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User Privacy Preservation in Personalised Web Search

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Abstract: Personalised web search is an inevitable part of today's fast growing world. For an efficient search result user may have to reveal their private information. But, due to security reasons most users do not disclose these secrets. This may affect the search results. This paper deals with the privacy preservation in personalised web search based on the online rating of the user. The proposed system includes online profile creation, customization of user interests, user ratings etc.

Keywords: Personalised web search, privacy preservation, online profile creation.

I. INTRODUCTION

Almost all the people now uses search engines for getting valuable information related to their topics of interest. But when they enter a keyword there may be many areas related to that keyword and the user may not get the required information. For instance, user may enter the keyword apple; he may get information related to fruit, company products etc. Thus for providing better results the user's needs has to be obtained and analysed so that users intention behind the query can be obtained.

There are many solutions to these personalised web search and they are classified into two types as click log based methods[2] and profile based methods. In click log based methods the search results are given according to the users previous search history. In this method, better results will be obtained for only repeated queries. In the latter method[3][4], profile creation technique is used. Here a user's profile is created which includes user's interested topics and their related ones.

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II. RELATED WORKS

Many methods have been proposed for preserving user's privacy[6][8] in personalised web search[9][10] .These does not provide the optimal solution. Early works were based on users search history. Then came the idea of profile based ones. The existing ones support only offline profile creation. The profile once created cannot be updated. Thus this profile may be used for all the queries of the user. Some methods do not provide facilities for the customization of the user interests. Thus all the requirements will be given equal priority which the user may not require.

III. SYSTEM MODEL

The system model consists of a large number of clients and a server. The server is considered to be untrusting. When a user sends a query the profile of the user is created online [7]. There the user can set priority to their interests. The query may be generalised according to the priority and it may send to the server side[11]. The server may give response based on the priority.

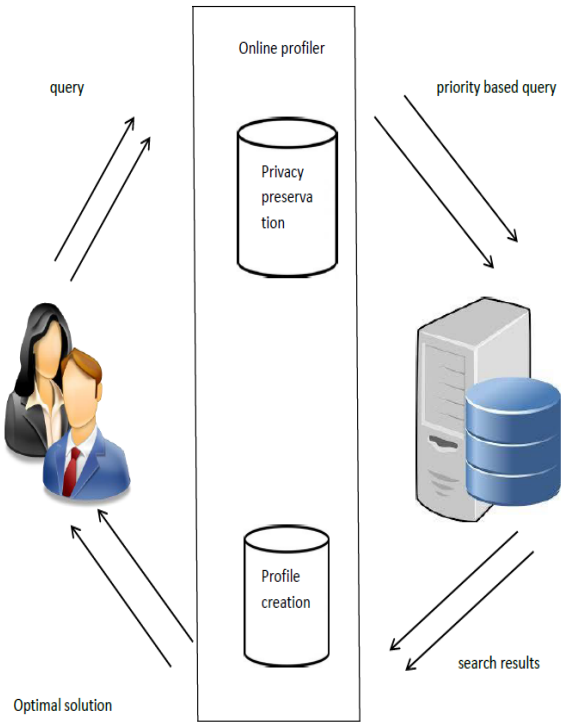

Fig 1.System Model

IV. PROPOSED SYSTEM

The user's profile is created online and they can customize their interests. The user is also given provision for entering comments for each search result. Hence if the user has not given any priority for a particular topic, the comments given by the user is considered. Based on this a ranking is provided. Thus it provides a better search results.

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When a user sends a query, a profile is created for the user[5]. This profile may contain the topics of interest of the user and their priorities. The user can also add comments for certain topics. The search results may be based on the priority and ranking of that particular topic.

V. PERFORMANCE ANALYSIS

The performance of the system can be analysed based on the search results and also based on the security it provides. The proposed system gives optimal search results to the user.

VI. CONCLUSION

Profile based search may result in many security issues. But if the required security measures be given then it may provide the better search results. The above method may provide better search results by providing the required privacy protection.

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