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Assignment 8

Unsupervised learning Kmeans

Aim: Implement K-mean algorithm for clustering to create a cluster on dataset (Using python).

Objective: To understand the concept of clustering.
To implement Kmeans clustering algorithm.

Theory: Kmeans clustering aims to partion n observation into K clusters in which each observation belongs to the cluster with the nearest mean, serving as a program.

Working: The Kmeans clustering algorithm attempts to split a given anonymous data

Initially K number of so called centroids are chosen. randomly and are unique

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Then, clusters are formed Based on these centroids, and the new centroid are ~~seted~~ selected
These process is iteratively repeated untill centroids stop changing.

- Advantages
  -) Simple to implement
  -) Scale to large dataset
  -) Adaptive

- Disadvantages
  -) Sensitive to outliers
  -) Dependens on initial value.

- Conclusion.
  Thus, we have understood the concept of kmeans and successfully implemented it to cluster iris dataset.