

Chapter - 8

Conclusion and Future Scope

8.1 INTRODUCTION

This chapter discusses features introduced in a new model, conclusion of research work presented in this thesis and future scope of research in this area.

8.2 CONCLUSION

Existing meta-search engines do not have their own databases for indexing purpose. They directly send request to individual fixed number of search engines for user search text and retrieves aggregate single list of result by eliminating duplicates. They are using their own ranking formulas to display retrieved links in some specific order. Moreover, existing meta-search engine uses optimization techniques for revenue and provides paid listings. Hence, ranking order is less reliable.

In new model of a meta-search engine the concept of database has been introduced for indexing purpose. If relevant search keywords already available in keyword database, then it retrieves results from it in an efficient way. This helps to improve response time of meta-search engine and eliminates the meta-search engine time-out problem.

Existing meta-search engine performs search process by sending input query to existing meta-search engine with or without stop words. The result shows that there is significant difference (more than 90%) in resultant links. New model of the meta-search engine performs stop word elimination process if required (with user input search text), which shows that it retrieves resultant links almost same (> 90 % accuracy) with and without stop words.

Developed new ranking formula for getting aggregate search results, offers competitive advantage to links for their position. This increases reliability of search result.

New model of the meta-search engine returns indexed aggregate search results based on new ranking formula. It also works to retrieve search results for selected number of search engines. i.e. the facility of selection search is provided in newly developed model. In this new model LIKE search facility is also provided, where user can rate links of search results. Direct search facility is provided for live search. Apart from text based web search new model also supports live searching of image and video links.

The response time of existing meta-search engines and new meta-search engine has been examined using webwait and pingdom tools. PHP code to measure response time for search query by the new model is also developed. Moreover, the firebug tool is used to measure load time performance of web page of existing meta-search engine and new meta-search engine. Analysis shows the performance of new model of meta-search engine is better than existing meta-search engines.

In new model administrator can manage a number of search engines, their URLs and URL components dynamically. This enables user to get search text from search engines listed in database and eliminates problem related to use of fixed number of search engines. It allows administrator to manage stop words dynamically. It also enables administrator to update meta-search engine database periodically, which eliminates problem related to working with old retrieved search results. It allows administrator to create merge database explicitly for merged results of search engine wise databases.

8.3 FUTURE SCOPE

Meta-search engine is a kind of tool which works on the web which is very wide; In future meta-search engine can have various optimization features. At present rarely people uses meta-search engines, because they are very less popular than search engines like, Google, Yahoo, MSN, etc. Meta-search engines are for using multiple search engines on single browser window, which restricts user to have use of different search engines on separate browser window, and that's the advantage of meta-search engine

for specific search on the web with limited number of links instead of hundreds of links page by page. Research work in this era can be continued with different optimization techniques.

- i. Organic search in meta-search engine through link analysis.
- ii. New ranking formula for selection search.
- iii. Normalization of indexed database based of count of keywords to improve efficiency and effectiveness of search results.
- iv. Search results based on user profile or last access.
- v. Dynamic management of keywords in meta-search engine.