AMAZONE

DATA ANALYSIS PROJECT

ROHIT WAGHMARE

INTRODUCTION & PROJECT SCOPE

BACKGROUND

- Brief description: "In the competitive e-commerce landscape, understanding sales trends, shipping efficiency, and product demand is crucial for maintaining customer satisfaction and optimizing operations."
- Importance: Highlight why analyzing these metrics (orders, shipping time, and product demand) is essential. For example, "Delays in shipping can impact customer loyalty, while understanding product demand can improve inventory planning."

OBJECTIVES

- Order Analysis: To identify key patterns in order frequency, seasonal demand, and regional order distribution.
- Shipping Time Analysis: To evaluate shipping times, detect delays, and assess performance across different regions and shipping methods.
- Product Demand Analysis: To determine high-demand products and analyze trends across various categories and regions.

TOOLS & METHODS

- Excel: Used for data processing, analysis, and visualization.
- Analysis Techniques: Data cleaning, trend analysis, visualization with charts, and cross-tabulation for shipping and product data.

DATASET OVERVIEW

Order Information:
- Order ID: Unique identifier for each order.
- Date: Date of the order.
- Status: Current status of the order (e.g., completed, canceled).

Fulfillment & Sales:
- Fulfillment: Method of order fulfillment.
- Sales Channel: Platform through which the sale was made.
- Ship Service Level: Type of shipping service selected for the order (e.g., standard, expedited).
- Fulfilled By: Entity responsible for fulfillment (e.g., Amazon, third-party seller).

Product Details:
- SKU: Stock keeping unit for product tracking.
- Category: Product category.
- Style: Specific style or type of product.
- Size: Size of the product if applicable.
- ASIN: Amazon Standard Identification Number for product identification.

Shipping Details:
- Ship City/State/Postal Code/Country: Destination details for the order.
- Courier Status: Status of the shipping courier (e.g., in transit, delivered).

Order Metrics:
- Qty: Quantity ordered.
- Amount: Total amount for the order.
- Currency: Currency in which the order was processed.
- Promotion IDs: Associated promotions or discounts.
- B2B: Indicates if the order is a business-to-business transaction.

Time-based Columns:
- Month Name and Day Name: For time-based analysis (e.g., monthly or weekly trends).
- Amount Bucket: Grouping of amounts into predefined ranges for better segmentation.

ORDER ANALYSIS

Introduction

- This section provides an in-depth analysis of order trends and patterns in Amazon India sales data.
- The goal is to identify insights on:
  - Order Volume Trends: Track changes in order volume over time.
  - Order Distribution by Region: Highlight high-demand regions or states.
  - Order Patterns by Day and Month: Understand peak order days and monthly trends.

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Total Orders	Distinct Orders	Total Amount
113701	105952	₹75,402,506

113701

TOTAL ORDERS

105952

DISTINCT ORDER

₹75,402,506

TOTAL SALES

→

ORDER ANALYSIS REPORT

Key Metrics Overview

- Total Orders (Count of Order ID): 113,701
  - Indicates the total number of orders processed in the dataset, representing overall sales activity.
- Distinct Orders: 105,952
  - Out of the total orders, this number represents unique orders (likely from unique customers or transactions), showing that a significant portion of orders are non-repetitive.
- Repeat Orders: 7,749
  - Highlights the number of repeat orders, suggesting some level of customer retention or recurring purchases.
  - Insight: A repeat order rate of approximately 6.8% (7,749 / 113,701) implies customer loyalty, which may be an area for further analysis and improvement.
- Total Revenue (Sum of Amount): ₹75,402,506
  - Total revenue generated from all orders, which is a critical indicator of the financial impact.
  - Insight: This value can be broken down further to analyze revenue by month, product category, or region for a detailed understanding of sales drivers.
- Total Quantity Sold (Sum of Qty): 114,139
  - Represents the cumulative quantity of items sold, which indicates the volume of products moved.
  - Insight: High product movement reflects strong demand; examining quantity trends by product type or category could reveal best-selling products.

Insights and Opportunities

- Customer Retention: The repeat order rate indicates an opportunity to explore customer retention strategies.
- Revenue Optimization: Analyzing the correlation between distinct orders and total revenue can help identify high-value customers or product categories.
- Sales Volume: The total quantity sold suggests strong demand, which could inform inventory management and supply chain decisions.

