Customer Segmentation using Clustering Algorithms

Introduction

Customer segmentation is a crucial part of any marketing strategy. It allows businesses to understand their customer base better, tailor their marketing efforts, and improve customer satisfaction. In this project, we employ three clustering algorithms: K-Means, DBSCAN, and Agglomerative Clustering to segment customers based on their purchasing behavior.

Dataset Information

The datasets used in this project include:

- List\_of\_Orders: Contains details about orders placed by customers.

- Columns: `Order ID`, `Order Date`, `CustomerName`, `State`, `City`

- Order\_Details: Contains details about each order.

- Columns: `Order ID`, `Amount`, `Profit`, `Quantity`, `Category`, `Sub-Category`

- Sales\_Target: Contains monthly sales targets by category.

- Columns: `Month of Order Date`, `Category`, `Target`

Summary:

- Successfully segmented customers using three different clustering algorithms.

- Provided actionable insights based on customer segments.

- Demonstrated the value of clustering for customer segmentation and targeted marketing.

Future Work:

- Explore additional features and more advanced clustering techniques.

- Incorporate real-time data for dynamic customer segmentation.

Architecture Diagram:

