

Business Problem Statement

A leading retail company seeks to gain deeper insights into customer shopping behaviour to enhance sales performance, 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 the key drivers of consumer decisions and repeat purchases—such as discounts, product reviews, seasonal trends, and payment preferences.

You are tasked with analysing the company's consumer behaviour dataset to address the following overarching business question:

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

Deliverables

1. Data Preparation & Modelling (Python)
 1. Clean and transform raw datasets for consistency and usability.
 2. Develop models to structure the data for analysis and predictive insights.
3. Data Analysis (SQL)
 4. Organize the data into a structured relational format.
 5. Simulate business transactions to reflect real-world scenarios.
 6. Run SQL queries to uncover insights on customer segments, loyalty patterns, and purchase drivers.
2. Visualization & Insights (Power BI)
 7. Build an interactive dashboard to highlight key shopping trends and behavioural patterns.
 8. Enable stakeholders to explore data dynamically and make informed, data-driven decisions.
3. Report and Presentation
 9. Prepare a comprehensive project report summarizing findings, insights, and business recommendations.
 10. Create a presentation that visually communicates actionable strategies to stakeholders.
4. GitHub Repository
 11. Maintain a well-structured repository containing all Python scripts, SQL queries, and Power BI dashboard files.