

PDF Report: Business Insights

Title: Business Insights from eCommerce Data Analysis

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Overview

The exploratory data analysis (EDA) was conducted on three datasets: Customers.csv, Products.csv, and Transactions.csv. The primary goal was to uncover actionable insights to improve the company's eCommerce strategies and decision-making.

Key Business Insights

1. Customer Sign-Up Distribution:

- The Signup Date analysis revealed seasonal patterns in customer acquisition. A spike in sign-ups was observed during holiday seasons, suggesting an effective marketing campaign during these times.
- Recommendation: Increase marketing spend and offer promotions during these peak sign-up periods to maximize customer acquisition.

2. Regional Performance:

- The Region column showed that North America generated the highest revenue, while Africa had the lowest contribution.
- Recommendation: Focus on expanding market share in underperforming regions through targeted campaigns and localized strategies.

3. Top-Selling Product Categories:

- Analysis of Category in the merged dataset revealed that Electronics accounted for the majority of sales, followed by Home Appliances.
- Recommendation: Invest in diversifying the product portfolio within high-performing categories and introduce bundle offers to boost revenue.

4. Customer Spending Behavior:

- High-value customers (top 10% by TotalValue) contributed disproportionately to total revenue. These customers also displayed higher transaction frequencies and larger average order values.
- Recommendation: Implement a loyalty program to retain high-value customers and incentivize repeat purchases.

5. Inactive Customers:

- A significant number of customers were found to have signed up but never made a purchase. This indicates a gap in the onboarding or retention process.

- Recommendation: Send follow-up emails or offer discounts to re-engage inactive customers and convert them into active buyers.

Conclusion

The insights derived from this analysis provide a roadmap for improving customer acquisition, retention, and revenue generation. By focusing on high-value customers, expanding regional efforts, and optimizing product offerings, the company can achieve significant growth.