Abstract

In this paper, we propose a clustering algorithm to find clusters of different sizes, shapes and densities. Density and Hierarchical based approaches are adopted in the algorithm using Minimum Spanning Tree, resulting in a new algorithm – Local Density-based Hierarchical Clustering Algorithm for overlapping data distribution using Minimum Spanning Tree (LDHCODMST). The algorithm is divided into two stages. In the first stage, local density is estimated at each data point. In the second stage, hierarchical approach is used by merging clusters according to the computed cluster distance based on overlap in distribution of data points. The proposed algorithm improves the effectiveness of clustering result in which data are distributed in different shapes and different density, and that it can get a better clustering efficiency.

References

- N. Chowdhury and C. A. Murthy, "Minimum Spanning Tree –Based Clustering Techniques: Relationship with Bayes Classifier"; Pattern Recognition, Vol. 30, no 11, pp
Local Density-based Hierarchical Clustering for Overlapping Distribution using Minimum Spanning Tree


Index Terms

Computer Science Data Mining

Keywords

Euclidean Minimum Spanning Tree Clustering Core Cluster Merge Similarity