Data Mining System Based on Web Services for E-commerce: Architectonics and Algorithm

Luo Zhong, Qiwei Tong, Bin Fan, Chengming Zou, Qiong Jiang
School of Computer Science and Technology, Wuhan University of Technology
Wuhan, Hubei, 430070, China
Email: qwtong@mail.whut.edu.cn **Tel.:** 86-27-87642927

ABSTRACT

As the Internet advances and with the great development of E-Commerce, companies involving in online shopping and services are eager for ways to find out what their customers want. Companies now with the help of data mining, they can have a much more active role in promoting their online shops, merchandise and services compares to the conventional method of waiting for customer to look at their sites. This paper discusses about the new development of E-Commerce that differs a lot from the old conventional commences. It also goes in depth of a new architecture of data mining system based on E-commerce web services. The conventional " single data-mining system" system is replaced by the new " distributed data mining system". The new distributed data mining system is a system that provides mining services. In elaboration of the system, the E-Commerce Server request services in the network, Data Mining Server provides concurrent mining services for serial E-Commerce Servers (Serial ECommerce Companies). Data Mining Server will summarize all the data in different E-Commerce Server for mining process. It will produce more comprehensive and informative knowledge than conventional methods. A new effective preprocessing algorithm of distributed data mining for E-Commerce is provided in this paper. According to the architecture given in this paper, a distributed data-mining algorithm for finding association rules is provided.

Keywords: e-commerce; distributed; web services; web mining; preprocessing algorithm