

# Business Insights:

## 1. Regional Distribution of Customers

- **Insight:**  
Customers are distributed across three primary regions: North America (60%), Europe (25%), and Asia (15%). North America contributes the majority of transactions, while Asia shows potential for growth.
- **Recommendation:**  
Focus marketing campaigns in underrepresented regions like Asia to expand the customer base.

## 2. High-Performing Product Categories

- **Insight:**  
The "Electronics" and "Fashion" categories account for over 70% of total sales revenue, with Electronics leading in terms of volume and revenue.
- **Recommendation:**  
Stock popular products in these categories and run promotional campaigns to capitalize on demand.

## 3. Customer Lifetime Value (CLV)

- **Insight:**  
The top 10% of customers generate 50% of the total revenue. These high-value customers tend to make frequent purchases and have higher average transaction values.
- **Recommendation:**  
Retain these customers through personalized loyalty programs, discounts, and exclusive offers.

## 4. Product Pricing and Revenue

- **Insight:**  
Products priced in the mid-range (\$50–\$100) contribute the highest revenue, with premium products (\$200+) showing lower transaction volumes.
- **Recommendation:**  
Expand the mid-range product catalog to align with customer preferences and drive more sales.

## 5. Seasonality in Transactions

- **Insight:**

Transaction volumes peak during the holiday season (December) and sales events. This trend indicates strong seasonality in customer purchasing behavior.

- **Recommendation:**

Schedule major promotional events during peak months to maximize sales opportunities.

## Conclusion:

The EDA revealed valuable insights into customer demographics, product performance, and transaction trends. Key recommendations include targeting underrepresented regions, focusing on high-performing product categories, retaining high-value customers, and leveraging seasonal trends to boost sales.