E-COMMERCE COMPANY PATH TO SUSTAINABLE GROWTH

Operational Analysis and Optimization

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COMPANY BACKGROUND

- An e-commerce company is experiencing various operational challenges that hinder its sustainable growth and customer satisfaction.

- To address these challenges, the company has decided to take a data-driven approach to optimize its key areas of operation.

KEY CHALLENGES

Improve financial performance

Enhance customer insights

Streamline logistics

Optimize product management

Improve customer satisfaction and return rates

OUTCOME

- By conducting this comprehensive analysis, the company aims to make informed decisions, streamline operations, and implement strategies that will lead to increased revenue, better customer satisfaction, and a competitive edge in the retail landscape.

STAKEHOLDERS

- Company Leadership
- Finance Team
- Marketing Team
- Logistics and Fulfillment Team
- Product Management Team
- Customer Support Team
- IT/Data Analytics Team
- Customers (B2B and B2C)
- Suppliers and Vendors
- Third-Party Fulfillment Partners (e.g., Amazon)
- Warehouse/Inventory Management
- Customer Feedback and Quality Assurance Teams
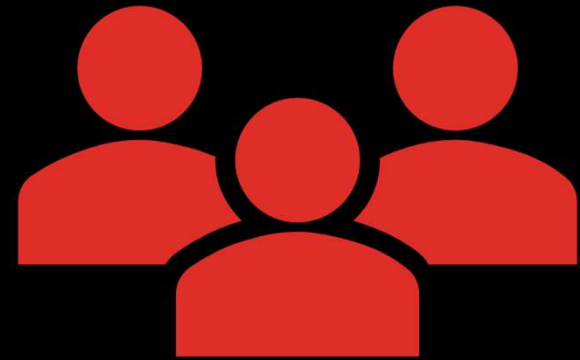
TECHNICAL PROCESSES

➢ **By using Python Library**

• **Pandas**   : Data cleaning , Duplicate remove , Replace null values and Data analytics

• **Matplotlib** : Visualization , Graphs , Interactive charts

• **Power BI**   : Dashboard , Data Visualization , Insights

KEY PERFORMANCE INDICATOR (KPI)

