Title: A Knowledge Mining approach for effective Customer Relationship Management

Author(s): Ayo C. K

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Abstract: The problem of existing customer relationship management (CRM) system is not lack of information but the ability to differentiate useful information from chatter or even disinformation and also maximize the richness of these heterogeneous information sources. This paper describes an improved text mining approach for automatically extracting association rules from collections of textual documents. It discovers association rules from keyword features extracted from the documents. The main contributions of the technique are that, in selecting the most discriminative keywords for use in association rules generation, the system combines syntactic and semantic relevance into its Information Retrieval Scheme which is integrated with XML technology. Experiments carried out revealed that the extracted association rules contain important features which form a worthy platform for making effective decisions as regards customer relationship management. The performance of the improved text mining approach is compared with existing system that uses the GARW algorithm to reveal a significant reduction in the large itemsets, leading to reduction in rules generated to more interesting ones due to the semantic analysis component being introduced. Also, it has brought about reduction of the execution time, compared to the GARW algorithm.