### **Business Insights Report**

#### **Objective**

The objective of this analysis is to explore an eCommerce dataset to uncover key insights that can drive business decisions. This includes examining customer and product data, transaction patterns, and regional performance. Through Exploratory Data Analysis (EDA) and business insights, we aim to identify growth opportunities, optimize product offerings, and improve customer engagement strategies.

### **Exploratory Data Analysis (EDA)**

The EDA involved the following key steps:

1. **Data Cleaning**: Removed missing or duplicated values to ensure the quality of the analysis.
2. **Correlation Analysis**: Identified relationships between transaction values, quantities, and customer demographics.
3. **Visualizations**: Created various plots (bar charts,treemaps, etc.) to identify trends, anomalies, and patterns across regions, products, and customers.

### **Business Insights**

#### **1. Regional Revenue Focus**

🌍 South and North America contribute over **53%** of the total revenue, suggesting a need for targeted marketing and product availability strategies in these regions. Exploring underperforming regions could uncover untapped growth potential.

#### **2. High-Demand Product Categories**

📚📱 Categories such as **Books**, **Electronics**, **Clothing**, and **Home Décor** drive the most sales. Expanding the product range in these areas could help increase market share and revenue.

#### **3. Early Registrations Drive Revenue**

🛒 Customers who signed up earlier tend to make more frequent and higher-value purchases. Retaining these customers through loyalty programs and personalized offers can increase lifetime value and boost revenue.

#### **4. Low-Performing Products & Regions**

❌ Some products show low sales volumes and may need to be discontinued. No region contributes less than **5%** of revenue, but areas with less than **10%** revenue share may benefit from tailored strategies.

#### **5. Seasonal Sales Peaks**

📅 Peak sales occur during **July** and **August**, suggesting seasonal demand. Aligning inventory, pricing, and promotions with these trends can maximize revenue during these high-traffic months.