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## Frequent itemset mining in high dimensional data: A review

(Conference Paper)

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## Abstract

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This paper provides a brief overview of the techniques used in frequent itemset mining. It discusses the search strategies used; i.e. depth first vs. breadth-first, and dataset representation; i.e. horizontal vs. vertical representation. In addition, it reviews many techniques used in several algorithms that make frequent itemset mining more efficient. These algorithms are discussed based on the proposed search strategies which include row-enumeration vs. column-enumeration, bottom-up vs. top-down traversal, and a number of new data structures. Finally, the paper reviews on the latest algorithms of colossal frequent itemset/pattern which currently is the most relevant to mining high-dimensional dataset. © Springer Nature Singapore Pte Ltd. 2019.

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1    Adriaans, P., Zantinge, D.  
(1996) *Data Mining*. Cited 365 times.  
Harlow, England: Addison Wesley Longman

2    Agrawal, R., Imieliński, T., Swami, A.  
**Mining Association Rules Between Sets of Items in Large Databases**  
(1993) *ACM SIGMOD Record*, 22 (2), pp. 207-216. Cited 9484 times.  
doi: 10.1145/170036.170072  
[View at Publisher](#)

3    Han, J., Kamber, M., Pei, J.  
**Data Mining: Concepts and Techniques**  
(2012) *Data Mining: Concepts and Techniques*. Cited 2250 times.  
<http://www.sciencedirect.com.ezproxy.um.edu.my/science/book/9780123814791>  
ISBN: 978-012381479-1  
doi: 10.1016/C2009-0-61819-5  
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4    Clarke, R., Ressom, H.W., Wang, A., Xuan, J., Liu, M.C., Gehan, E.A., Wang, Y.  
**The properties of high-dimensional data spaces: Implications for exploring gene and protein expression data**  
(2008) *Nature Reviews Cancer*, 8 (1), pp. 37-49. Cited 288 times.  
doi: 10.1038/nrc2294  
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5    Nurul Fariza, Z.  
(2012) *Disclose: Discovering Colossal Closed Itemsets from High Dimensional Datasets via a Compact Row-Tree*