

Search Optimization for Faceted Product Search Engines

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Abstract- Faceted search is becoming a popular method to allow users to interactively search and widely used in online webshops and product comparison sites. This approach suffers from many issues. One of the difficulties with faceted search is, large number of facets is available and another one is to invest a significant amount of time to devise an effective list. To overcome this, an approach for dynamic facet ordering in the e-commerce domain is proposed. It's a search engine worked on the basis of multiple service calls between the search engines and registered e-commerce applications. After getting service responses from thee-commerce servers, the search engine evaluates multiple facets from the response and take a optimized decision based on user's query. The search engine ranks the optimized results and displays them based on this ranks along with links to the specified pages. The main idea is, user finds their desired product with the least amount of effort.

I. INTRODUCTION

Search engines are designed to help users to quickly find useful information from the web. Thousands number of search engines are existing to perform the task of information retrieval but only some of them are popular. Because of vast availability of numerous search engines searchers often get confuse with the problem of good search engine selection. Its evaluation is expensive process because it requires the expert's judgments that indicate the degree of relevance of the web documents [1]. Clicks data from the previous searchers can be used as valuable resource of user's judgments [2, 3]. These judgments can help to judge the quality of retrieved results automatically.

Faceted search applications require faceted data, namely the existence of facet hierarchies and the mapping of documents onto those hierarchies. One of the benefits of faceted search is that, search results are more useful and easier to find data. The fully automated algorithm ranks those properties and facets on top that lead to a quick drill-down for any possible target product. The development of recommender systems has been stimulated by the rapid growth of information on the Internet. For information filtering, recommender systems can automatically recommend the few

optimal items, which users might like or have interests to buy by learning the user profiles, users' previous transactions, the content of items, etc [4].

Faceted browsing, is a technique for accessing information to explore a collection with multiple filters, accessed and ordered in multiple ways. Filters can be a number of defined attributes, such as date, title, size, keyword etc. In faceted beginnings, earliest applications were created by online retailing to search product data. And started with a hierarchy structure to browse data. Defining attributes with user input has developed over time. The benefits of faceted search is, user defined and eliminate unnecessary results when indexing. Faceted search uses a hierarchy structure to enable users to browse information by choosing from a pre-determined set of categories. This allows a user to type in their simple query, then refine their search options by navigating or drilling down. Examples of this are ecommerce sites like Amazon and eBay. The focus of this approach is to sort properties based on their facets and then, additionally, also sort the facets themselves.

II. PROPOSED APPROACH

The proposed approach is based on a facet impurity measure, regarding qualitative facets in a similar way as classes, and on a measure on a measure of dispersion for numeric facets. The faceted search system focuses on both textual and structured content.

III. ADVANTAGES

- (i) User finds its desired product with the least amount of effort.
- (ii) Online retailers pay special attention to the usability and efficiency of their web shop user interfaces.

In this section contains three modules.

- (i) Real time communication
- (ii) Search engine-shopping cart communication
- (iii) Ranking and facet evaluation

(i) Real time communication

Real time communications is a term used to refer to any live telecommunications that occur without transmission delays. Real time communication between Search engine and shopping server. It should be an extended HTTP. The HTTP headers allow the client and the server to pass additional information with the request or the response. The response time fixing is done by extended http and request rejection on idle.

(ii) Search engine-shopping cart communication

A search engine is a software system that is designed to search for information on the World Wide Web. The search results are generally presented in a line of results often referred to as search engine result pages. Some search engines also mine data available in database. Web search engines get their information by web crawling from site to site.

(iii) Ranking and facet evaluation

Ranking method is one of the simplest performance evaluation methods. A ranking is a relationship between a set of items such that, for any two items, the first is either, 'ranked higher than', 'ranked lower than' or 'ranked equal to' the second.

IV. CONCLUSION

An approach that automatically orders facets such that the user finds its desired product with the least amount of effort. To retrieve some information from the web, search engines are essentially required. When these search engines receive the queries, return a list of documents which are ranked on the basis of their quality. The proposed system is a search engine worked on the basis of multiple service calls between the search engine and registered e-commerce applications. With the help of facets, provide an efficient way to analyse and navigate the search result space. On the financial side whenever a user clicks on the links, for each every link click the system can identify the link its and it can after the payment from the shopping sites for each generated by the search engine to that particular facets.

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