

Business Requirements Document (BRD):

1. Business Problem:

The mall management currently lacks a comprehensive understanding of the various customer profiles that visit the mall. This lack of insight leads to untargeted and ineffective marketing strategies, resulting in suboptimal customer satisfaction and sales performance.

2. Business Objectives:

The primary objectives of this project are:

- To segment customers into distinct groups based on their purchasing behaviour and demographics.
- To enhance targeted marketing strategies for each customer segment.
- To improve overall customer satisfaction and increase sales.

3. Functional Requirements:

3.1 Data Collection

- Collect relevant data on customers, including demographics (age, gender, income) and purchasing behaviour (spending scores, purchase history).
- Ensure data is clean, accurate, and updated regularly.

3.2 Data Analysis

- Perform exploratory data analysis (EDA) to understand the data distribution and relationships.
- Use clustering algorithms (e.g., K-means) to segment customers into distinct groups.

3.3 Visualization

- Develop intuitive and interactive visualizations to represent customer segments.
- Use dashboards to display key metrics and insights for each segment.

3.4 Reporting

- Generate detailed reports outlining the characteristics of each customer segment.
- Provide actionable recommendations for targeted marketing strategies based on the segments.

4. Non-functional Requirements:

4.1 Performance

- Ensure the system can handle large datasets efficiently.
- The analysis and visualization processes should be optimized for speed and accuracy.

4.2 Scalability

- The solution should be scalable to accommodate an increasing volume of customer data over time.
- Ensure the system can integrate with other data sources and marketing platforms as needed.

4.3 Usability

- The user interface should be intuitive and easy to navigate for non-technical users.
- Provide comprehensive documentation and user training to ensure effective use of the system.