

# MACHINE LEARNING PROJECT: CUSTOMER SEGMENTATION USING K-MEANS ALGORITHM

## INTRODUCTION:

- Conducted a customer segmentation analysis using K-Means Clustering to identify distinct groups within a dataset, enabling targeted marketing strategies for improved customer engagement.
- The project involved thorough data preprocessing, including scaling to normalize feature distributions, ensuring optimal clustering performance.
- Employed visualizations through Seaborn and Matplotlib to explore data patterns and present segmentation results effectively.

## Key Algorithms Used:

**K-Means Clustering:** For grouping customers based on purchasing behaviour and demographics.

**Scaling Techniques:** To standardize data and enhance clustering accuracy.

**Seaborn and Matplotlib:** For data visualization and insightful exploratory analysis.

Through this project, applied clustering techniques and data visualization tools, providing actionable insights for strategic decision-making in marketing and customer relationship management.

