

# E-commerce Customer Segmentation

### Abstract:

A key challenge for e-commerce businesses is to analyze the trend in the market to increase their sales. The trend can be easily observed if the companies can group the customers; based on their activity on the e-commerce site. This grouping can be done by applying different criteria like previous orders, mostly searched brands and so on.

### Problem Statement:

Given the e-commerce data, use k-means clustering algorithm to cluster customers with similar interest.

### Dataset Information:

The data was collected from a well known e-commerce website over a period of time based on the customer's search profile.

### Variable Description:

Column	Description
Cust_ID	Unique numbering for customers
Gender	Gender of the customer
Orders	Number of orders placed by each customer in the past

**Remaining 35 features (brands) contains the number of times customers have searched them**

### Scope:

## Problem Statement – K-means

- Analyzing the existing customer data and getting valuable insights about the purchase pattern
- Data pre-processing including missing value treatment
- Segmenting customer based on the optimum number of clusters ('k') with the help of silhouette score

### Learning Outcome:

The students will get a better understanding of how the variables are linked to each other and will be able to apply cluster analysis to business problem such as customer segmentation.