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A Fuzzy Clustering Algorithm using Cellular Learning Automata based Evolutionary Algorithm

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Abstract

In this paper, a new fuzzy clustering algorithm that uses cellular learning automata based evolutionary computing (CLA-EC) is proposed. The CLA-EC is a model obtained by combining the concepts of cellular learning automata and evolutionary algorithms. The CLA-EC is used to search for cluster centers in such a way that minimizes the clustering criterion. The simulation results indicate that the proposed algorithm produces clusters with acceptable quality with respect to clustering criterion and provides a performance that is superior to that of the C-means algorithm.

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