Total Order Id
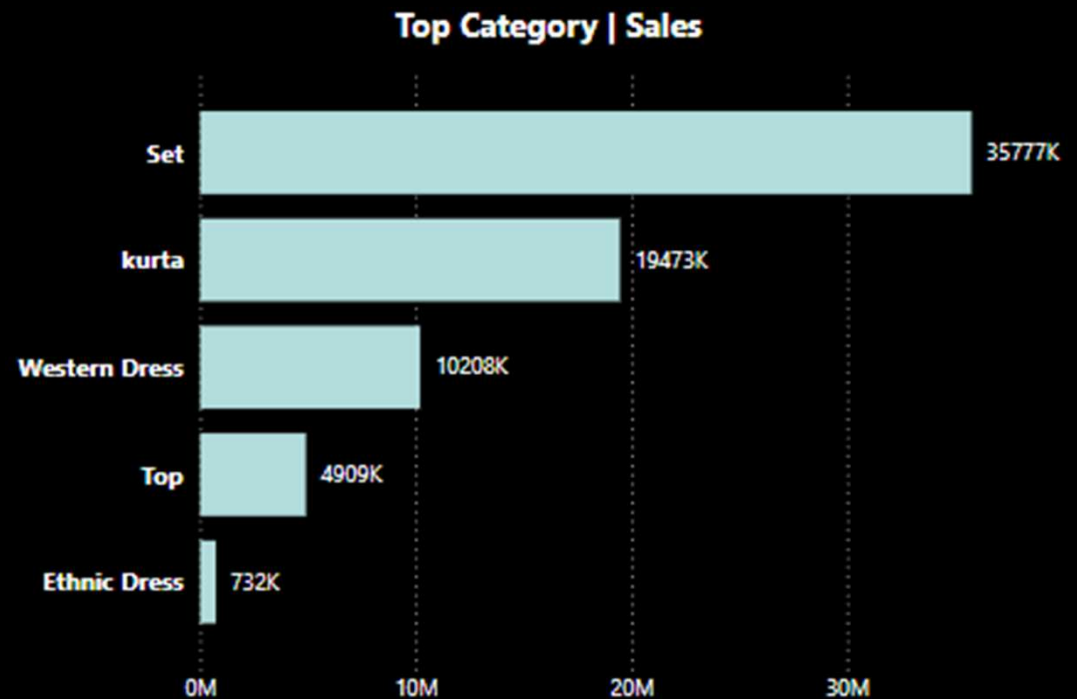128943

Total Quantity Sold
116648

Total Revenue
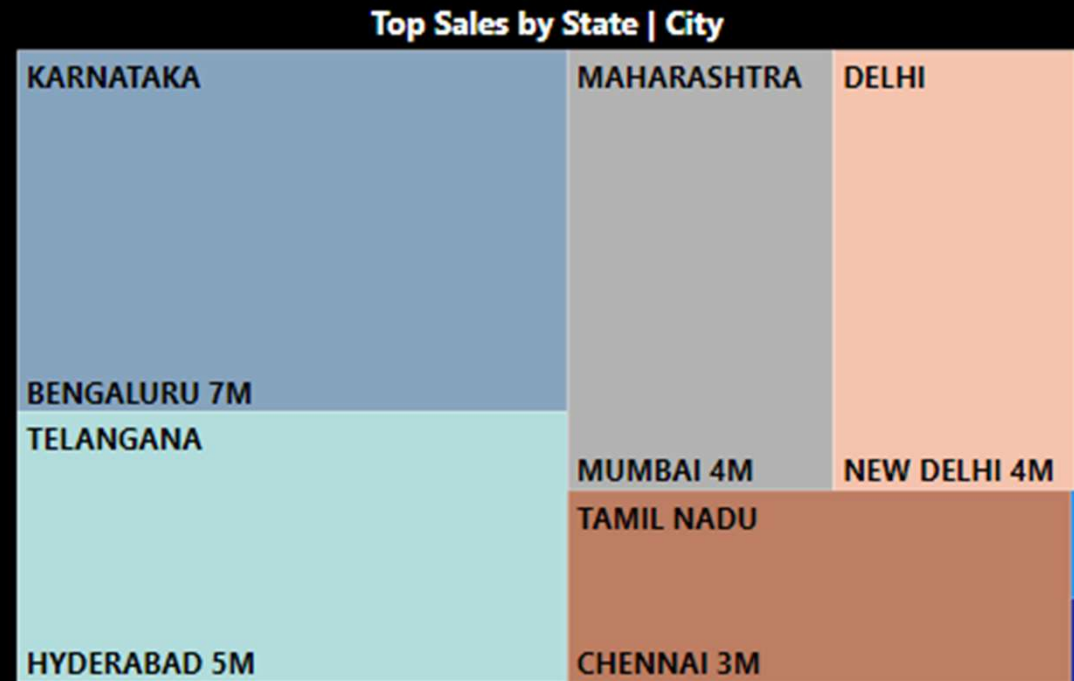71772314

Average Order Value
596.35

IMPORTANT PROBLEMS

- Identify the top 5 selling products category by Revenue ?
- Identify the top 5 locations by customers purchase rate is high?
- Find the trend of the sales data by Revenue for analysis purpose ?
- Evaluating the percentage of orders fulfilled by Amazon versus Merchant will provide insights ?
