

Business Problem Statement

A leading retail organization seeks to gain deeper insights into customer purchasing behaviour to enhance sales performance, customer satisfaction, and long-term loyalty. Recent observations indicate notable shifts in buying patterns across demographic segments, product categories, and sales channels (online versus offline). The leadership team aims to identify the key drivers influencing purchasing decisions and repeat buying behaviour, including factors such as pricing and discounts, customer reviews, seasonal trends, and payment preferences.

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

"How can consumer shopping data be leveraged to uncover actionable trends, strengthen customer engagement, and optimize marketing and product strategies?"

Deliverables

1. Data Preparation & Modeling (Python):

Clean, preprocess and transform the raw dataset to ensure data quality and suitability for analytical modeling.

2. Data Analysis (SQL):

Structure the data to simulate real-world business transactions and execute analytical queries to derive insights related to customer segmentation, loyalty patterns, and key purchase drivers.

3. Visualization & Insights (Power BI):

Develop an interactive dashboard that clearly presents critical trends and performance metrics, enabling stakeholders to make informed, data-driven decisions.

4. Report and Presentation:

Produce a comprehensive project report summarizing analytical findings, insights, and business recommendations. Create a professional presentation that effectively communicates key results and actionable strategies to stakeholders.

5. GitHub Repository:

Maintain a well-organized GitHub repository containing all Python scripts, SQL queries, and dashboard files, ensuring transparency, reproducibility, and ease of collaboration.