

Personalized Web Search Using Domain Knowledge with Search as you type

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ABSTRACT

Today's generic search engines are using search as you type technique while searching the information in order to retrieve information faster as compared to keyword search. But generic search engine does not distinguish different users need. It shows same result to different types of users without bothering their needs. Most of the personalized search engines retrieve the specific information but uses keyword search technique. This paper proposes personalized web search using domain knowledge with search as you type technique in order to retrieve specific information and compare the results with keyword search.

Keywords:- personalized web search, search as you type, domain knowledge, user profile

1.INTRODUCTION

“Google”, the search engine, is now become our need today. Most of the computer users, who use Internet, use this search engine. It is generic search engine to serve all users. It shows same result to different type of users searching for same keyword. For example, one biological user want to search about biological ‘virus’ and another one is computer savvy, want to search about computer ‘virus’, generic search engine shows same result to both. But using personalized search engine, exact information can be find according to user’s need which saves users valuable time. Some of previous work for personalized search engine uses user’s profile which includes browsing history and domain knowledge, but they are based on keyword search. As we know, generic search engine are using search as you type technique, if this technique is used in personalized web search, the user may get appropriate result in short time.

2.LITERATURE REVIEW

Rakesh Kumar et al., [1] proposed framework for personalized web search, considering user’s interest to suggest the relevant pages. For this, Rakesh Kumar et al., [1] considers user’s profile and domain knowledge. User Profile is constructed by using data of web usage of the user. Domain knowledge is used to store information about different categories and different domain. Information which is obtained from user profile is classified according to categories and domain. DMOZ directory is used as source for preparing domain knowledge. Author says some pages for some specific categories from DMOZ directory is used for preparing the domain knowledge. Using this domain knowledge, Enhanced User Profile is prepared. For preparing the Enhanced User Profile, each URL in the user’s profile is matched with URL present in Domain Knowledge and the most relevant URL’s are added to Enhanced User Profile. Cosine similarity is used to find matching URL’s from user profile and domain knowledge to update the Enhanced User Profile. For this, top 20 URL’s in descending order of cosine similarity are added to Enhanced User Profile. Rakesh Kumar et al., [1] shown different experimental results for personalized web search using Enhanced User Profile and concluded that the performance of the system using Enhanced User Profile better than the performance by using through simple user profile. Micro Speretta et al., [2] used approach based on building user’s profile based on user’s interaction with particular search engine Micro Speretta et al., [2] implemented a wrapper around Google search engine, which collects user’s search activity information like queries submitted and snippets visited. Two separate profiles were created based on queries submitted and snippets of user selected results. The profiles were used to calculate a new rank of results browsed by users and average of this rank compared with Google’s rank. They performed various experiments and found that user profile built from queries produced improvement of 33% in the rank of selected result and that of built from snippets is of 37%. S.Vanitha [3] introduced technique which contains separate modules for user profile and click through data, which are mapped to find more personalized web pages. Weights of terms are used in different categories to identify the interest of the user. S.Vanitha [3] suggests the extraction of key terms to group with the weight and then weight and group is to be compared with different categories to store in database in order to find user’s interest. Click through data module uses Bayesian classification algorithm to generate patterns to find frequently needed data. Then results from these two modules are compared to search more personalized web pages. F Liu et al., [4] proposed a technique to create user’s profile which can be constructed

automatically from user's search history. F Liu et al., [4] proposed use of user's search history for learning user profile and category hierarchy which can be used for learning general profile. These two profiles are combined to categorize user's query to represent user's need for searching. Susmitha Dey et al., [5] focused on specific domain selection. Susmitha Dey et al., [5] proposed interface which accepts only keywords. For this purpose, information is fragmented into different parameters related to specified domain only. Keywords entered by user are also related to specific domain which allows searching exactly what relevant data is expected by user. Devang Karavadiya et al., [6] focused on query grouping which allows search engine to understand user's session. Once query group is identified then search engine can easily identify the context behind queries and clicks in the corresponding query group. Query group is collection of queries by same user that are relevant to common informational need. As user hits new query, query groups are dynamically updated and new groups may be created over time. Devang Karavadiya et al., [6] explored long term search history which consists of past queries click through which can be used to improve retrieve performance. It is also shown that such information can be used effectively for the task of organizing user search histories into query group. Guoliang Li et al., [7] studied the problem of supporting search as you type using SQL. Guoliang Li et al., [7] focused on how to achieve the high speed for searching as you type using existing functionalities of DBMS. Paper proposed the solution which uses auxiliary table as index structure and SQL queries to support search as you type. Guoliang Li et al., [7] also proposed various techniques to improve query performance. Karthiga Chandrasekaran et al., [8] reviewed various techniques of searching in Relational Databases like DBXplorer, DISCOVER, BANKS etc. Karthiga Chandrasekaran et al., [8] compared different papers, techniques and results. Lastly Karthiga Chandrasekaran et al., [8] concluded that techniques supporting multiple tables are not efficient and suggested that if the ranking queries are applied, the search performance can be improved in a better way.

3.CONCLUSION

We propose a model for personalized web search which will consider individual's interests and past browsing history into mind. For this purpose, we'll use domain knowledge in background. Using user's interest and browsing history, different domain will be incorporated in domain knowledge. Using domain knowledge, we'll create user profile. Once the user profile will be created, model will take user query and will suggest the relevant web pages with respect to query. In this model, we propose search as you type method instead of keyword search. In relevant domain, the information will be searched as user will type character by character. We'll perform some experiments in order to compare the retrieval effect using search as you type with keyword search in particular domain.

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