Retail Consumer Behavior Analysis Project

Business Problem Statement

A leading retail company is seeking to better understand its customers' shopping behaviors to improve sales, enhance customer satisfaction, and build long-term loyalty. Management has observed shifts in purchasing patterns across demographics, product categories, and sales channels (online vs. offline).

They want to identify which factors—such as discounts, product reviews, seasonal trends, and payment preferences—influence customer decisions and repeat purchases.

This project aims to answer the overarching business question:

"How can the company leverage consumer shopping data to identify trends, improve customer engagement, and optimize marketing and product strategies?"

Project Deliverables

1. Data Preparation & Modeling (Python)

- Clean, transform, and preprocess the raw dataset.

- Prepare structured data suitable for analysis and modeling.

2. Data Analysis (SQL)

- Organize data into a relational structure and simulate business transactions as needed.

- Write and execute SQL queries to uncover insights on customer segments, loyalty, and purchase drivers.

3. Visualization & Insights (Power BI)

- Develop an interactive dashboard highlighting key patterns and trends.

- Provide visual insights to support data-driven decision-making.

4. Report & Presentation

- Produce a clear report summarizing methodology, insights, and actionable business recommendations.

- Create a presentation that visually communicates findings to stakeholders.

5. GitHub Repository

- Maintain a well-structured repository containing all Python scripts, SQL queries, documentation, and dashboard files.