A Method for Reduction of Association Rules in Data Mining

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Abstract : The use of association rules algorithms within data mining is recognized as being of great value in the knowledge discovery in databases. Very often, the number of rules generated is high, sometimes even in databases with small volume, so the success in the analysis of results can be hampered by this quantity. The purpose of this research is to present a method for reducing the quantity of rules generated with association algorithms. Therefore, a computational algorithm was developed with the use of a Weka Application Programming Interface, which allows the execution of the method on different types of databases. After the development, tests were carried out on three types of databases: synthetic, model, and real. Efficient results were obtained in reducing the number of rules, where the worst case presented a gain of more than 50%, considering the concepts of support, confidence, and lift as measures. This study concluded that the proposed model is feasible and quite interesting, contributing to the analysis of the results of association rules generated from the use of algorithms.

Keywords : data mining, association rules, rules reduction, artificial intelligence

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