

**Name: Meet Kataria**

## **Customer Segmentation Report**

# **Customer Segmentation Using Clustering Techniques**

### **1. Introduction:**

Customer segmentation is a way to understand different groups of customers based on their purchasing behaviour and profile information. By utilizing clustering techniques, businesses can group customers effectively, leading to better marketing strategies and improved customer management.

### **2. Clustering Methodology:**

In this analysis, K-Means clustering was employed to segment customers. The analysis considered various data points, including total spending, number of purchases, and preferred products. The optimal number of customer groups was determined by optimizing the Davies-Bouldin Index (DB Index).

### **3. Results:**

The analysis revealed that the best number of groups was 2, indicated by the lowest DB Index value of 0.65. Each group represents customers with similar purchasing habits and preferences. These groupings provide valuable insights for targeted marketing and personalised engagement.

### **4. Visualizations:**

Scatter plots were created to visualize these customer groups. The plots demonstrated clear separation, indicating distinct groups of customers.



## **5. Conclusion:**

Customer segmentation helps us understand how customers act. We can use the findings to create focused marketing campaigns, better use our resources, and improve customer satisfaction. By analyzing the data more, we can refine the segments and make our business strategies better.