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A Survey on Mining Query Facets for Search Results

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ABSTRACT: A query facet is a set of items which describe and summarize one important aspect of a query. Query facets provide interesting and useful knowledge about query and thus can be used to improve search experience. Some content originally created by a website it might be re-published by other websites. So for overcoming this problem facets are used that find the main content of the different documents and helps the user from not reading the whole document. There are two methods used for mining the facets that is QDMiner and Latent Dirichlet Allocation (LDA). QDMiner which automatically mines the query facets from top search results. LDA gives the list topics which contain relevant words and their occurrence in document. There is used the QT clustering algorithm for the list of clustering. QT clustering algorithm that groups the data into high quality clusters. In the system user give the query as an input. Then we get the seed collection for that query. After seed collection the methods are apply on the database and from that database the user get the facets for search result. When the QDMiner is apply there are multiple steps for QDMiner such as list extraction, list weighting, list clustering, item ranking. For finding the facets we use two methods that is QDMiner and LDA.We compare this two methods. From that comparison QDMiner is better than the LDA. QDMiner can be used to iteratively extract more list from top search result as compare to LDA. It proved from literature survey, hence the QDMiner method to be better as compared to LDA method.

I. INTRODUCTION

A query facet is a set of items which describe and summarize one important aspect of a query. Here a facet item is typically a word or a phrase. A query may have multiple facets that summarize the information about the query from different perspectives. displaying query facets could save browsing time. query facets may also be used to improve the diversity of the ten blue links. We can re-rank search results to avoid showing the pages that are near-duplicated in query facets at the top. Query facets also contain structured knowledge covered by the query, and thus they can be used in other fields besides traditional web search, such as semantic search or entity search. the problem of finding query facets which are multiple groups of words or phrases that explain and summarize the content covered by a query.

A query may contain various facets terms that provide useful and relevant information about the query. Thus, users can understand some important aspects of a query without browsing tens of pages. Query facets may provide relevant search result for the users. Some existing entity search approaches also exploited knowledge from structure of webpages. In list and context extraction step, lists and their context are extracted from each document. From each document in the search result set, extract a set of lists from the HTML content of documents based on the HTML tag patterns. During list weighting all extracted lists are weighted, and some unimportant or noisy lists are assigned by low weights. A good list contains items that are informative to the query. In the facet and item ranking module the facets and their items are evaluated and ranked. After the candidate query facets are generated, evaluate the importance of facets and items, and rank them based on their importance [1].

Latent Dirichletallocation(LDA) gives the list of topics which contain relevant words and their occurance in the document. In LDA, each document may be viewed as a mixture of various topics where each document is considered to have a set of topics that are assigned to it via LDA [3].

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II. MOTIVATION

The challenges come from the large and heterogeneous nature of the web, which makes it difficult to generate and recommend facet. The query facet contains a group of words and phrases that summarize the information about query. Previous models typically generate words and phrases related to the original query, but do not consider how these words and phrases would fit together in actual.

III.REVIEW OF LITERATURE

QDMiner which automatically mines the query facets from top search results. The QDMiner finds the main content of the different documents and helps the user from not reading the entire document. QDMiner extract a list from the search result set using the Html tag patterns. QDMiner extracts lists from free text, HTML tags, and repeat regions contained in the top search results, quality of query facets mined by QDMiner is good. QDMiner aims to other the possibility of finding the main points of multiple documents and thus save users time on reading whole documents. QDMiner is aggregating frequent lists within the top search results to mine query facets [1].

Faceted Web Search is a extending faceted search into the open-domain web setting. To use query-dependent automatic facet generation, which generates facets for a query instead of the entire corpus. To incorporate user feedback on these query facets into document ranking. Faceted Web Search systems by their utility in assisting users to clarify search intent and find subtopic information. Faceted search enables users to navigate a multi-faceted information space by combining text search with drill-down options in each facet. Faceted search has not been explored much for general web search, even though it holds great potential for assisting multi-faceted queries and exploratory search [2].

Web search queries are often ambiguous or multi-faceted,which makes a simple ranked list of results inadequate. To assist information finding for such faceted queries, a technique that explicitly represents interesting facets of a query using groups of semantically related terms extracted from search results. Two algorithms for approximate inference on the graphical model since exact inference is intractable. Evaluation combines recall and precision of the facet terms with the grouping quality. Web search queries are often ambiguous or multi-faceted. To extract query facets from web search results to assist information finding for these queries [3].

A framework for addressing this task and perform a detailed analysis of four core components; co-occurrence models, type filtering, context modeling and homepage finding. the performance of a model that only uses co-occurrence statistics. While it identifies a set of related entities, it fails to rank them effectively. Two types of error emerge: (1) entities of the wrong type pollute the ranking and (2) while some how associated to the source entity, some retrieved entities do not engage in the right relation with it. Method achieves very high recall scores on the end-to-end task, providing a solid starting point for expanding our focus to improve precision; additional heuristics lead to state-of-the-art performance [4].

Extracting query subtopics are similar to generating facets for queries. A query subtopic is often defined, as distinct information need relevant to the original query. The problem of discovering query facets, which are several groups of words or phrases that make clear, and review the content enclosed by a query. QDMiner is used to automatically supply query facets by extracting and grouping recurrent lists from free text, HTML tags, and duplicate regions within top search results. Experimental outcome show that a big number of lists are present and QDMiner can mine valuable query facets. To analyze the problem of list duplication, and find modeling fine-grained similarities between lists and punishing the duplicated lists can mine superior query facets [5].

