We can either ***classify*** a given observation or perform a ***regression.***

***regression*** is a measure of the relationship between the mean value of one variable with the corresponding value or values of another variable or other variables.

***Classification***is the process of determining the category or class that an observation belongs to.

Both ***regression*** and ***Classification*** comes under the domain of ***Supervised Learning.***

In ***supervised learning,*** the learning process has a "goal" - to predict the missing variable Y. ***Y*** is also called the ***target variable.***

***Clustering:*** Often data will not be neatly and nicely labeled. One approach to this situation is to try to find some "natural" groupings in the data. *Clustering* is one such approach that looks at each of the different attributes in the data and tries to group the data based on rows that have similar values for the attributes.

***K-Means Clustering:*** K-Means is an unsupervised learning technique, meaning that it is a technique for finding patterns in data without prior knowledge of what belongs to what.