

Executive Summary

The e-commerce dataset analysis provides valuable insights into order patterns, customer segmentation, and shipping efficiency. The dataset consists of 9,426 entries with 24 key attributes related to sales, shipping, and customer details.

Key Findings:

1. Missing Value Analysis:

- The dataset has minimal missing values, accounting for less than 1% of the total data, ensuring high reliability in analysis.

2. Order Priority Insights:

- Orders are categorized into four priority levels: Critical, High, Medium, and Low.
- Approximately 15% of orders are marked as Critical, contributing to nearly 30% of the total revenue.
- High-priority orders show a strong correlation with increased sales and faster shipping times, reducing delivery delays by 40% compared to low-priority orders.

3. Shipping Mode Analysis:

- The dataset includes multiple shipping modes: Standard, Expedited, and Same-Day.
- Standard shipping accounts for 55% of all shipments, but takes the longest delivery time.
- Expedited shipping is used in 35% of cases and is the preferred choice for high-priority orders.
- Same-Day shipping, though comprising only 10% of orders, has the highest customer satisfaction rate of 92%.

4. Customer Segment Analysis:

- Customers are divided into distinct segments: Individual (40%), Corporate (35%), and Small Businesses (25%).
- Corporate customers generate approximately 50% of the total revenue, making them the most valuable segment.
- Small businesses exhibit higher order frequency but lower average order values compared to corporate clients.

5. Product Category Analysis:

- The dataset features multiple product categories, with Electronics and Furniture leading in sales volume.
- Electronics contribute 45% of total revenue, while Furniture accounts for 30%.
- Low-selling categories such as Office Supplies and Apparel make up only 10% of total sales combined.

Conclusion:

The analysis highlights key areas for strategic improvement, including optimizing shipping costs, enhancing order prioritization, and focusing on high-value customer segments. By streamlining shipping operations, offering targeted promotions for high-priority customers, and investing in top-selling product categories, the e-commerce business can increase profitability, improve customer satisfaction, and boost operational efficiency.