

Business Problem Statement

A major retail organization seeks to gain deeper insights into customer purchasing patterns to enhance revenue generation, elevate customer experience, and foster enduring brand loyalty. The leadership has observed shifts in buying behaviors across different customer segments, merchandise types, and distribution channels (digital vs. physical stores). There is particular interest in identifying the key drivers—including promotional offers, customer feedback, seasonal trends, and transaction methods—that influence buying decisions and encourage repeat business.

Your assignment is to examine the organization's consumer behavior dataset to address the following central business question:

"How can the organization harness shopping data insights to recognize emerging patterns, strengthen customer relationships, and refine promotional and merchandising strategies?"

Deliverables

- 1. Data Preparation & Modeling (Python):** Process and restructure the raw dataset to enable comprehensive analysis.
- 2. Data Analysis (SQL):** Structure the information into an organized format, replicate business scenarios, and execute queries to derive insights regarding customer classifications, retention, and factors influencing purchases.
- 3. Visualization & Insights (Power BI):** Develop an interactive analytics dashboard that showcases critical patterns and emerging trends, empowering decision-makers with data-driven intelligence.
- 4. Report and Presentation:** Compose a comprehensive project report outlining your principal discoveries and strategic recommendations. Create a presentation that effectively conveys insights and practical suggestions to organizational stakeholders.
- 5. GitHub Repository:** Organize all Python code, SQL scripts, and dashboard components in a well-maintained repository.