- Identify the peak sales days to contribute more efficient resource management?
- Find the average quantity ordered per product category to analyze t the inventory management better ?
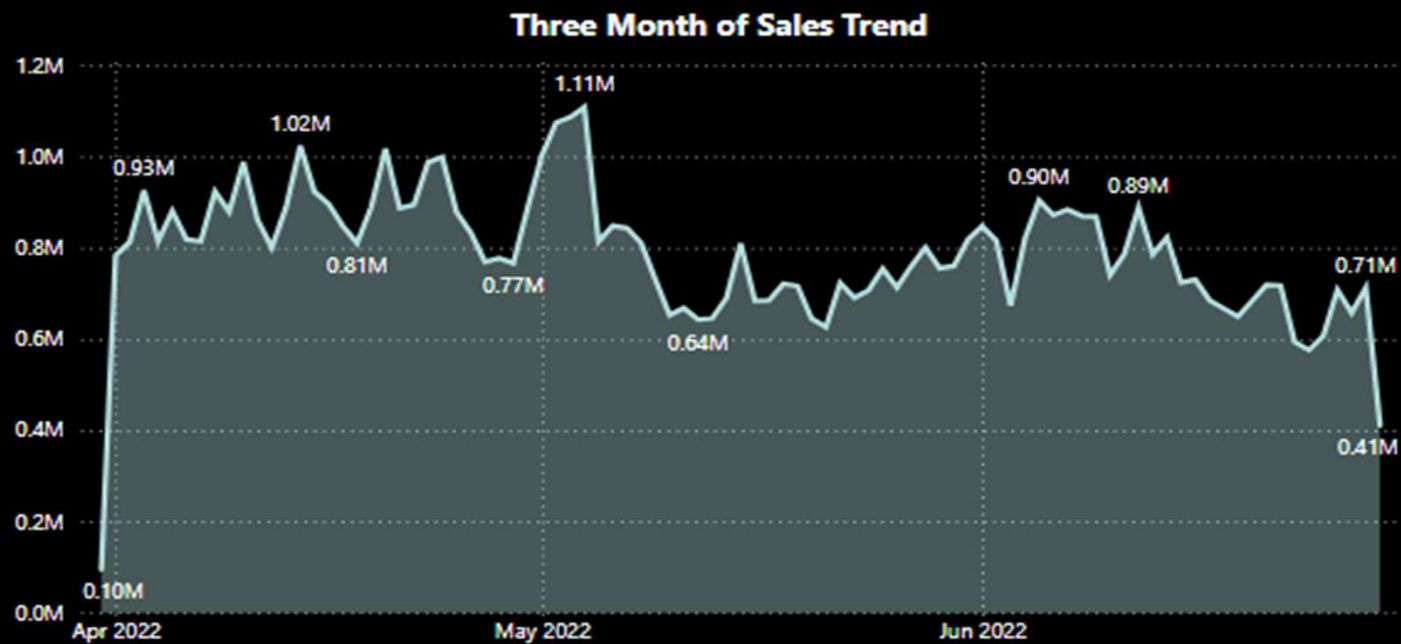
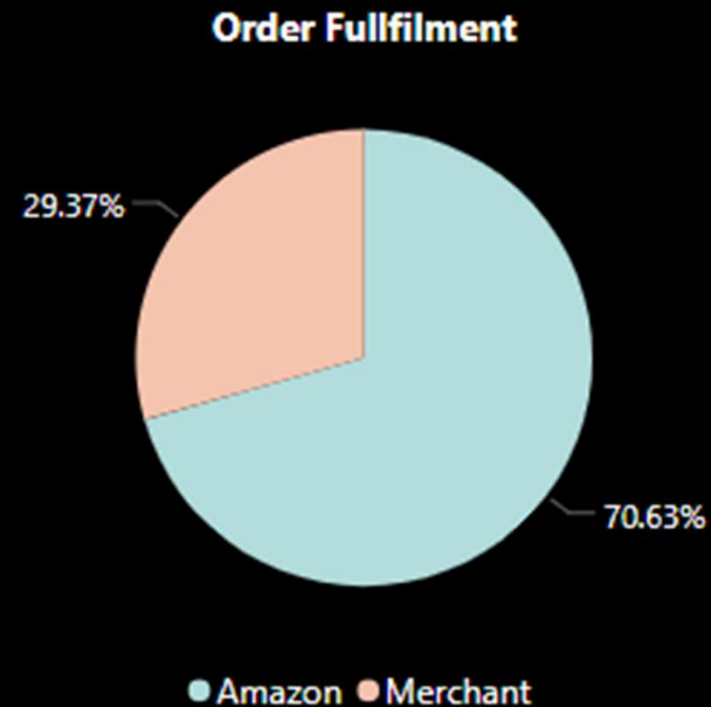# 1. IDENTIFY THE TOP 5 SELLING PRODUCTS CATEGORY BY REVENUE ?

Top Category | Sales

Category	Sales
Set	35777K
kurta	19473K
Western Dress	10208K
Top	4909K
Ethnic Dress	732K

