

Business Problem Statement

A major retail company is seeking deeper insights into its customers' purchasing behavior to boost sales performance, enhance customer satisfaction, and strengthen long-term loyalty. Recent shifts in buying habits—across different demographics, product lines, and sales channels (both online and in-store)—have raised questions about what truly influences customer choices. The company wants to better understand how factors such as discounts, product reviews, seasonal trends, and payment preferences impact purchase decisions and repeat buying.

Your role is to analyze the organization's customer behavior dataset to address the following key question:

“How can the company utilize customer shopping data to uncover meaningful trends, improve customer engagement, and refine its marketing and product strategies?”

Deliverables

1. Data Preparation & Modeling (Python):

Clean, preprocess, and structure the raw dataset to ensure it is ready for analysis.

2. Data Analysis (SQL):

Build a well-organized database, simulate business transactions, and execute SQL queries to extract insights on customer segments, loyalty patterns, and factors influencing purchases.

3. Visualization & Insights (Power BI):

Develop an interactive dashboard to highlight key behavioral trends, helping stakeholders make informed, data-driven decisions.

4. Report & Presentation:

Prepare a clear and concise report summarizing the major findings and recommended actions. Create a visually compelling presentation to communicate insights effectively to business stakeholders.

5. GitHub Repository:

Provide a comprehensive, well-structured repository containing all Python scripts, SQL queries, processed data files, and the Power BI dashboard.