Abstract

Clustering task aims at the unsupervised classification of patterns in different groups. Ant-based clustering is a biologically inspired data clustering technique. In the research, three new variants of the Leader Ant Clustering with Constraint algorithm (ILAMC, ILAME and ILACE) are proposed that implements incremental Leader Ant-based clustering and the following constraints: the must-link (ML), cannot-link (CL) constraints and ?-constraints. The main aim of the research is to improve the clustering accuracy, reduce the execution time and providing better convergence, to validate the accuracy using the F-measure and Entropy.

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An Enhanced Incremental Leader Ant Clustering with Constraints

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