The user faceted-search behavior using the intersection of web query-logs with existing structured data. Since web queries are formulated as free-text queries, a challenge in our approach is the inherent ambiguity in mapping keywords to the different possible attributes of a given entity type. An automated solution that elicits user preferences on

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attributes and values, employing different disambiguation techniques ranging from simple keyword matching, to more sophisticated probabilistic models. The scalability of our solution by running it on over a thousand categories of diverse entity types and measure the facet quality with a real-user study [6].

Facets to index the meta-data associated with the audio content provide a mechanism to rank the facets based on the search results. An interactive query interface that enables easy browsing of search results through the top ranked facets. This is the first system to use the concepts of facets in audio search, and the first solution that provides an audio search for the rural population quantitative results to illustrate the accuracy and effectiveness of the faceted search and qualitative results to highlight the usability of the interactive browsing system. The experiments have been conducted on more than 4000 audio documents collected from a live Spoken Web Voice Site and evaluations were carried out with 40 farmers who are the target users of the Voice Site [7].

The Web has long since stopped being just a resource of information. More and more transactions are happening online, with the decision process driving users to make these context, faceted applications show possible refinements of those facets (categories) to sub-categories, typically along with the number of search results (satisfying both the free text query and the current facet constraints) present in each sub-category. These counts provide guidance to the user by presenting a quantitative overview on the variety of data available, thereby hinting at the refinement operations that seem most promising for zooming in on the target information need [8].

A supervised approach based on a graphical model to recognize query facets from the noisy candidates found. The graphical model learns how likely a candidate term is to be a facet term as well as how likely two terms are to be grouped together in a query facet, and captures the dependencies between the two factors. We propose two algorithms for approximate inference on the graphical model since exact inference is intractable. Our evaluation combines recall and precision of the facet terms with the grouping quality. Experimental results on a sample of web queries show that the supervised method significantly outperforms existing approaches, which are mostly unsupervised, suggesting that query facet extraction can be effectively learned [9].

Query Log Mining is a branch of the more general Web Analytics scientific discipline. it can be considered a special type of web usage mining According to the Web Analytics Association, Web Analytics is the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage. Query log mining is concerned with all those techniques aimed at discovering interesting patterns from query logs of web search engine with the purpose of enhancing either effectiveness or efficiency of an online service provided through the web. Keep into account that query log mining is not only concerned with the search service (from which queries usually come from) but also with more general services like, for instance, search-based advertisement, or web marketing in general [10].

IV. EXISTING SYSTEM

1.Query Reformulation and Recommendation: Query reformulation and query recommendation (or query suggestion) are two popular ways to help users better describe their information need. Query reformulation is the process of modifying a query that can better match a user's information need and query recommendation techniques generate alternative queries semantically similar to the original query.

2.Query-Based Summarization: Summarization algorithms are classified into different categories in terms of their summary construction methods (abstractive or extractive), the number of sources for the summary (single document or multiple documents), types of information in the summary (indicative or informative), and the relationship between summary and query (generic or query-based). The difference is that most existing summarization systems dedicate themselves to generating summaries using sentences extracted from documents

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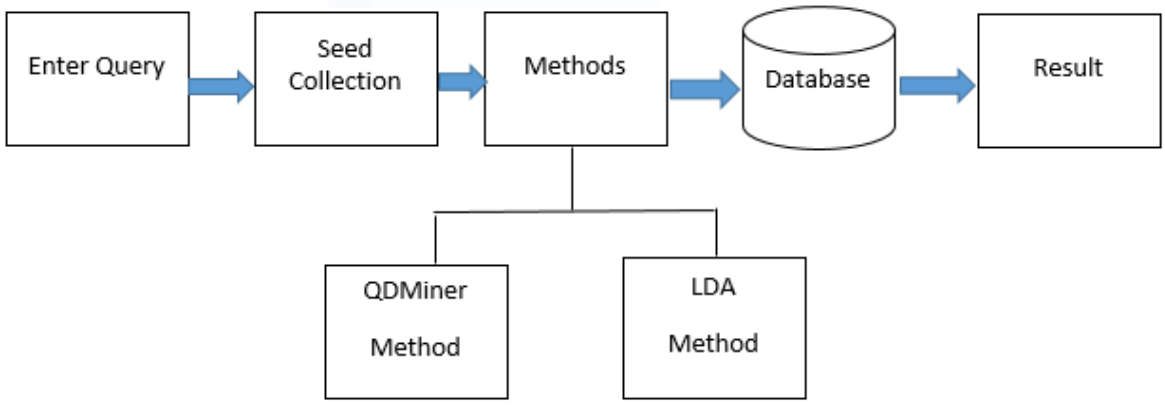
V.SYSTEM ARCHITECTURE

Figure 01Mining Query Facets for Search Result



V. OVERVIEW

In the system user give the query as an input. Then we get the seed collection for that query. After seed collection the methods are apply on the database and from that database the user get the facets for search result. When the QDMiner is apply there are multiple steps for QDMiner such as list extraction, list weighting, list clustering, item ranking.QDMiner which automatically mines the query facets from top searchresults.The QDMiner finds the main content of the different documents and helps the user from not reading the entire document. QDMiner extract a list from the search result set using the Html tag patterns. QDMiner extracts lists from free text, HTML tags, and repeat regions contained in the top search results; quality of query facets mined by QDMiner is good. QDMiner aims to other the possibility of finding the main points of multiple documents and thus save users time on reading whole documents. QDMiner is aggregating frequent lists within the top search results to mine query facets [1].
Latent Dirichlet allocation(LDA) gives the list of topics which contain relevant words and their occurance in the document. In LDA, each document may be viewed as a mixture of various topics where each document is considered to have a set of topics that are assigned to it via LDA [3].

VI. CONCLUSION

Different methods are used to mining facets for search results. First is the QDMiner method. Second is the LDA method. It proved from literature survey, hence the QDMiner method to be better as compared to LDA method.

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