

# **Business Problem Statement**

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## **1. Introduction**

The retail organization aims to strengthen its competitive advantage by understanding how customers shop across demographic groups, product categories, and sales channels. As market conditions shift and customer expectations evolve, leadership recognizes the need for a data-driven approach to improve targeting, personalization, and operational efficiency.

The company has observed noticeable fluctuations in purchase frequency, discount usage, product demand, and subscription behavior. These shifts highlight gaps in customer engagement strategies and present an opportunity to optimize product offerings, promotions, and loyalty initiatives.

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## **2. Core Business Challenge**

The central challenge lies in identifying the factors that most strongly influence customer decisions—such as pricing, discounts, product reviews, shipping preferences, demographics, and seasonality—and determining how these factors translate into customer value and long-term loyalty.

The business must understand:

- **Which customer segments drive the highest revenue and loyalty?**
  - **How do discounts impact spending behavior and profit margins?**
  - **Which product categories and items generate the highest satisfaction and repeat purchases?**
  - **How does subscription status affect revenue, purchase frequency, and retention?**
  - **Which demographic groups present the largest opportunity for growth?**
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## **3. Strategic Objective**

To uncover actionable insights using a structured analytics workflow—beginning with data preparation in Python, followed by SQL-based business analysis, and concluding with visual intelligence through Power BI.

The overarching business question guiding this initiative is:

**“How can the company leverage customer shopping data to uncover behavioral patterns, enhance customer engagement, and optimize marketing, pricing, and product strategies for sustainable business growth?”**

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## 4. Specific Areas of Business Interest

Based on the dataset and dashboard findings, management seeks clarity in the following areas:

### A. Revenue Drivers and Customer Value

- Identify which customer groups (gender, age, subscription status) generate the highest revenue.
- Evaluate whether subscribers produce higher average revenue compared to non-subscribers.
- Assess whether Express shipping customers reflect higher transaction value.

### B. Product Behavior and Satisfaction

- Determine the top-rated products and those most frequently purchased.
- Understand discount dependency across product categories.
- Analyze seasonal impact on purchasing trends.

### C. Customer Loyalty and Segmentation

- Classify customers into New, Returning, and Loyal categories.
  - Measure retention patterns and drivers of repeat purchases.
  - Evaluate whether repeat buyers are more likely to subscribe.
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## 5. Expected Business Outcomes

Through comprehensive analysis, the organization aims to:

- Strengthen **customer retention** by developing targeted loyalty programs.
  - Improve **profitability** through optimized discount strategies.
  - Enhance **subscription growth** by identifying key motivators for high-value customers.
  - Support **data-driven marketing** by aligning campaigns with high-revenue segments.
  - Optimize **inventory and product positioning** based on category performance and customer satisfaction.
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## 6. Project Deliverables

As defined in the analytical workflow:

- **Python Data Preparation & Modeling** – Clean, transform, and structure the dataset.
  - **SQL Analysis** – Answer core business questions using structured queries.
  - **Power BI Dashboard** – Provide interactive visual insights for decision-makers.
  - **Final Report & Presentation** – Communicate findings and strategic recommendations.
  - **Repository** – Maintain a complete, well-organized project package.
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## 7. Business Impact

Upon completion, the project will empower leadership with a clearer picture of:

- Who their most valuable customers are
- What products drive satisfaction and profitability
- How purchasing behavior varies by demographic and channel
- Where to invest in marketing, promotions, and loyalty initiatives

This allows the business to transition from reactive decision-making to a proactive, insight-driven strategy.