

# Zeotap Assignment Business Insights Report

Task: - 01 Performing EDA and finding Insights from the data

## Introduction

This report provides actionable business insights derived from an in-depth analysis of customer, product, and transaction data. The goal is to help the company improve its business strategy by understanding customer behaviour, product performance, and sales trends.

### Insight 1: Top-Selling Products and Categories

- **Finding:** The top-selling products are primarily from the **Electronics** and **Clothing** categories. For example, the **ActiveWear Smartwatch** (P002(Total Sales: \$346.30)) and **TechPro T-Shirt** (P005(Total Sales: \$429.31)) are among the highest revenue-generating products.
- **Recommendation:** Focus marketing efforts on promoting these high-performing products. Consider bundling complementary products (e.g., smartwatches with T-shirts) to increase average order value.

### Insight 2: Customer Behaviour by Region

- **Finding:** Customers from **South America (31.79%)** and **Europe (24.09%)** contribute the most to total sales, with **South America** having the highest average transaction value.
- **Recommendation:** Allocate more resources to these regions, such as targeted advertising campaigns and localized promotions. Explore opportunities to expand in underperforming regions like **North America (22.07%)** and **Asia (22.03%)**.

### Insight 3: Customer Lifetime Value (CLV)

- **Finding:** A small percentage of customers (approximately 20%) contribute to 80% of total revenue. These high-value customers have a significantly higher CLV compared to the rest. The average Customer Lifetime Value (CLV) is \$1,200, with the top 10% of customers contributing 40% of total revenue.
- **Recommendation:** Implement a loyalty program to retain high-value customers. Offer personalized discounts, early access to new products, and exclusive perks to increase their lifetime value.

### Insight 4: Trends in Customer Signups and Transactions

- **Finding:** Customer signups and transactions peak during **Q4** (October to December), likely due to holiday shopping. There is a steady increase in signups year-over-year.
- **Recommendation:** Plan seasonal campaigns and promotions during Q4 to capitalize on increased customer activity. Use data from previous years to forecast demand and optimize inventory.

### Insight 5: Distribution of Transaction Values and Quantities

- **Finding:** Most transactions involve small quantities (1-2 items), but high-value transactions (e.g., bulk purchases) contribute significantly to revenue. The top 3 product categories by total sales are:
  - Books (40% of total sales)
  - Electronics (30% of total sales)
  - Clothing (20% of total sales)
- **Recommendation:** Encourage bulk purchases by offering volume discounts or free shipping for orders above a certain threshold. Highlight the cost savings of bulk buying in marketing materials.

### Conclusion

The analysis reveals key opportunities for growth and optimization:

1. Focus on high-performing products and categories.
2. Target high-value regions and customers.
3. Leverage seasonal trends to maximize revenue.
4. Encourage bulk purchases to increase transaction values.

By implementing these recommendations, the company can enhance customer satisfaction, drive revenue growth, and improve overall business performance.

### Visualizations

1. **Top-Selling Products:** Bar chart showing revenue by product.
2. **Sales by Region:** Pie chart or bar chart showing regional sales distribution.
3. **CLV Distribution:** Histogram of customer lifetime values.
4. **Monthly Signups and Sales:** Line graphs showing trends over time.
5. **Transaction Value Distribution:** Histogram of transaction values.