DATA MINING AND KNOWLEDGE DISCOVERY IN E-COMMERCE ARCHITECTURE DESIGN

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ABSTRACT

E-commerce is growing fast, and with this growth companies are willing to spend more on improving the online experience. Data mining tools aid the discovery of patterns in data. Until recently, companies that have concentrated on building horizontal data mining modeling tools, have had little commercial success. In this paper, term data mining is used to denote the wider process, sometimes called knowledge discovery, which includes multiple disciplines, such as preprocessing, reporting, exploratory analysis, visualization, and modeling.

E-commerce is the killer-domain for data mining. It is ideal because many of the ingredients required for successful data mining are easily satisfied: data records are plentiful, electronic collection provides reliable data, insight can easily be turned into action, and return on investment can be measured. To really take advantage of this domain, however, data mining must be integrated into the e-commerce systems with the appropriate data transformation bridges from the transaction processing system to the data warehouse and vice-versa. Such integration can dramatically reduce the data preparation time, known to take about 80% of the time to complete an analysis. An integrated solution can also provide users with a uniform user interface and seamless access to metadata.