2. IDENTIFY THE TOP 5 LOCATIONS BY CUSTOMERS PURCHAES RATE IS HIGH?

Top Sales by State | City

3. FIND THE TREND OF THE SALES DATA BY REVENUE FOR ANALYSIS PURPOSE ?

Three Month of Sales Trend

4. EVALUATING THE PERCENTAGE OF ORDERS FULFILLED BY AMAZON VERSUS MERCHANT WILL PROVIDE INSIGHTS ?

Order Fullfilment

29.37%

70.63%

● Amazon ● Merchant

6. FIND THE AVERAGE QUANTITY ORDERED PER PRODUCT CATEGORY TO ANALYZE THE INVENTORY MANAGEMENT BETTER ?
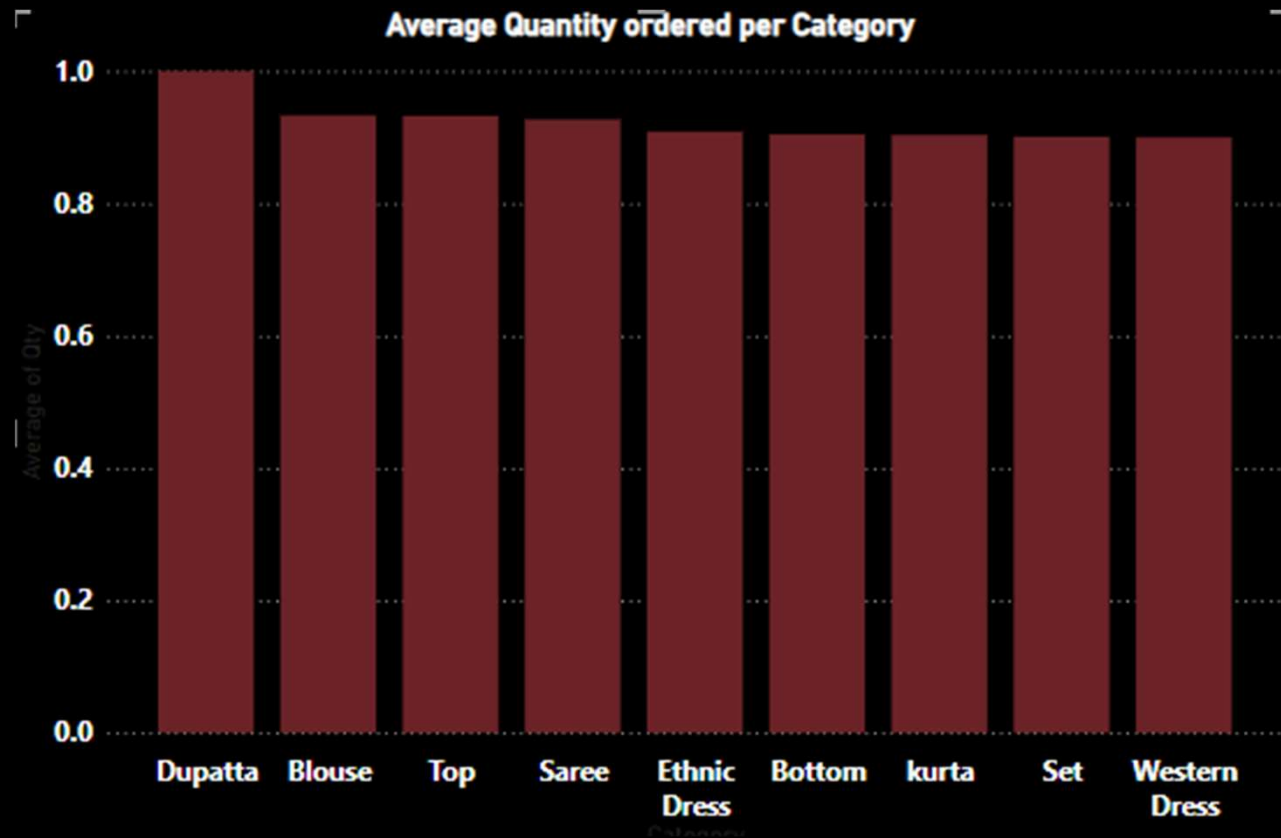
CONCLUSION

- Total Revenue: The total revenue generated during the analyzed period is ₹71,772,313.62 .suggesting seasonal growth likely due to sales events or holidays.

- Top-Selling Product Categories: The Set category led the sales, contributing to a significant portion of the total revenue. It was followed by Kurta and Western Dress categories, which also performed well.

- Average Order Value (AOV): The average order value is calculated to be ₹596.3 , indicating the typical spending pattern of customers per order.

- Fulfillment Methods: Orders fulfilled by Amazon generated higher revenue compared to those fulfilled by Merchants. Amazon's fulfillment accounted for 69.5% of total Orders, highlighting its efficiency in managing orders. Refer the pie chart for better understanding.

CONCLUSION

- Peak Sales Days : The Day of Sunday saw the highest sales volume, while Tuesday and Wednesday also showed strong performance. Thursday had significantly lower sales . Refer the Column chart for better understanding.

- Return and Cancellation Rates: The overall cancellation rate stands at approximately 16% , affecting the company's profitability. A deeper analysis indicates that Set and Kurta items had the highest return and cancellation rates .

- Top Cities for Sales: , Bangalore, Hyderabad and Mumbai were the top-performing cities in terms of sales, collectively contributing to total revenue. These cities were key markets for the company's growth.

- B2B vs B2C Sales: B2C customers exhibited higher average order values, with bulk orders for Kurta and Set items. B2B customers were more price-sensitive, reflected in smaller, more frequent orders. These conclusions provide actionable insights for improving logistics, customer satisfaction, and overall revenue growth(Problem Statement).

RECOMMENDATIONS

- Address High return rates, especially in clothing, by improving product descriptions with detailed sizing guides and introducing size recommendation tools or virtual fitting rooms.

- Capitalize on peak sales periods, By planning targeted marketing campaigns and offering discounts during off-peak months to balance revenue across the year.

- Implement loyalty programs, personalized offers, and smaller bundle packages to increase average order value and customer retention in the B2C segment.

- Invest in localized marketing and improved delivery options (e.g., same-day delivery) in top cities like Mumbai, Bangalore, and Chennai to enhance the customer experience.

- Reduce order cancellations by introducing real-time stock tracking and sending timely notifications to customers about delayed or out-of-stock items.

- Regularly collect and analyze customer feedback to address pain points related to returns, cancellations, and overall satisfaction, leading to improved retention.

THANK YOU !

For any suggestion feel free to ask any Question

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Dashboard

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