Micro View and Macro View Approached to Discovered Rule Filtering

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Abstract: A data mining system tries semi-automatically discover knowledge by mining a large volume of raw data, but the discovered knowledge is not always novel and may contain unreasonable facts. We try to develop a discovered rule filtering method to filter rules discovered by a data mining system to be novel and reasonable ones using information retrieval technique. In this method, we rank discovered rules according to the results of information retrieval from an information source on the Internet. In this paper, we show two approaches toward discovered rule filtering; the micro view approach and the macro view approach. The micro view approach tries to retrieve and show documents directly related to discovered rules. On the other hand, the macro view approach tries to show the trend of research activities related to discovered rules by using the results of information retrieval. We discuss advantages and disadvantages of the micro view approach and feasibility of the macro view approach by using an example of clinical data mining and MEDLINE document retrieval.