

Computation Load Sharing of Personalized Mobile Search Engine

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Abstract— Number of information available on web is expanding day to day. People frequently search web for their various information needs, using search engines. In the mobile technology the recent advancements is boosted searching and browsing tasks on mobile. Withal, the uncertainty in queries and presence of noise hampers the performance of traditional search engines. They provide identical results to all users, regardless of their context. Thus users needs extra effort and time for getting relevant results. In addition to this, the constraints correlated with mobile devices of new challenges for mobile search.

A framework, include user preferences has been proposed for mobile search engine personalization in this research. The focus is on using social context access from users click through data, social networks to filter search queries. Initially a system will be developed and studied that determine the effectiveness of integrating this type of context when conducting mobile search. The system shall appropriate and analyze user queries issued on mobile devices to determine the degree by which social context used reformulate the queries by providing relevant context and then finally arrange the results to match user needs.

Keywords—Social Context, Search Engine.

I. INTRODUCTION

The Internet specially World Wide Web are most popular. Because of the absence of centralized control or authority, statistics about the Net lack some degree of certainty. There is no question yet, that the Net is huge in terms of numbers of users, Web sites and Web pages. For instance, an appraisal of the minimum number of host machines on the Internet is over 1,028,544,414, (Internet Domain Survey, July 2014). In addition, India had about 243 million Internet users as of June 2014, according to IAMAI (Internet and Mobile Association of India). There is every reason to believe these numbers will all much increase in the next few years, with some analysts saying that the Web is doubling in size every 100 to 125 days (Morgan, 1996).

There are four different methods for locating information on the Web:

- First, you go directly to a Web page simply by knowing its location. This is the reason for companies show off their URLs over their TV, print and web advertising.
- Second, the search engines find pages that are associated with a Web page through the hypertext links emanating from a Web page provide built-in associations to other pages that its author considers to provide related information.

- Third, narrowcast services can push pages at you that meet your particular user profile.
- Fourth, search engines allow users to state the kind of information they hope to find and then furnish information that hopefully relates to that description.

II. MOBILE WEB SEARCH

A mobile users tend to submit shorter hence, more ambiguous queries compared to their web search [9]. When the queries return the results, the limitation of the space to display the number of results on first page is restricted and thus LIMITS THE USERS CHANCE TO TAKE from the search. In ORDER TO RETURN HIGHLY SIGNIFICANT results to the users, mobile search engines must be able to profile the users interests and personalize the search results according to the USERS PROFILE [8]. practical approach to capturing a users interests for personalization is to analyze the users click through data [2], [10], [12] has developed a search engine personalization method based on users concept preferences and showed that it is more effective than methods that are based on page preferences [4]. However, most of the previous work assumed that all concepts are of the same type.

Observing the need for different types of concepts, Personalized Mobile Search Engine (PMSE) which represents different types of concepts in different ontologies has been part of research [5]. In particular, recognizing the importance of location information in mobile search, the concepts are separated into location concepts and content concepts [7]. For example, a user who is planning to visit INDIA MAY ISSUE THE QUERY HOTEL and click on the search results about hotels. From the click through of the query hotel, PMSE can learn the users content preference (e.g., room rate and facilities) and location preferences (India). Accordingly, PMSE will favor results that are concerned with hotel information in India for future queries on hotel.

The introduction of location preferences offers additional dimension for capturing a users interest and opportunity to enhance search quality for users. To context information allow to see by users mobility, it takes into account the visited physical locations of users the PMSE. Since this information can be efficiently obtained by GPS devices, it is hence referred to as GPS locations. GPS locations play an important role in web search. For example, if the user, who is searching

hotel information, is currently located in Maharashtra, Pune, his/her position can be used to personalize the results to favor information about nearby hotels. Here, can see that the GPS locations (i.e., Maharashtra, Pune) help reinforcing the users location preferences (i.e. India) derived from a users search activities to provide the most relevant results.

A framework which is capable of combining a users GPS locations and location preferences into the personalization process is an aspiration of many researchers [8].

