

# Task 1: Exploratory Data Analysis (EDA) and Business Insights

**Objective** : The aim of this analysis was to explore the dataset comprising customer, product, and transaction information to extract meaningful insights, identify key revenue drivers, and suggest business strategies.

## Business Insights:

### 1. Top-Contributing Regions

The region contributing the highest revenue is **South America**, accounting for \$219,352.56 (approximately 31.8% of total sales). This indicates that South America could be a focus area for targeted marketing and further expansion strategies.

### 2. Best-Selling Products

The **ActiveWear Smartwatch** is the best-selling product, with a total of 100 units sold. Promoting this product further through discounts or bundled offers can boost sales even more.

### 3. Revenue by Product Category

The **Books** category generates the highest revenue of \$192,147.47, followed by **Electronics** at \$180,783.50. Investing in promoting the Books category and expanding its product line may yield higher returns.

### 4. Seasonal Revenue Trends

Monthly revenue peaks around **September 2024**, suggesting that this could be a seasonal demand period. Planning promotions or sales during this time can maximize profitability.

### 5. High-Value Customers

The top customer, **Paul Parsons**, generated \$10,673.87 in revenue. Implementing loyalty programs for high-value customers like Paul could enhance retention and foster repeat purchases.

### 6. Low-Performing Products

Products in the **Home Decor** category contribute the lowest revenue of \$150,893.93 among all categories. A reassessment of the product offerings and potential restructuring for this category might help improve profitability.

### 7. Customer Activity Patterns

On average, customers make **2.5 transactions** per year, spending approximately **\$689.99 per transaction**. Efforts to increase transaction frequency through personalized recommendations and cross-selling could drive higher overall sales.