Abstract

As an important task of relational database, relational classification can directly classify the data that involve multiple relations from a relational database and have more advantages than propositional data mining approaches. The information age has provided us with huge data repositories which cannot longer be analyzed manually. Most available existing data mining algorithms looks for pattern in a single relation. To classify data from relational database need of multi-relational classification arise which is used to analyze relational database and used to predict behavior and unknown pattern automatically which include business data, bioinformatics, pharmacology, web mining, credit card fraud detection, disease diagnosis system, computational biology, online retailers. In this paper, we present the several kinds of multi-relational classification methods including Inductive Logic Programming (ILP) based, Associative based multi-relational classification, Emerging Patterns based, Relational database based classification approaches and discuss each relational classification approaches, their characteristics, their comparisons and challenging issues in detail.
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Index Terms

Computer Science
Information Sciences
Keywords
Relational data mining  Multi-relational classification  Inductive Logic Programming
Tuple ID Propagation
Selection Graph
Decision Tree