Abstract

Data mining is the collection of different techniques. Clustering information into various cluster is one of the data mining technique. It is a method, in which each cluster must contain more similar data and have much dissimilarity between inter cluster data. Most of traditional clustering algorithms have disadvantages like initial centroid selection, local optima, low convergence rate etc. Clustering with swarm based algorithms is emerging as an alternative to more conventional clustering techniques. In this paper, a new hybrid sequential clustering approach is proposed, which uses PSO - a swarm based technique in sequence with Fuzzy k-means algorithm in data clustering. Experimentation was performed on standard dataset available online. From the result, the proposed approach helps to overcome limitations of both algorithms, improves quality of formed cluster and avoids being trapped in local optima.

References

Hybrid Particle Swarm Optimization (HPSO) for Data Clustering


Index Terms

Computer Science

Artificial Intelligence
Keywords

Data Clustering  Particle Swarm Optimization  Fuzzy k-means  Hybrid  Particle Swarm Optimization