Introduction

- This section focuses on analyzing shipping times to evaluate delivery efficiency and customer satisfaction.
- Key aspects covered include:
  - Average Shipping Time: Typical time taken from order placement to delivery.
  - Shipping Time by Region: Identifying regions with faster or slower shipping times.
  - Service Level Comparison: Evaluating differences between standard, expedited, and premium shipping services.
- Objective: To identify patterns and potential areas for improvement in the shipping process for enhanced customer experience.

SHIPPING TIME ANALYSIS
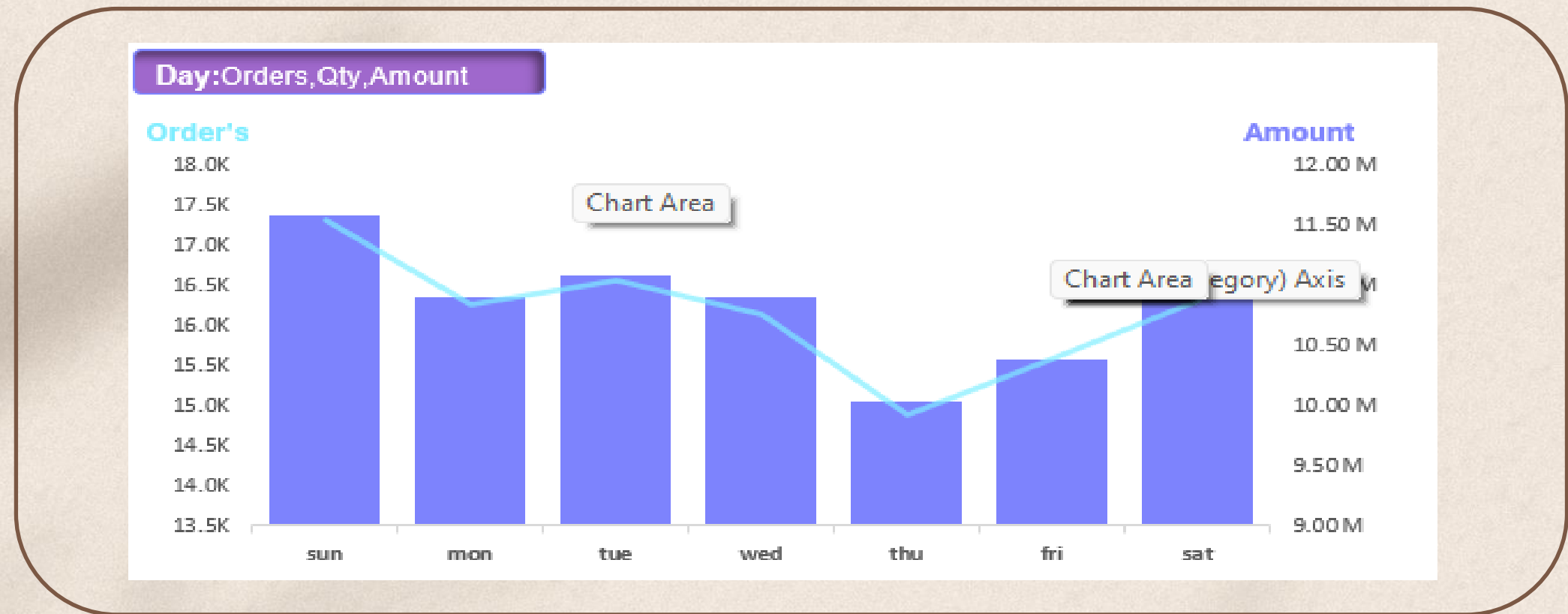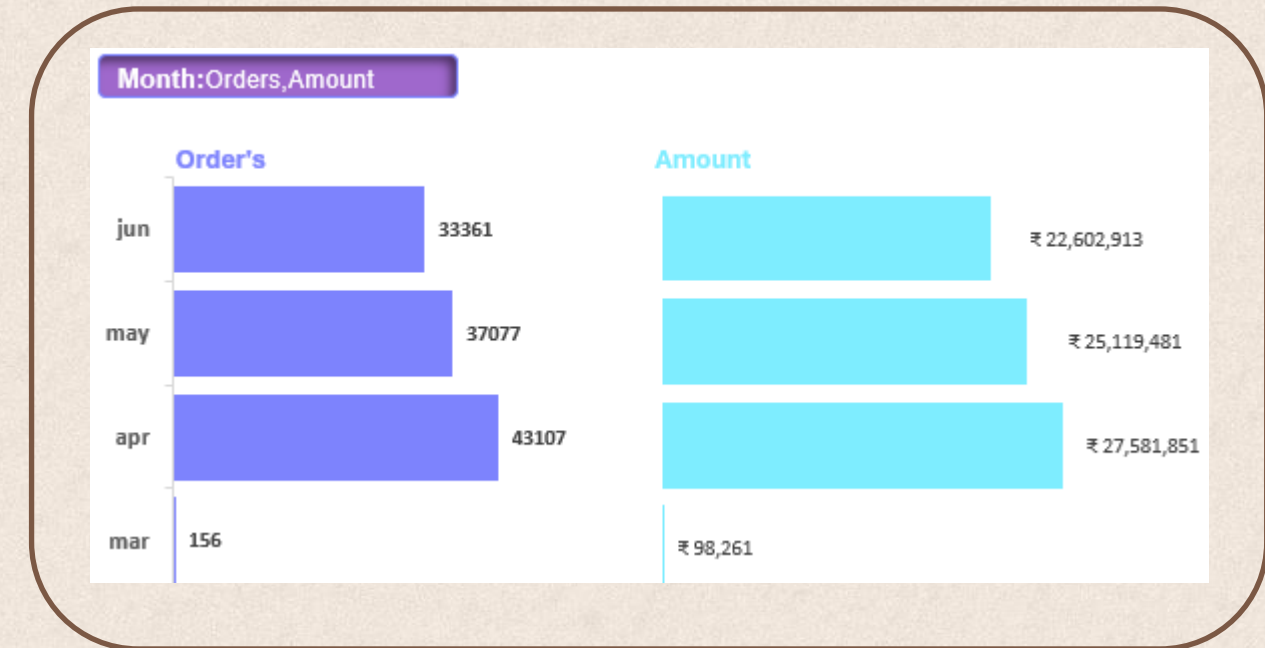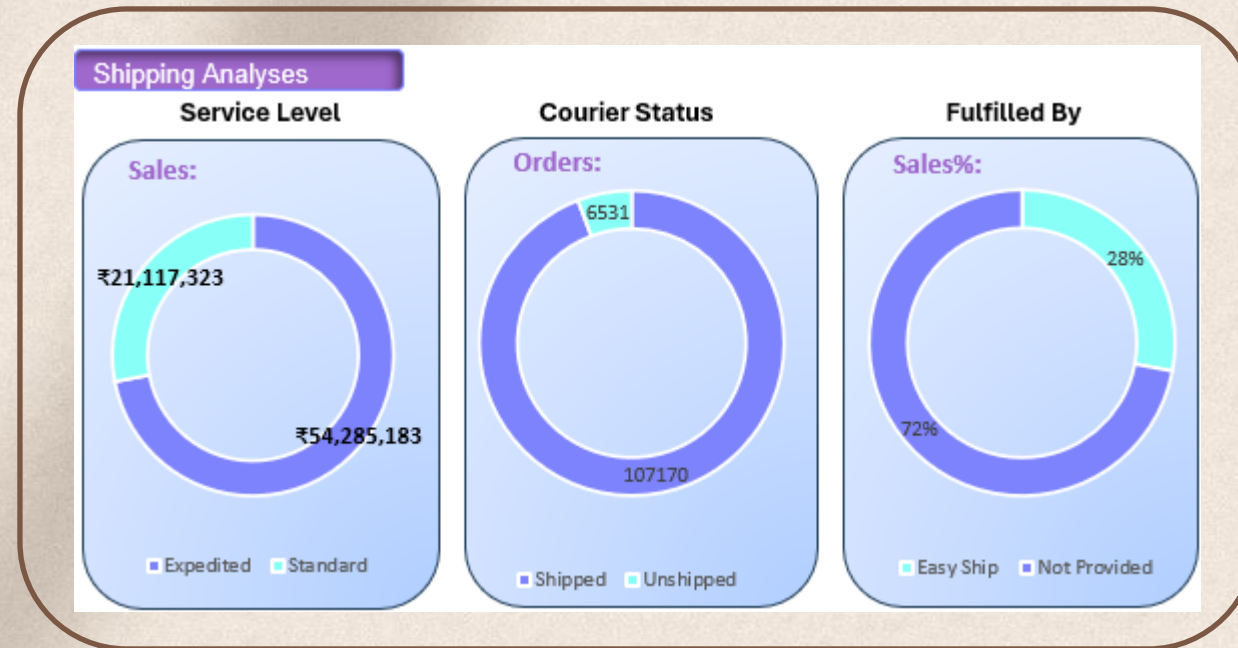
SHIPPING & TIME ANALYSIS REPORT

