

# Customer Segmentation Analysis Using K-Means Clustering

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# Understanding Customer Behavior

## Problem Statement

Analyze customer purchase behavior to improve marketing strategies.

## Key Objectives

- Segment customers using clustering.
- Identify high and low-value customers.
- Enhance marketing strategy effectiveness.

# Dataset Description

2205

## Customer Records

Clean dataset with no missing values.

39

## Features

Includes Income, Spending, and Recency.



### Average Income

₹51,622



### Average Spending

₹562



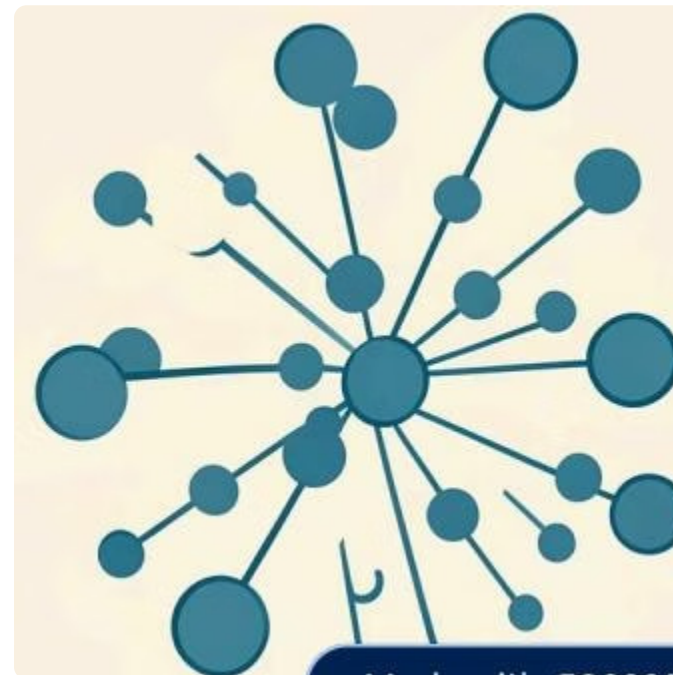
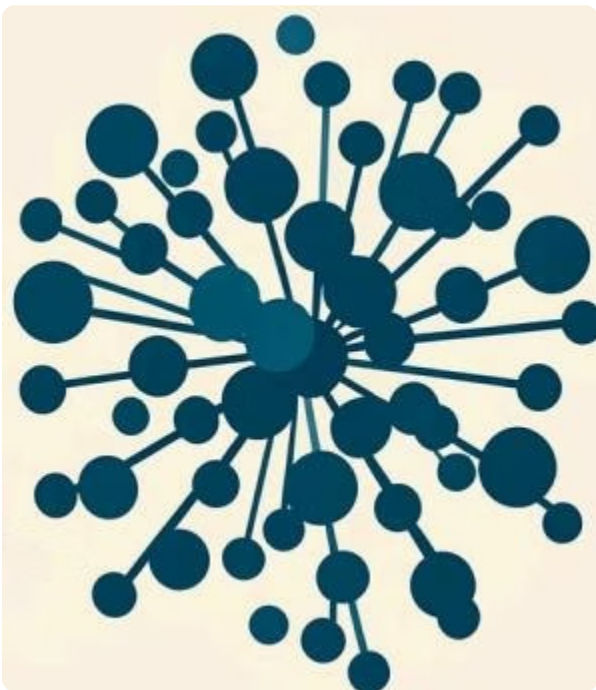
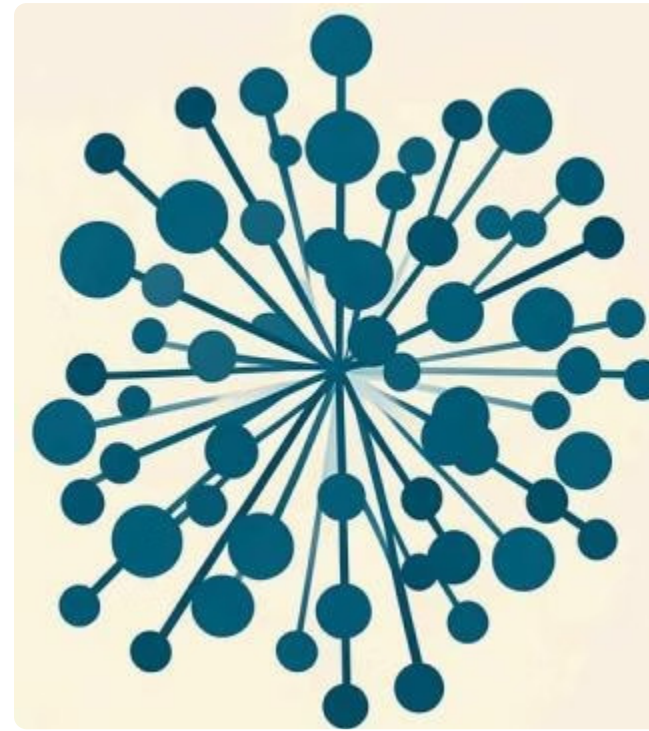
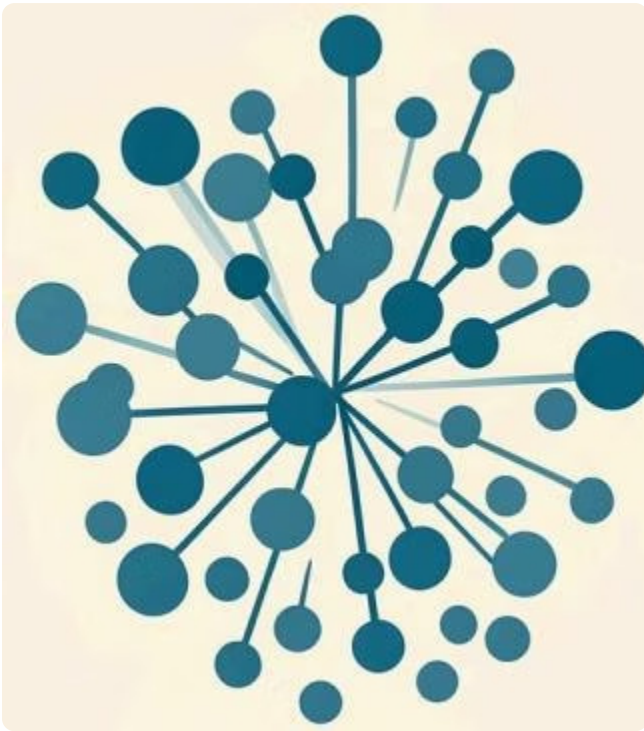
### Average Recency

