

Customer Shopping Behavior – Business Problem Statement

A retail organization aims to gain deeper insight into how customers interact with its products and services. Recent shifts in buying habits across age groups, product categories, and purchasing channels have raised important questions around customer engagement, satisfaction, and retention. Leadership is particularly interested in understanding how factors such as pricing strategies, promotional offers, product reviews, seasonality, and delivery preferences influence purchasing decisions and repeat behavior.

The objective of this analysis is to transform consumer shopping data into actionable intelligence that supports informed decision-making. By identifying behavioral trends and key drivers behind customer choices, the business can improve marketing effectiveness, optimize product strategies, and strengthen long-term loyalty.

Primary Business Question

How can customer transaction data be utilized to uncover behavioral patterns, enhance customer engagement, and support strategic decisions related to marketing, pricing, and product positioning?

Project Deliverables

- **Data Preparation & Feature Engineering:** Clean, validate, and transform raw customer transaction data using Python to ensure analytical readiness.
- **Analytical Processing & Business Queries:** Use SQL to structure the data and perform targeted analysis on customer segments, purchasing trends, loyalty, and revenue drivers
- **Visualization & Dashboard Development:** Design an interactive Power BI dashboard that clearly presents insights, trends, and key performance indicators for stakeholders.
- **Insights & Recommendations Report:** Summarize findings and translate analytical results into practical business recommendations.
- **Project Repository & Documentation:** Maintain a well-organized GitHub repository containing scripts, queries, and dashboard assets.