Abstract

Association rules are an important problem in data mining. Massively increasing volume of data with temporal dependencies in real life databases has motivated researchers to design novel and incremental algorithms for temporal association rules mining.

In this paper, an incremental association rules mining algorithm is proposed that integrates interestingness criterion during the process of building the model called SUMA. One of the main features of the proposed framework is to capture the user background knowledge, which is monotonically augmented. The incremental model that reflects the changing data over the time and the user beliefs is attractive in order to make the over all KDD process more effective and efficient. The proposed framework is implemented and experiment it with some public datasets and found the results quite promising.

References
5. Liu, B. and Hsu, W., Lee, H-Y. And Mun, L-F.: Tuple-Level Analysis for Identification of 
Interesting Rules. Technical Report TRA5/95, SoC. National University of Singapore, 
Expectations:. Technical Report:TRA7/96, Department of Information Systems and Computer 
of Interesting Association Rules. In Proceedings of Industrial Conference on Data Mining 
(ICDM), (2006).
8. Al-Hegami, A. S.: Pushing Novelty Criterion into Incremental Mining Algorithm, 
International Journal of Computer Science and Network Security,Korea, VOL.7 No.12, 
December (2007).
Association Patterns. In Proceedings of World Academy of Science, Engineering and 
10. Bhatnagar, V., Al-Hegami A. S., and N. Kumar: A hybrid approach for Quantification of 
Novelty in Rule Discovery. In Proceedings of International Conference on Artificial Learning and 
Data Mining (ALDM'05), Turkey, Feb. 25-27, pp 39-42 (2005).
(2005).
data. In Proceeding of the 16th International Conference on Data Engineering, San Diego, USA. 
(2000).
In Research Issues on Data Mining and Knowledge Discovery. (1997).
18. Cheung, D. W., Han, J., Ng, V.T., Wong, C.Y.: Maintenance of discovered Association 
Rules in Large Databases: An Incremental Updating Technique, Proc. the International 
19. Cheung, D. W., Ng, V.T., Tam, B.W.: Maintenance of Discovered Knowledge: A case in 
Multi-level Association Rules, Proc. 2nd International Conference on Knowledge Discovery and

Index Terms

Computer Science
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Keywords

Knowledge discovery in databases (KDD), Data mining, Incremental Association rules, Temporal association rule, Domain knowledge, Interestingness, Novelty measure.