

## **Module-4 Clustering**

- 1) Explain the applications w.r.to cluster analysis
- 2) Specify the requirements for cluster analysis
- 3) Compare the clustering methods w.r.to orthogonal aspects
- 4) Briefly outline basic clustering methods
- 5) Explain k-means partitioning algorithm
- 6) Apply the k-means partitioning technique on a 1-D dataset of seven points namely: (1,2,3,8,9,10, 25), for  $k=2$ . Compute the within cluster variation  $E$ .
- 7) Compare Agglomerative hierarchical clustering and Divisive hierarchical clustering
- 8) List the distance measures used in hierarchical algorithmic methods
- 9) Explain Multiphase hierarchical clustering using clustering feature trees
- 10) Explain hierarchical clustering using linkage and complete linkage
- 11) List the two strategies used for hierarchical clustering and Explain
- 12) Explain Density-Based clustering based on connected regions with high density
- 13) Specify major tasks of clustering evaluation
- 14) Briefly outline the steps involved in calculating Hopkins statistic
- 15) Explain how determining the number of clusters in a dataset is important.
- 16) List the criterias involved in measuring clustering method. Explain
- 17) Explain extrinsic clustering quality measurement method
- 18) Explain intrinsic clustering quality measurement method
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