

Cluster Validation Analysis on Attribute Relative of Soft-Set Theory

International Conference on Soft Computing and Data Mining

SCDM 2016: Recent Advances on Soft Computing and Data Mining pp 3-10

- Rabiei Mamat (1) Email author (rab@umt.edu.my)
- Ahmad Shukri Mohd Noor (1)
- Tutut Herawan (2)
- Mustafa Mat Deris (3)

1. School of Informatics and Applied Mathematic, University Malaysia Terengganu, Kuala Terengganu, Malaysia

2. Faculty of Computer Science and Information Technology, University Malaya, Kuala Lumpur, Malaysia

3. Faculty of Computer Science and Information Technology, University Tun Hussein Onn Malaysia, Batu Pahat, Malaysia

Conference paper

First Online:

29 December 2016

DOI (Digital Object Identifier): 10.1007/978-3-319-51281-5_1

- [67 Downloads](#)

Volume 549 of the book series [Advances in Intelligent Systems and Computing \(AISC\)](#)

Cite this paper as:

Mamat R., Noor A.S.M., Herawan T., Deris M.M. (2017) Cluster Validation Analysis on Attribute Relative of Soft-Set Theory. In: Herawan T., Ghazali R., Nawi N., Deris M. (eds) Recent Advances on Soft Computing and Data Mining. SCDM 2016. Advances in Intelligent Systems and Computing, vol 549. Springer, Cham

Abstract

Data clustering on categorical data pose a difficult challenge since there are no-inherent distance measures between data values. One of the approaches that can be used is by introducing a series of clustering attributes in the categorical data. By this approach, Maximum Total Attribute Relative (MTAR) technique that is based on the attribute relative of soft-set theory has been proposed and proved has better execution time as compared to other equivalent techniques that used the same approach. In this paper, the cluster validity analysis on the technique is explained and discussed. In this analysis, the validity of the clusters produced by MTAR technique is evaluated by the entropy measure using two standards dataset: Soybean (Small) and Zoo from University California at Irvine (UCI) repository. Results show that the clusters produce by MTAR technique have better entropy and improved the clusters validity up to 33%.

Keywords

Soft set Data clustering Attribute Relative Cluster validity

References