, containing sales and profit data for various products across different categories and regions.

☀ DATA PREPARATION

Utilized the Pandas library to load and preprocess the dataset, ensuring it is cleaned and ready for analysis. Addressed any missing or inconsistent data points, and performed necessary transformations.

☀ Exploratory Data Analysis (EDA):

Conducted initial EDA using Pandas to gain insights into the dataset's structure and content. Employed Seaborn and Matplotlib for visualizations, creating plots to understand the distribution of key variables.

☀ Formulation of Hypotheses:

Developed hypotheses based on initial observations and business objectives. Ensured hypotheses were specific, testable, and aligned with the goal of improving business performance.

FORMULATE HYPOTHESES

This paragraph introduces hypotheses for the Superstore sales analysis, covering technology product profitability, regional sales, seasonal trends, shipping impact, and weekday versus weekend profit differences. These hypotheses set the direction for data exploration, aiming to reveal key insights to enhance business decision-making.

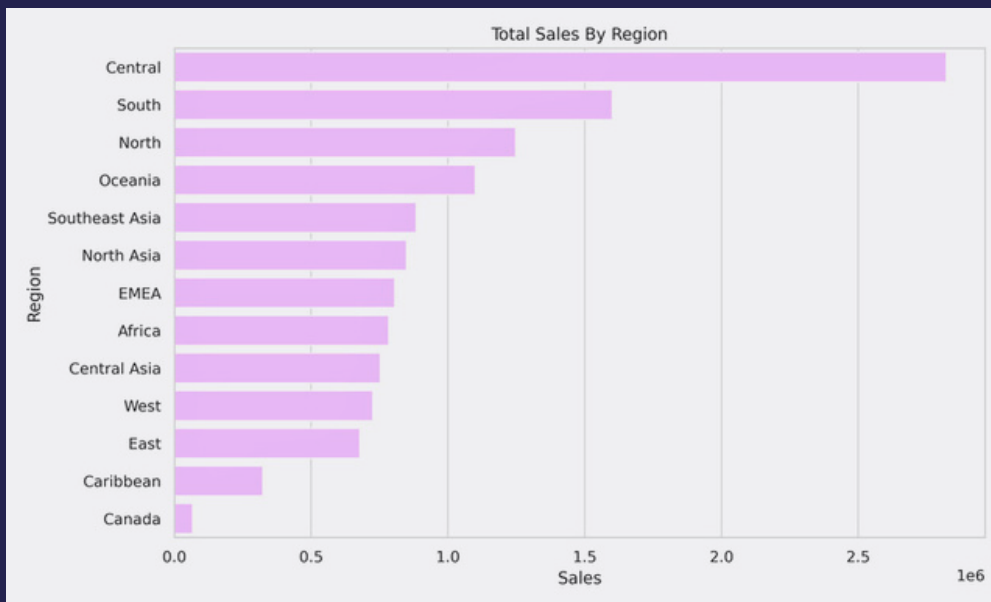
- Hypothesis 1: Technology products and Consumer Segment have the highest profit margin compared to other product categories and segments
- Hypothesis 2: The East region has the highest sales compared to other regions.
- Hypothesis 3: Sales are higher during certain months of the year.
- Hypothesis 4: Orders with same-day shipping have the lowest rate of returned products.
- Hypothesis 5: The Company's profit is more on weekdays than on weekends.

TEST THE HYPOTHESES



Hypothesis 1: Technology products and Consumer Segment have the highest profit margin compared to other product categories and Segments

- The hypothesis is supported as technology products and Consumer Segment have the highest profit margin of the three categories and Segments.



Hypothesis 2: The East region has the highest sales compared to other regions.

The hypothesis is not supported as the Central region has the highest sales



Hypothesis 3: Sales are higher during certain months of the year.

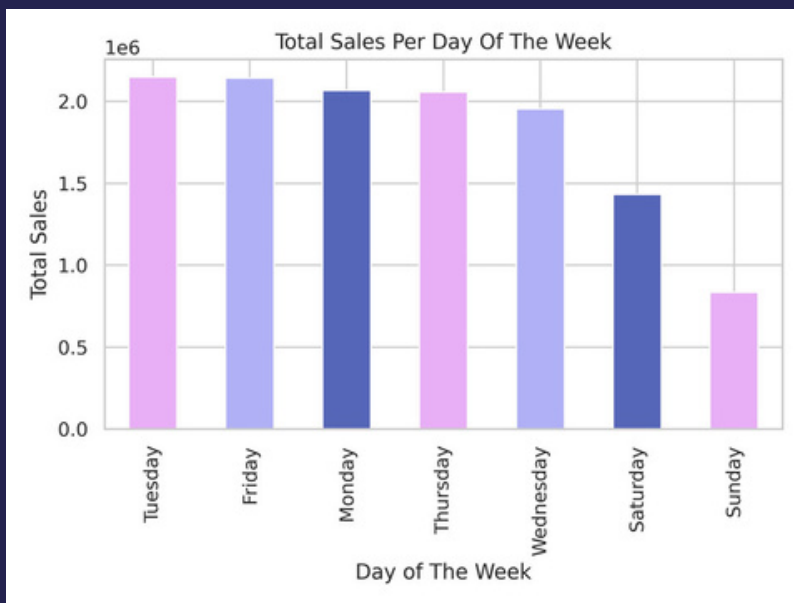
Sales are higher in November and December.

This supports our hypothesis that sales are higher during certain months of the year.



Hypothesis 4: Orders with same-day shipping have the lowest rate of returned products.

The hypothesis is supported as orders with same-day shipping have the lowest rate of returned products.



Hypothesis 4: Orders with same-day shipping have the lowest rate of returned products.

The hypothesis is supported as orders with same-day shipping have the lowest rate of returned products.

CONCLUSION:

- Hypothesis 1 :

Technology products have the highest profit margin compared to other product categories. This hypothesis is supported. The data shows that technology products have the highest profit margin compared to other product categories.

- Hypothesis 2 :

The East region has the highest sales compared to other regions. This hypothesis is not supported. The data shows that the East region does not have the highest sales compared to other regions.

- Hypothesis 3:

Sales are higher during certain months of the year. This hypothesis is supported. The data shows that sales are higher during certain months of the year.

- Hypothesis 4:

Orders with same-day shipping have the lowest rate of returned products. This hypothesis is supported.

The data shows that orders with same-day shipping have the lowest rate of returned products.





- Hypothesis 5:

The company's profit is more on weekdays than on weekends. This hypothesis is supported. The data shows that the company's profit is more on weekdays than on weekends.

Recommendations

The company should prioritize technology product development for increased profits and consider reducing less profitable product lines. Focusing on the Central region, which demonstrates the highest sales, is recommended. To capitalize on peak demand, efforts during November and December should be maximized, including increased inventory and targeted campaigns. Consistent sales throughout the year could involve introducing new products and promotions during slower months. Offering more same-day shipping options is crucial, requiring optimization of inventory and supply chain processes. For weekend strategies, implementing weekend-only promotions, targeted marketing, and special events can enhance sales.

Next steps

#	Recommendations	Priority
1	Develop and promote technology products. Optimize same-day shipping options	 HIGH
2	Focus on the Central region for sales. Maximize efforts during November and December.	 MEDIUM
3	Consider strategies for maintaining consistent sales throughout the year. Explore different weekend promotions and events.	 LOW
4	Implement dynamic pricing strategies based on real-time demand and market trends to optimize product pricing for maximum profitability.	 HIGH



Thank you!