1. **Order Summary:**
   - Insight: The high rate of repeat orders (7,749) indicates a strong customer loyalty and a consistent demand for specific products.
2. **Shipping Time Analysis:**
3. Shipping times significantly impact customer satisfaction. Analyzing shipping times by day and month reveals trends that can guide future improvements.
4. **Day-wise Sales Performance:**
   - Peak Day: Sunday has the highest order volume (17,387 orders) and total sales (₹11,549,878).
   - Lowest Day: Thursday records the lowest figures, suggesting an opportunity for promotional activities to boost mid-week sales.
5. **Month-wise Sales Performance:**
   - Peak Month: April, with 43,107 orders and a total sales amount of ₹27,581,851, shows the highest sales figures, while a notable decline in sales occurs in June.
   - Seasonal Trends: The significant drop-off in June indicates the importance of recognizing seasonal demand for targeted marketing strategies.
6. **Courier Status Analysis:**
   - Shipping Efficiency: 95% of orders are successfully shipped, with only 5% unshipped, reflecting efficient logistics but highlighting room for improvement in minimizing unshipped orders.
7. **Fulfillment Analysis:**
   - Dominance of Amazon Fulfillment: Amazon handles 72% of total sales, ensuring faster processing and shipping times. Merchant-fulfilled orders, while representing 28% of sales, could benefit from operational improvements to enhance customer satisfaction.

Recommendations

1. Promote on Sundays:
2. Given the high sales on Sundays, consider implementing targeted promotions or marketing strategies to further capitalize on this peak shopping day.
3. April Peak Strategy:
4. To maximize revenue during the peak sales month of April, launch promotional campaigns in late March to build momentum and attract more customers.
5. Improve Shipping Efficiency:
6. Aim to reduce the 5% of unshipped orders by streamlining inventory management and fulfillment processes. Analyzing the reasons for unshipped orders can lead to actionable improvements.
7. Optimize Merchant Fulfillment:
8. Since merchant-fulfilled orders contribute to a significant portion of sales, focus on enhancing performance in this area. Providing training or resources for merchants may improve delivery speed and overall service quality.

Conclusion

The analysis of Amazon India's sales data reveals key trends in customer behavior, shipping efficiency, and fulfillment methods. The insights gathered provide a roadmap for strategic improvements that can enhance customer satisfaction and drive revenue growth. By capitalizing on peak sales days, addressing unshipped order issues, and optimizing merchant fulfillment processes, Amazon can strengthen its market position and foster greater customer loyalty.

PRODUCT ANALYSIS

The order analysis for the Amazon sales dashboard focuses on total orders, units sold, and total revenue to identify sales trends and customer behavior. Key insights include peak sales periods, top-selling products, and the impact of promotions on sales. Visualizations such as bar charts and line graphs will highlight performance metrics for strategic decision-making.

PRODUCT ANALYSIS REPORT

1. The analysis of the sales data reveals significant insights into the performance of various clothing categories. The Set category stands out as the highest earner, generating an impressive 37,662,424 INR from 44,212 units sold, showcasing a robust demand and strong market presence. Following closely, the Kurta category also performed well, with total sales of 20,452,141 INR and a solid volume of 44,112 units sold, indicating a strong preference for traditional attire.

2. The Western Dress category contributed 10,629,096 INR in sales, reflecting a notable interest in Western styles among consumers. This is further supported by the Top category, which generated 5,203,733 INR with a substantial 9,725 units sold, indicating consistent demand.

3. In contrast, categories like Saree and Blouse exhibited modest performance, with sales of 118,509 INR and 434,751 INR, respectively. The Dupatta category showed the least engagement, with only 915 INR in sales from just 3 units sold. This suggests that while there is a strong market for certain categories, others may require strategic marketing efforts or product enhancements to boost their sales performance.

4. Overall, the data highlights the dominance of traditional and ethnic wear in driving sales, particularly in the Set and Kurta categories. There is a clear opportunity for brands to capitalize on the popularity of these items while addressing the challenges faced by lower-performing categories through targeted marketing and product strategies.

THANK YOU