Abstract

Traditional association rule mining generates a large number of rules. This leads to a difficulty in finding the interested and significant rules. An efficient interactive post-processing task which includes ontology and rule schema is used to obtain user interesting rules. Correlation analysis finds significant association rules by analyzing the dependency between the antecedent and consequent parts of the rule. In this paper, correlation analysis is integrated with the interactive post-processing to obtain significant user interesting rules. A redundancy removal follows this framework to weed out the extra rules and also to reduce the ruleset further. The proposed methodology provides a significant set of non-redundant user interesting rules leading to an efficient analysis.

References
- B. Padmanabhan and A. Tuzhuliiin, &quot;Unexpectedness as a Measure of Interestingness in Knowledge Discovery,&quot; Proc. Workshop Information Technology and Systems (WITS), pp. 81-90, 1997.
- Bing Liu, Wynne Hsu and Yiming Ma, &quot;Pruning and Summarize the Discovered Associations&quot; In the proc. of ACM SIGMOD pp. 125 134, San Diego, CA, August 1999.
- A. C. B. Garcia and A. S. Vivacqua, &quot;Does Ontology Help Make Sense of a Complex World or Does It Create a Biased Interpretation?&quot; Proc. Sense making
- A. C. B. Garcia, I. Ferraz, and A. S. Vivacqua, "From Data to Knowledge
427-441, 2009.
- Bayardo, R., Agrawal, R, and Gunopulos, D. "Constraint-based rule mining in
- Knowledge-Based Interactive Postmining of association rules using ontologies and rule
schemas IEEE Transactions on knowledge and data engineering, VOL. 22, NO. 6, JUNE
2010.
- Pruning and Summarizing the Discovered Associations ACM SIGKDD International
Conference on Knowledge Discovery & Data Mining (KDD-99), August 15-18, 1999, San Diego,
CA, USA.

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