CUSTOMER SEGMENTATION USING DATA SCIENCE

Phase 2:Innovation

Customer Segmentation and Analysis

Customer segmentation is an effective tool for businesses to closely align their strategy and tactics with, and better target, their current and future customers.

Most common algorithms used in customer segmentation:

K-means

Hierarchical clustering

DBSCAN (Density-Based Spatial Clustering of Applications with Noise)

Gaussian mixture models

Principal component analysis (PCA)

Latent class analysis

Neural networks such as self-organizing maps (SOMs)

Steps to solve the problem:

1. Importing Libraries.
2. Exploration of data.
3. Data Visualization.
4. Clustering using K-Means.
5. Selection of Clusters.
6. Ploting the Cluster Boundry and Clusters.
7. 3D Plot of Clusters.

Real-world Application

Luxury car manufacturers often use lifestyle segmentation to target top earners. They identify top earners by analyzing factors like their age, education level, occupation, and, if available, past spending habits. From there, they can create ads that mirror this individual's interests and tastes.

Conclusion

K means clustering is one of the most popular clustering algorithms and usually the first thing practitioners apply when solving clustering tasks to get an idea of the structure of the dataset. The goal of K means is to group data points into distinct non-overlapping subgroups. One of the major application of K means clustering is segmentation of customers to get a better understanding of them which in turn could be used to increase the revenue of the company.


Thank
you!