A new hybrid approach for data clustering

This paper appears in:
Telecommunications (IST), 2010 5th International Symposium on
Date of Conference: 4-6 Dec. 2010
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Page(s): 914 - 919
Product Type: Conference Publications

ABSTRACT

Data clustering has been applied in multiple fields such as machine learning, data mining, wireless and pattern recognition. One of the most famous clustering approaches is K-means which effectiv used in many clustering problems, but this algorithm has some problems such as local optimal co initial point sensitivity. Artificial fishes swarm algorithm (AFSA) is one of the swarm intelligent alg major application is in solving optimization problems. Of its characteristics, it can refer to high cor insensitivity to initial values. In this paper a hybrid clustering method based on artificial fishes sw and K-means so called KAFSA is proposed. In the proposed algorithm, K-means algorithm is used behaviors of artificial fishes in AFSA. The proposed algorithm has been tested on five data sets an was compared with particle swarm optimization (PSO), K-means and standard AFSA algorithms. E results showed that proposed approach has suitable and acceptable efficacy in data clustering.

INDEX TERMS

Index Terms are available to subscribers and IEEE members.

Additional Details | References (21)

On page(s): 914
Conference Location : Tehran
E-ISBN : 978-1-4244-8184-2
Print ISBN: 978-1-4244-8183-5
INSPEC Accession Number: 11875587
Digital Object Identifier : 10.1109/ISTEL.2010.5734153
Date of Current Version : 17 March 2011
Issue Date : 4-6 Dec. 2010