

**A GENERAL FRAMEWORK OF MODELING AND
EXTRACTING THE KNOWLEDGE OF MINING ALGORITHMS
FOR SOLVING DATA MINING PROBLEMS USING ONTOLOGY**

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Abstract

Data mining has attracted increasing interests in recent years. Although there are several data mining software suits available, it is not easy for an end user to apply data mining techniques without the help of the data mining expert. The difficult is that with huge amount of data mining algorithms, how to choose a set of algorithms appropriate to their data that can satisfy their requirement. In other words, the users need the knowledge of the character of the data mining algorithms. Therefore an algorithm relatively better than other algorithms for some type of datasets in some measure criteria might perform worse in other cases. To circumvent this problem, we propose a method to extract and represent the knowledge of mining algorithms. The knowledge is represented by ontology. Users or agents could select mining algorithms easily with the data mining ontology. Data mining technology plays an important role in dealing with massive data, transforming data into valuable information, assisting enterprises in effective CRM decision-making and other aspects. On the basis of detailed analysis of the existing CRM structure, a new design scheme of customer relationship management systems based on data mining is presented and the design details of which are illustrated in detail.