数据库与知识工程

必要规则对分类影响的研究

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摘要： 基于规则分类方法的主要计算依据是形如"A→C"的规则（称为充分规则）及其置信度。其中："A"代表数据集中决策属性取值的集合，"C"代表某个类标号。那么，形如"C→A"的规则（称为必要规则）是否可以在分类算法中起到积极的作用呢？依据规则分类方法原理设计了简单的实验，实验只考虑单个决策属性的不同取值与类之间的关联。根据实验目标，分类测试采用了两种方法：方法1只考虑充分置信的影响；方法2考虑充分置信和必要置信的影响。通过在几个典型的分类集上测试，结果表明：在分类计算时适当利用必要规则置信度可以提高分类精度。

关键词： 分类   置信度   充分规则   必要规则   classification   confidence   sufficient rule   necessary rule

Research of necessary rules' influence on classifying

Abstract: The computing gist of algorithms based on rules involves the rules like "A→C" and their confidences. Here, "A" represents the set of decision attributes and their values, and "C" represents a kind of class label. Can the rules like "C→A" act positively in classifying algorithms? A simple experiment was designed, which considered the associations between single attribute values and class label. Two testing methods were made according to the experiment goals. By the first method, confidences of "A→C" were used. By the second method, the confidences of both "A→C" and "C→A" were used. The experiments were made on several typical classifying data sets. The results show the higher classifying precision by using the double confidences.

Keywords:

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