

Retail Customer Shopping Behaviour Analysis

Problem Statement

A retail business serves a diverse customer base across multiple product categories, seasons, and purchasing patterns. Although the company collects detailed customer transaction data, it lacks clear visibility into how different customer segments behave and which factors most strongly influence purchasing decisions and repeat buying behaviour.

Shifts in customer demographics, payment preferences, subscription usage, and promotional effectiveness have made it challenging for the business to identify high-value customers and optimize marketing strategies. As a result, customer engagement efforts remain broad and less targeted, limiting opportunities for improved retention and revenue growth.

The focus is on analysing historical customer shopping data to uncover meaningful patterns in customer behaviour. The insights generated aim to support data-driven decisions related to marketing optimization, customer engagement, and long-term business strategy.

Business Objective

To analyse customer transaction data in order to identify purchasing trends, segment customers based on behaviour, and generate actionable insights that support marketing optimization and customer retention initiatives.

Deliverables

- 1. Data Preparation & Analysis (Python)**
 - Cleaned and transformed customer transaction data and performed exploratory analysis to identify behavioural patterns.
- 2. Analytical Queries & Insights (SQL)**
 - Executed structured queries to analyse customer segments, purchase frequency, spending behaviour, and loyalty indicators.
- 3. Interactive Dashboard (Power BI)**
 - Developed a business-focused dashboard highlighting key metrics, trends, and customer segments for stakeholders.
- 4. Insights & Recommendations**
 - Summarized key findings and provided actionable business recommendations to improve customer engagement and marketing effectiveness.