**Unsupervised-Machine-Learning-for-Customer-Market-Segmentation**

In this hands-on guided project, we will train unsupervised machine learning algorithms to perform customer market segmentation.

This case requires to develop a customer segmentation to define marketing strategy. The sample Dataset summarizes the usage behaviour of about 9000 active credit card holders during the last 6 months. The file is at a customer level with 17 behavioural variables.

"Market segmentation" is the process of dividing the customers into groups or categories based on their features. Market segmentation is crucial for marketers since it enables them to launch targeted ad marketing campaigns that are tailored to customer's specific needs.

We have been given access to data that contains the products purchased by various users. We would like to build a recommendation system that is able to recommend similar products for the customer based on their previous purchases. For this reason, we are going to use K-Means as unsupervised ML algorithm.

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● Executed data visualization (histogram, pie chart, box plot) to get a good idea regarding the features in the dataset.

● Performed customer segmentation using k-Means Clustering algorithm.

● Implemented elbow method to select optimal numbers of cluster and PCA algorithm for dimensionality reduction.