**Efficient clustering algorithm to segregate tests based on execution behaviour**

Unsupervised learning

Machine learning technique for finding hidden patterns or intrinsic structures in data

Unsupervised learning is a type of machine learning algorithm used to draw inferences from datasets consisting of input data without labeled responses.

The most common unsupervised learning method is cluster analysis, which is used for exploratory data analysis to find hidden patterns or grouping in data. The clusters are modeled using a measure of similarity which is defined upon metrics such as Euclidean or probabilistic distance.

Common clustering algorithms include:

Hierarchical clustering: builds a multilevel hierarchy of clusters by creating a cluster tree

k-Means clustering: partitions data into k distinct clusters based on distance to the centroid of a cluster

Gaussian mixture models: models clusters as a mixture of multivariate normal density components

Self-organizing maps: uses neural networks that learn the topology and distribution of the data

Hidden Markov models: uses observed data to recover the sequence of states

Unsupervised learning methods are used in bioinformatics for sequence analysis and genetic clustering; in data mining for sequence and pattern mining; in medical imaging for image segmentation; and in computer vision for object recognition.