III. PROBLEM STATEMENT

The problem statement of this research work is that: To solve the problems with current personalized context dependent web search engines, which are still immature to serve the exact needs of the enormous different users with high effectiveness using precision and recall measurements.

A major problem in mobile search is that the interactions between the users and search engines are limited by the small form factors of the mobile devices. The sub problems are that i am going to deal are:

- How to use web net to find semantic relations among the words of submitted query for obtaining the right context of it.
- How to collect results from other search engines like Google?
- How to pre-process the submitted query and the collected results? Can some part on the computation be shifted to user end?
- How to obtain suitable search queries for the experimentations?
- To propose a method to re-rank the retrieved search results to represent best the user interest and need?
- What is the proper approach to develop the search engine?
- How to evaluate the personalized mobile search engine?

IV. BACKGROUND

A web search engine is designed to search for information on the World Wide Web servers. The search results are generally presented in a list of results often called hits. The information may consist of web pages, images, information and other types of files. Some search engines also mine data available in databases or open directories. Search Engine has main One type is that Crawler-based search engine, which is use automated software programs to survey and categorize web pages. The programs used by the search engines to access your web pages are called spiders, crawlers, robots or bots. A spider will find a web page, download it and analyze the information presented on the web page. This is a seamless process. Next, the web page will be added to the search engines database. Then when a user do a search, the search engine will check its database of web pages for the key words the user searched in to host a list of links in order of which is (as defined by the bots), to what the user wants to find online. Crawler-based search engines are constantly searching the Internet for new web pages and updating

their database of information with these new or altered pages. Examples of crawler-based search engines are: Google and Ask.

In the last few years, the trend of the adaptation of traditional IR system to the web environment has been one of the most important issues of the revolution of web personalization. The former task is accomplished by periodically collecting newly created documents through re-crawling, keeping the search systems internal document index updated.

The two paradigms, searching by query and browsing, coexist: most of the times, browsing is useful when the user does not know beforehand the search domain keywords. Searching by query is considered as the most popular way that users begin seeking information because it allows them to quickly identify pages containing specific information. For this reason, sophisticated search techniques are required, enabling search engines to operate more accurately for the specific user. Personalized search aims to build systems that provide individualized collections of pages to the user, based on some form of model representing their needs and the context of their activities. Depending on the searcher, one topic will be more relevant than others tailored to the preferences, tastes, backgrounds and knowledge of the user who expressed it.

V. METHODOLOGY

Many researches and models have been proposed for developing personalized mobile search engines. Personalized mobile search engines still suffer from the disability of identifying accurate context for submitted queries which leads to retrieve non relative results to ~~insert~~ the proposed model, try to solve the context dependent of submitted queries based on identifying semantic relations among the terms of submitted query. The steps that will be introduce to build a personalized mobile search engine are:

- To collect Search results.
- To Preprocess the given queries.
- Then extract the concepts.
- Ranking and results retrieved.

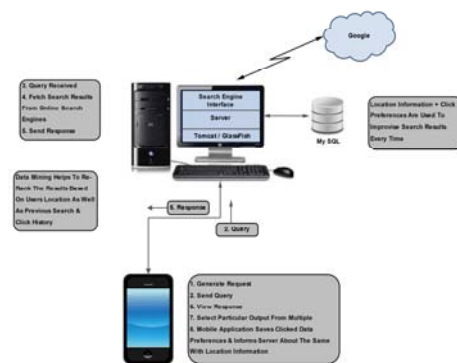


FIGURE : DESIGN OF PMSE

The propose design for PMSE by adopting the search approach which relies on one of the commercial search engines, such as Google, Yahoo, or Bing, to

perform an actual search. The user is responsible or receiving the users requests, submitting the requests to the PMSE server, displaying the returned results and collecting his/her click throughs in order to derive his/her personal preferences. The PMSE server, on the other hand is responsible for handling heavy tasks such as forwarding the requests to a commercial search engine as well as training and re-ranking of search results before they are returned to the client. The user profiles for specific users are stored on the PMSE clients, thus preserving privacy to the users.

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