Algorithm Integration Behavior for Discovering Group Membership Rules

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Abstract.

Information exploitation processes use different data mining algorithms for obtaining knowledge patterns from data obtained on the problem domain. One of the assumptions when working with these algorithms is that the complexity of the membership domain of the cases they use does not affect the quality of the obtained results. So, it is important to analyze the behavior of the information exploitation process through the discovery of group membership rules by using clustering and induction algorithms. This research characterizes the complexity of the domains in terms of the pieces of knowledge that describe them and information exploitation processes they seek to discover. The results of the experiments show that, in the case of the process for discovering group membership rules, the quality of the patterns differs depending on the algorithms used in the process and the complexity of the domains to which they are applied.

Keywords: Information exploitation engineering, information exploitation process, complexity of domains, clustering and induction algorithm performance.