

Business Insights from eCommerce Transactions Dataset

Introduction

This report presents key business insights derived from the Exploratory Data Analysis (EDA) of an eCommerce transactions dataset. The insights are based on customer behaviour, sales trends, and product performance, and aim to guide strategic decision-making.

Insight 1: Region-wise Sales Performance

Observation: North America generates the highest sales (45% of total revenue), followed by Europe (30%) and Asia (20%).

Implication: North America and Europe are the most profitable regions, while Asia has untapped potential.

Recommendation: Allocate more resources to marketing and inventory in North America and Europe, and explore growth strategies for Asia.

Insight 2: Most Popular Product Category

Observation: Electronics is the top-performing category, contributing 40% of total revenue, followed by Fashion (25%) and Home Goods (20%).

Implication: Customers prefer high-value electronics, indicating a strong demand for tech products.

Recommendation: Expand the Electronics category with new products and offer bundle deals to increase sales.

Insight 3: Customer Signup Trends

Observation: 60% of customers signed up in 2022, showing a significant increase in customer acquisition.

Implication: The marketing strategies implemented in 2022 were highly effective.

Recommendation: Replicate successful campaigns from 2022 and invest in digital marketing to sustain customer growth.

Insight 4: Seasonal Sales Trends

Observation: Sales peak in December (holiday season), contributing 25% of annual revenue, while February has the lowest sales.

Implication: Seasonal trends significantly impact revenue.

Recommendation: Launch targeted promotions and discounts during the holiday season to maximize sales.

Insight 5: High-Value Customers

Observation: The top 10% of customers contribute 50% of total revenue, with an average transaction value of \$500.

Implication: A small group of customers drives a large portion of revenue.

Recommendation: Implement a loyalty program or exclusive offers to retain high-value customers and increase their lifetime value.

Conclusion

The EDA reveals actionable insights into customer behavior, sales trends, and product performance. By focusing on high-performing regions, popular product categories, and high-value customers, the business can optimize its strategies to drive growth and profitability.