Adaptive Web Search Engine

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Abstract

The overwhelming amount of information on the web sometimes causes difficulties for a typical user trying to find suitable information. Although Web Search Engines (WSE) are available to support users, finding appropriate documents from a query can be a very complex task. Appropriate indexing of web contents is more challenging every day due to its dynamic nature. On the other hand, users can be frustrated in finding query results that match their interests. Adaptive WSEs are a new area of research that specifically address this issue. They try to retrieve query results based on user preferences and user interests. Some of the approaches focus on the document space. They categorize retrieved documents based on users (or user groups). Some other approaches focus on the query space. They make more appropriate queries, based on a user's personality, and then send the customized query to the conventional WSEs. Our aim is to create a consistent architecture to perform query space adaptation in three different steps. First, it recommends frequent phrases to the user. Then, it creates a more appropriate request to query the WSE. Finally, it reorganizes the results based on the user's past selections. We will simulate and test the proposed model using sample generated queries. The proposed adaptive WSE is expected to recommend to its users appropriate keywords suitable for creating unambiguous queries. On the other hand, we anticipate more precise and closely related documents (pages) in response to a query which are ordered based on the users' interests. This will hence cause lower user frustration.