Chapter 6

Conclusion and Future work

Information access and retrieval is a complex process when information source are heterogeneous and distributed over the internet. Since, internet is connecting people in a large percentage of the household in the world; everyone would like to be able to access every piece of information on the internet easily and efficiently. A difficulty will be arose that how to deal with the current information retrieving system of returning too much data, too much irrelevant data. Building Personalized intelligent agent to provide sophisticated and smart service can solve all of these problems.

In the propose ABPSWIRS we demonstrated the usefulness of agents in retrieving information and the feasibility of multi agent architecture. It learns users area of interest and queries more accurately after interaction between user and system and communication among multi- agent overtime. It then automatically search for document from existing engines on the internet, ranks ,summarize and filter the results , analysis the profile, refines the documents with user s feedback until it fulfilled the users search requirements.

Since the web user typically gather their need in the form of short queries which contain one to three key terms so the retrieved results that are returned from the search engine may satisfy the general need but often fail to satisfy the users search intention. Personalized search provides the user with results that accurately satisfy their specific goal and intent for the search.
We described a strategy for personalization of Web search:

- A user's search history can be collected without direct user involvement.
- The user's profile can be constructed automatically from the user's search history and user behaviour.
- Create Dynamic domain ontology that must be used as a context query to improve retrieval effectiveness expansion process to achieve personalization.

The aim of this semantic retrieval model is to provide better search capabilities which yield a qualitative improvement over keyword-based full-text search, by introducing and exploiting finer-grained domain ontologies. Our approach can be seen as an evolution of the classic vector-space model, where keyword-based indices are replaced by an ontology-based KB, and a semi-automatic document annotation and weighting procedure is the equivalent of the keyword extraction and indexing process. We show that it is possible to develop a consistent ranking algorithm on this basis, yielding measurable improvements with respect to keyword-based search, subject to the quality and critical mass of metadata.

The results verify that query expansion with ontology improves the efficient retrieval with reference to users need. Profile creation for observing the browsing behaviour of user is essential to have the personalized results. Importantly, users' profile is to be updated over the period and with browsing behaviour of user as users' interest is dynamic as keeps changing with need and time. It is also verified with results that re-ranking of the documents retrieved from search engine on the basis of users' interest. This dissertation has explored Web search personalization as a way to help people find what they are looking for faster and more easily.

There is room for further improvement and research beyond our current results. For instance, our proposal inherits all the well-known problems of
building and sharing well-defined ontologies, mapping keywords to concepts and annotating with documents. It is our aim to provide a consistent model by which any advancement on these problems is played to the benefit of semantic retrieval improvements. Along this line, the thesis undertakes further steps towards an effective deployment of the Agent based semantic Information Retrieval approach on a decentralized, heterogeneous, dynamic and massive repository of content such as the Web. Work can be extended to the area like bigdata search, language independent search.
List of Publications

ISSN : 2229-4333(Print) — ISSN : 0976-8491(Online) SJIF - 3.361 Global Impact Factor 0.478.

ISSN: 2156-5570 Impact Factor : 1.324

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