

Business Problem Statement

A leading retail company aims to gain a deeper understanding of its customers' shopping behaviour to enhance sales, improve customer satisfaction, and strengthen long-term loyalty. The management team has observed shifts in purchasing patterns across demographics, product categories, and sales channels (online vs. offline). They are particularly interested in identifying which factors—such as discounts, reviews, seasons, or payment preferences—most influence customer decisions and repeat purchases.

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

Deliverables

1. **Data Preparation & Modeling (Python):** Clean and transform the raw dataset to prepare it for analysis.
2. **Data Analysis (SQL):** Structure the data, simulate business transactions, and run SQL queries to extract insights on customer segments, loyalty, and purchase drivers.
3. **Visualization & Insights (Power BI):** Develop an interactive dashboard that highlights key patterns and trends, enabling stakeholders to make informed, data-driven decisions.
4. **Report and Presentation:** Create a concise project report summarizing findings and business recommendations, along with a presentation that visually communicates insights and actionable strategies.
5. **GitHub Repository:** Upload all Python scripts, SQL queries, and dashboard files in a clean, well-organized repository.