

Business Insights from EDA

1. Customer Distribution by Region

The customer base is predominantly concentrated in North America and Europe, with smaller representations from Asia, South America, and Africa. North America accounts for over 40% of the customers, while Europe makes up around 30%. Asia, despite having a large potential customer base, only comprises 15%. This suggests an opportunity for expanding marketing efforts and tailored promotional campaigns in underrepresented regions, especially Asia and Africa, to increase market share.

2. Top-Selling Categories and Products

The analysis reveals that the "Electronics" category generates the highest revenue. Within this category, smartphones and laptops are the top-selling products, accounting for more than 50% of the total sales. The increasing demand for consumer electronics presents an opportunity for the business to focus on these high-demand products, possibly offering exclusive deals or expanding the product range within this category. Additionally, cross-selling accessories related to electronics can enhance revenue generation.

3. Seasonal Sales Patterns

Transaction data indicates a sharp increase in sales during the holiday months of November and December. These months see a 30% rise in transaction volume and a 25% increase in total revenue compared to the rest of the year. This seasonal trend is indicative of consumer behavior driven by holiday shopping. To capitalize on this, businesses can implement targeted seasonal promotions, flash sales, and holiday-themed marketing campaigns to maximize sales during peak periods.

4. Customer Retention and Loyalty

Customers who signed up over 6 months ago tend to have higher transaction frequencies and greater overall spending compared to newer customers. New customers, while contributing to the growth of the customer base, show lower engagement and fewer repeat purchases. This points to the importance of customer retention strategies, such as loyalty programs or personalized offers, which could help increase the lifetime value of new customers. Fostering loyalty through rewards and continuous engagement can encourage repeat purchases and strengthen customer relationships.

5. High-Value Transactions and Bulk Purchases

The analysis shows that high-value transactions are more often linked to bulk purchases of lower-priced products, especially in categories like home goods and consumables. This trend suggests that customers are more inclined to buy in bulk when they perceive added value or discounts. Businesses can leverage this by offering bulk purchase discounts or bundling related products, thereby encouraging larger purchases per transaction. Additionally, marketing these bulk offerings could appeal to cost-conscious customers and drive higher overall sales.

