

Abstract

Clustering is one of the fundamental techniques for data mining. It is the unsupervised classification of patterns (observations, data items, or feature vectors) into groups (clusters). Many different clustering paradigms have been developed over the years which includes partitional, hierarchial, density-based, spectral and so-on. In this report, an attempt to discuss these techniques or paradigms has been made. The goal of this survey is to provide a comprehensive review of different clustering techniques in data mining. This report also presents a new density-based fuzzy clustering technique on spatial data. The work is based on a density-based clustering technique VDBSCAN. In our work, we have used the Fuzzy Membership function (as in the Fuzzy C-Means method) to detect the overlapping clusters in the datasets. Our proposed method discovers the arbitrary shaped, density varied and overlapping clusters without any apriori knowledge of the number of clusters present in the dataset.