

Project Charter

Project Title : **Customer Segmentation for a Retail Store**

Project Manager : LATHIGAA

Start Date : July 14, 2024

End Date : July 15, 2024

Objectives:

The primary objective of this project is to segment customers of a retail store into distinct groups based on their purchasing behavior. By identifying these customer segments, the store can develop targeted marketing strategies, optimize product offerings, and enhance customer satisfaction.

Scope:

The scope of this project includes:

1. **Data cleaning and preprocessing**
 - Handling missing values
 - Removing duplicates
 - Transforming data into a suitable format for analysis
2. **Exploratory Data Analysis (EDA)**
 - Analyzing customer demographics (age, gender, location, etc.)
 - Examining purchasing patterns (frequency, average order value, items purchased, etc.)
 - Identifying relationships and trends within the data
3. **Customer segmentation using K-Means clustering**
 - Determining the optimal number of clusters
 - Applying the K-Means algorithm to segment customers
 - Evaluating the quality and stability of the clusters
4. **Visualization and reporting**
 - Creating visualizations using Matplotlib to illustrate the segmentation results
 - Generating insights and conclusions based on the segmentation
 - Providing recommendations for targeted marketing strategies and product optimization

Deliverables:

The key deliverables for this project include:

1. Insights and conclusions

- Detailed analysis of customer segments
- Identification of key characteristics and behaviors for each segment

2. Recommendations

- Strategies for targeted marketing campaigns based on customer segments
- Suggestions for product optimization and assortment planning

3. Final report and presentation

- Comprehensive documentation of the project methodology and findings
- Presentation of results and recommendations to stakeholders

This project aims to provide valuable insights into the retail store's customer base and enable data-driven decision-making to improve customer engagement, sales, and overall business performance.