

Clustering Spatial Data using DBSCAN (Density-Based Spatial Clustering of Applications with Noise)

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Abstract

Clustering algorithms are data attractive for the last class identification in spatial databases. This system presents the new clustering algorithm DBSCAN (Density-Based Spatial Clustering of Applications with Noise). DBSCAN is a density-based clustering algorithm, grows regions with sufficiently high density into clusters and discovers of arbitrary shape and size in spatial databases. DBSCAN defines a cluster as a maximum set of density-connected objects. Every object not contained in any cluster is considered to be noise. DBSCAN is efficient even for large spatial databases. This system performs the effectiveness and efficiency of DBSCAN using spatial databases. The results demonstrate that DBSCAN is significantly more effective in discovering clusters of arbitrary shape than the well-known algorithm CLARANS (Clustering Large Applications based on RANdomized Search) and the run time comparison of DBSCAN and CLARANS on these databases in terms of efficiency.