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A Novel Approach to Unify Search Engines

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ABSTRACT: In this paper, we have made an attempt to unify the different types of search engines which work on different networks like torrent and public. There are so many and different search engines that are currently available nowadays which serve different purposes for example torrentz2 (it help in searching torrent content), wolframalpha (it help in solving mathematical equations) shodan (its for internet connected device) etc. The goal of the unifying search engine is to unify different types of search engines on the basis of user choice and single query is searched in multiple search engines.
The objective of our research is to save the time of users which is on searching particular query in multiple search engines.

Keywords: Torrentz2, Wolframalpha, Shodan

I. INTRODUCTION

A. Search engine

A search engine is a program that searches for keyword or characters specified by the user in one or multiple databases and is also use especially for finding particular sites,data on the world wide web. It has following features-

- ✓ Searching for results get easy and fast
- ✓ Advance options provide precise results

II. TYPES OF SEARCH ENGINES

There are different types of search engines that can be differentiated on the different on the basis of their working –

A. Crawlers based search engines

These types of search engines use a "spider" or a "crawler" to search the Internet. The crawler digs through individual web pages, pulls out keywords and then adds the pages to the search engine's database. Google and Yahoo are examples of crawler search engines.

Crawler-based search engines are good when you have a specific search topic in mind and can be very efficient in finding relevant information in this situation. However, when the search topic is general, crawler-based search engines may return hundreds of thousands of irrelevant responses to simple search requests, including lengthy documents in which your keyword appears only once.

The advantages of crawlers are:

- They contain a huge amount of pages.
- Ease of use.

There are several disadvantages to crawlers:

- Sometimes, it's just too much information. It is easy to trick the crawler. Websites have hidden data that can be manipulated to make the page appear like it's something it's not.
- Page rank can be manipulated.

B. Directories based search engines

Directories are human powered search engines. A website is submitted to the directory and must be approved for inclusion by editorial staff.

Typically, webmasters submit a short description to the directory for their websites, or editors write one for the sites they review, and these manually edited descriptions will form the search base. Therefore, changes made to individual web pages will have no effect on how these pages get listed in the search results.

Advantages:

- Each page is reviewed for relevance and content before being included. This means no more surprise porn sites.
- Less results sometimes means finding what you need quicker.

Disadvantages:

- Unfamiliar design and format.
- Delay in creation of a website and it's inclusion in the directory.
- May have trouble with more obscure searches.

C. Hybrids search engines

- Hybrids are a mix of crawlers and directories. This search engine overcomes the disadvantages of both the above mentioned search engines and the results are more precise as compare to directory or crawler search engine.

More and more search engines these days are moving to a hybrid-based model.

Examples of hybrid search engines are Yahoo, Google.

D. Meta-search engines

Meta search engines are ones that search several other search engines at once and combines the results into one list. Search results returned from all the search engines can be integrated, duplicates can be eliminated and additional features such as clustering by subjects within the search results can be implemented by meta-search engines.

Meta-search engines are good for saving time by searching only in one place and sparing the need to use and learn several separate search engines.

III. ABOUT THIS WORK

This work is inspired from the concept of meta search engines, as there are so many search engines and they work differently based on location, query asked, rating and some other factors. Instead of just searching and listing, the unifying search engine give user full freedom to choose the listing of results, source of result and also the network (torrent).

This work is in its starting phase and currently there is no such search engine available which provides this kind of facility, which provide the user interface for unifying the search into a single page with single search bar.

A. Advantages

- User have full control to choose the search engine of their choice.
- User can also control the listing of the search result in future.
- User can search on multiple network like torrent in future and also the onion network future.

B. Disadvantage

- The number of search engines choice may create confusion for users.

IV. PRACTICAL USES OF THIS SEARCH ENGINE

The work is already capable to show different search engines and right now it supports few search engines with advance search options like Google advance search etc.

I use the unifying search search engine which is available in github.

Work link:
https://github.com/harshit73/Unifying-search-engine-

A. Requirements for this work are

(a). Any browser (firefox, safari,Google chrome etc).
(b) Internet connection.

B. Working of unifying search engine

Searching for the user query “books on search engine” in Google and Yahoo in same time we get different search results. The following figures Fig. 1, Fig. 2 and Fig. 3 shows the Interface of the work of unifying search engine, Output with Google and Output with Yahoo respectively.

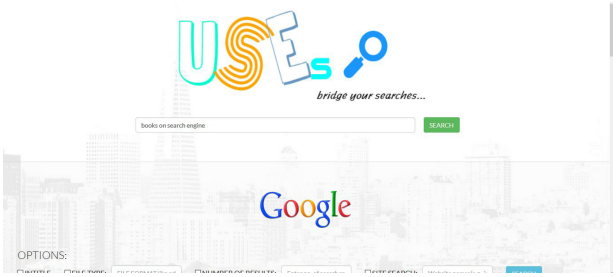

Fig. 1 Interface of the work.

Result of both Google and Yahoo with different search results

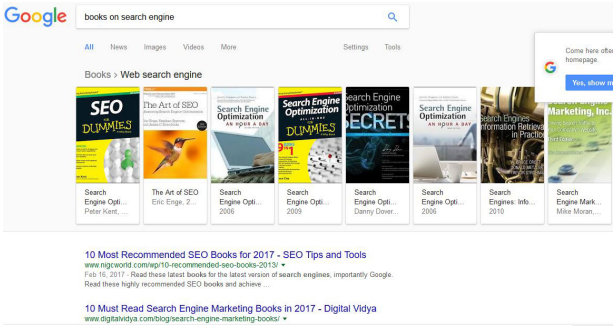

Fig. 2 Output with Google.

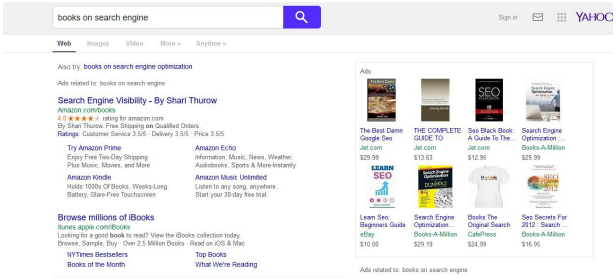

Fig. 3 Output with Yahoo.

As you can see from the screenshot that the result of the Google and the Yahoo are different which give variety

of top search result based on the Google and Yahoo which is the goal of the unify search engine.

V. CONCLUSION

Unifying search engine provide variety to the user search result with most close query result. This is the way by which user can search same query in multiple search engine at the same time and can also get the most relevant search result based on the search engines choices.

Soon it will support the search result from networks like onion, torrent etc.

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