

關聯法則所建構之推薦系統及視覺化

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摘要

整合檢索系統可以把散佈在各地的資源整合在一起，讓人們在找資料的時候，可以透過單一入口網查詢方式獲取相關資料。但也往往因為系統回應資料量過於龐大，讓使用者很難從中直接找到真正有幫助的內容。為此，本研究提出以知識關聯地圖方式呈現查詢結果，直接呈現大量資料中的知識網絡。本研究主要採用關聯法則，從原始文件中直接探勘關鍵字彼此之間的關係，進一步討論關鍵字之間所代表的實質意義，並將關鍵字之間的抽象關係、關聯的強弱以知識關聯地圖呈現，讓使用者更容易理解；除了傳統的條列式結果頁，額外透過知識關聯地圖的協助，更能了解文章的重點。

現行推薦系統多半以分析使用者紀錄或是統計文章的熱門度來推薦熱門資料。在我們系統中，當使用者瀏覽文章時，會在頁面中鑲入關聯詞給使用者參考，系統也會自動推薦文章、其他相關主題關鍵字給使用者，透過知識關聯地圖的方法所推薦的文章與主題關鍵字能更貼切使用者的需求。實驗結果顯示，我們的系統可以將較有代表性、主題明確的專有名詞給留下，高度關聯的關鍵字在知識關聯地圖上會形成連線，讓使用者可以容易看出這篇文章代表這篇文章的幾個重要關鍵字。

關鍵字：全文檢索系統、關聯法則、知識關聯地圖、推薦系統

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Keyword Recommendation and Visualization Based on Association Rule

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Abstract

The rapid development of computer technology contributes to produce a large number of digital archives content and the number of digital archives website grows rapidly. In recent years, websites are oriented to integrating many retrieval systems. It is help for people searching information that integrate multiple website resources and dispersed system. People can get relevant information through an integrated website when they surf the internet to search information. Relatively, response data of integrated website is too large to directly find real helpful content for users. Our study presents a knowledge map to perform query results, directly display what the relation and concept is between data. In this study, we use association rules to directly explore the relationship between keywords from the source file and further discuss the real significance between the keyword. Finally we perform abstract relationship between the keyword by knowledge map that may help users understand easily. Addition to the column type results page, through the assistance of the associated map, user can understand the focus of the article better.

Current recommendation system recommend by user records or statistics. In our system, when people browses the article, we set the associated word as a reference in that page, the system can automatically identify which related articles contain this keyword to recommend to the user. Through the related words, we can recommend users more appropriate articles, and can recommend other users related topic keywords. In this study, we now have a system that is available for users to set the threshold and search type of the

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search engine. The experimental results show that, under the appropriate threshold settings, the proper noun which is more representative will interconnect into a multilateral and we can identified several different grouped-words clearly.

Keywords: Association Rule, Knowledge Map, Recommend System

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