49 days



# K-Means Clustering Technique

We applied K-Means Clustering to segment customers into 4 distinct groups based on Income and Total Spending.





# Customer Segments Distribution



## Cluster 0

578 customers



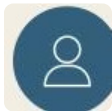
## Cluster 1

510 customers



## Cluster 2

337 customers



## Cluster 3

596 customers



PERSONA 11

Low Income (₹26,604), Low Spending (₹61)



PERSONA 03

High Income (₹66,447), High Spending (₹857)



PERSONA 76

Very High Income (₹79,062), Premium Customers (₹1,569)



PERSONA 93

Medium Income (₹47,903), Moderate Spending (₹231)

# Detailed Segment Breakdown

1

## Cluster 0

Low Income (₹26,604), Low Spending (₹61)

2

## Cluster 1

High Income (₹66,447), High Spending (₹857)

3

## Cluster 2

Very High Income (₹79,062), Premium Customers (₹1,569)

4

## Cluster 3

Medium Income (₹47,903), Moderate Spending (₹231)

# Key Insights & Strategic Actions



## Highest Revenue

Cluster 2 generates the most revenue.



## Valuable Customers

Premium customers (Cluster 2) are fewer but highly valuable.



## Lowest Contribution

Cluster 0 contributes the least revenue.



## Moderate Spenders

Majority of customers are moderate spenders (Cluster 3).



