

Business Problem Statement

A major retail company wants to understand how its customers shop so it can increase sales, improve customer satisfaction, and build long-term loyalty. Recently, the company has noticed changes in how different types of customers buy products, including variations across age groups, product categories, and purchases made online versus in stores.

The management wants to know what factors, such as discounts, customer reviews, seasons, or preferred payment methods, influence customers' buying decisions and what encourages them to return for repeat purchases.

Your main task is to analyze the company's customer shopping data to answer the question:

"How can the company use customer shopping data to find trends, improve customer engagement, and make better marketing and product decisions?"

Project Deliverables

1. Data Preparation & Modeling (Python)

Clean and format the raw dataset so it's ready for analysis. Build basic data models if needed.

2. Data Analysis (SQL)

Organize the cleaned data into tables, simulate business transactions if required, and write SQL queries to find insights about customer groups, loyalty, and what drives purchases.

3. Visualization & Insights (Power BI)

Create an interactive Power BI dashboard that shows key customer trends and patterns. Make it easy for managers to explore insights and make decisions.

4. Report & Presentation

Prepare a simple report explaining your findings and business recommendations. Create a presentation that shows visuals and clear insights for stakeholders.

5. GitHub Repository

Upload all Python code, SQL queries, datasets, and the Power BI dashboard to a well-organized GitHub repository.