eCommerce Transaction

This project involves performing Exploratory Data Analysis (EDA) on a dataset containing eCommerce transaction details. The goal is to identify business insights and trends that can help optimize marketing strategies, improve sales, and enhance customer experience.

Dataset
We are working with three datasets:
1. Customers.csv - Contains customer information: ID, Name, Region, Signup Date.
2. Products.csv - Contains product details: ID, Name, Category, Price.
3. Transactions.csv - Contains transaction records: Transaction ID, Customer ID, Product ID, Quantity, Total Value.

Exploratory Data Analysis (EDA)

Key Business Insights from EDA

1. Top Revenue-Generating Product Categories: Certain product categories such as electronics and fashion generate significantly higher revenues compared to others. Targeting marketing efforts towards these categories can drive growth.
2. Region-Wise Sales Discrepancy: There is a noticeable difference in total transaction values across regions. High-performing regions should be further analyzed for expansion opportunities, while strategies to boost sales in underperforming regions can help balance revenue distribution.
3. Frequent and High-Value Customers: A small proportion of customers contribute to a large percentage of overall revenue. Creating loyalty programs for these customers can increase repeat purchases and improve lifetime value.
4. Transaction Frequency Insights: Customers who have frequent transactions are often more engaged. We can use this information to identify at-risk customers (those with reduced transaction frequency) and target them with promotions or reminders.
5. Price and Quantity Trends: There's a positive relationship between higher quantities purchased and higher total value per transaction. Businesses should consider bundle offers or volume-based pricing to increase sales volume and encourage larger orders.