## Cluster 2

Loyalty rewards



## Cluster 0

Discount campaigns



## Cluster 1

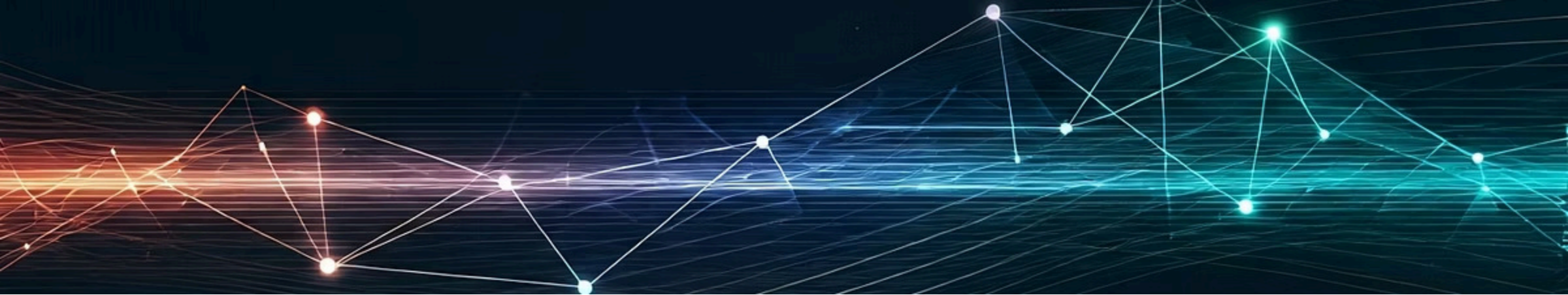
Premium offers



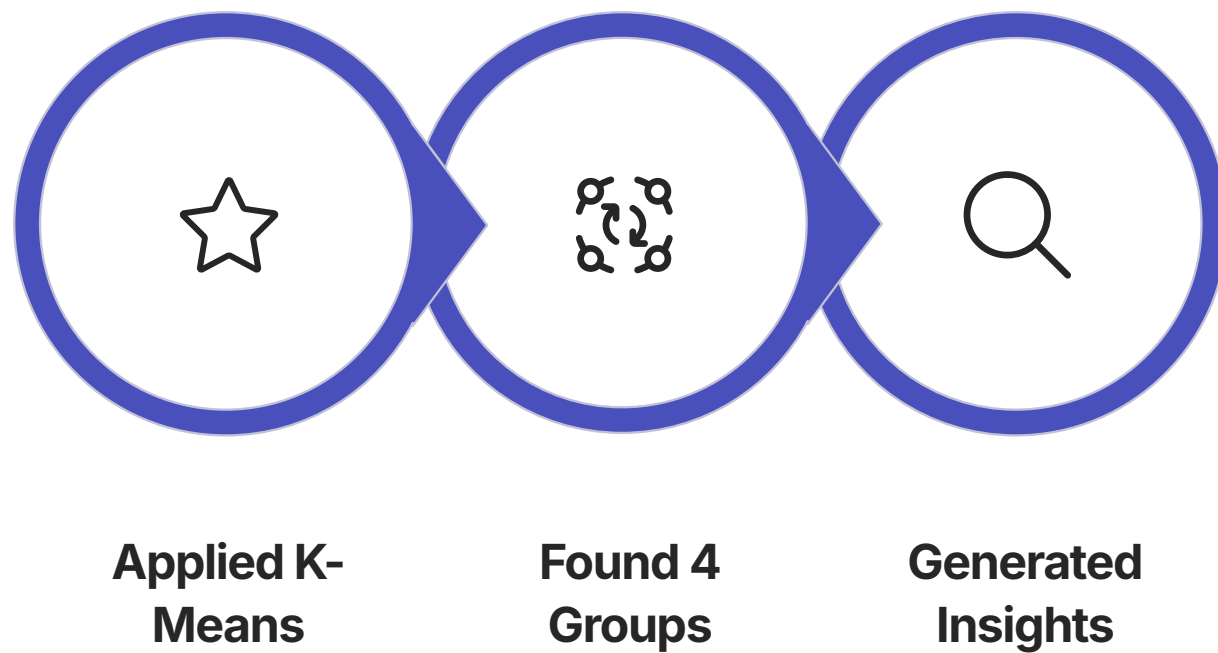
## Cluster 3

Engagement strategies





# Conclusion



Successfully segmented customers, providing actionable insights for targeted marketing and improved business outcomes.