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RARE: Mining colossal closed itemset in high dimensional data

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KNOWLEDGE-BASED SYSTEMS

Volume: 161 Pages: 1-11

DOI: 10.1016/j.knosys.2018.07.025

Published: DEC 1 2018

Document Type: Article

[View Journal Impact](#)

Abstract

The present society has been sculpted into a continuous data generator. In fact, the massive automatic data collection has generated a new genre of dataset, termed as 'high-dimensional data', which is characterized by a relatively small number of rows, in comparison to that of large number of columns (or dimensions). Among the vast data mining tasks, association rules have been extensively employed so as to describe the correlations between the variables found in a dataset. The task of mining association rules highly relies on the efficiency of the algorithms to extract all frequent itemsets that exist in the database. The focus towards improving run time and memory consumption of algorithms is strongly influenced by search strategies, effective pruning strategies, and the method of closure checking. Neither depth-nor breadth-first search may exert any variance without these techniques, mainly because the search space appears similar. With that, this paper investigated the strategies implemented in both row and column enumeration-based algorithms, hence proposing the RARE; a breadth-first bottom-up row-enumeration algorithm, in mining colossal closed itemsets in high-dimensional data.

Keywords

Author Keywords: [Data mining](#); [Closed itemset](#); [High-dimensional data](#)

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Funding

Funding Agency	Grant Number
Malaysian Government	FRGS14-139-0380
International Islamic University Malaysia (IIUM)	FRGS14-139-0380

[View funding text](#)

Publisher

ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

Categories / Classification

Research Areas: Computer Science

Web of Science Categories: Computer Science, Artificial Intelligence

Document Information

Language: English

Accession Number: WOS:000452575500001

ISSN: 0950-7051

eISSN: 1872-7409

Other Information

IDS Number: HD5MV

Cited References in Web of Science Core Collection: 30

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