Exploratory Data Analysis (EDA) Report

Objective

This analysis aims to explore customer, product, and transaction datasets to derive actionable business insights. By understanding trends in customer demographics, product performance, and transaction behaviours, businesses can optimize strategies for growth and efficiency.

Dataset Overview

1. **Customers.csv**
   o Total Customers: 500
   o Key Attributes: CustomerID, Region, SignupDate
2. **Products.csv**
   o Total Products: 100
   o Key Attributes: ProductID, Category, Price
3. **Transactions.csv**
   o Total Transactions: 10,000
   o Key Attributes: TransactionDate, TotalValue, Quantity

Action Plan

1. **Market Expansion**
   o Target underperforming regions with localized strategies to grow customer base.
2. **Product Optimization**
   o Prioritize high-performing categories while monitoring demand trends to adjust inventory.
3. **Customer Retention**
   o Strengthen relationships with high-value customers through loyalty incentives and tailored experiences.
4. **Seasonal Preparation**
   o Optimize Q4 planning by aligning stock, logistics, and promotions with historical demand trends.
5. **Campaign Analysis**
   o Leverage successful strategies from 2023 campaigns to attract and retain new customers.

Conclusion

The analysis highlights opportunities for growth through regional expansion, product optimization, and targeted customer retention. Implementing these strategies can drive revenue, improve customer satisfaction, and enhance market presence.