

# An Approach for Semantic Based Paper Evaluation Using Keywords

G. Thilagavathy<sup>1</sup>, S. Mythili<sup>2</sup>, R. Arun Kumar<sup>3</sup>

PG Scholar M.E, Dept of Computer Science and Engineering, United Institute of Technology, Coimbatore, India<sup>1</sup>

Associate Professor, Dept of Computer Science and Engineering, United Institute of Technology, Coimbatore, India<sup>2</sup>

Assistant Professor, Dept of Computer Science and Engineering, United Institute of Technology, Coimbatore, India<sup>3</sup>

**Abstract:** Traditional keyword search mechanism which couldn't meet the needs of current expert knowledge base in searching based on semantic. Semantic search is most powerful and one of the main motivations of the semantic web. The system which focuses on scalability, semantic search, data retrieval performance and usability it uses specific domain information which extracts to improve the performance, providing match making to the users, and simultaneously rank search results. Semantic indexing approach is adapted to achieve the scalability. The performance of the semantic web approach was evaluated in comparison with the traditional system approach. This is the paper which focuses on ontology based indexing and retrieval system based on keyword semantics in the learning of Java content domain. Detailed evaluation is provided to observe the performance by query expansion and specific information extraction. It will be of great use for the developers and researchers who worked on web. But my area of work will be for the process of evaluation, where in the examination like paper correction system.

**Keywords:** Traditional Keyword Search Mechanism, Semantic Search, Semantic Indexing Approach.

## INTRODUCTION

The Web has transformed the concept of information. The Web continues to grow in size and quantity, and, above all, it continues to change in structural complexity and underlying architecture. Extensible Markup Language (XML) and metadata standards such as Dublin Core (DC), along with the initiatives of the World Wide Web Consortium (W3C) to create a "Semantic Web," point toward a new world of Web-based information, a world in which information will be machine readable and machine understandable.

### A) Semantic Web (SW) technology

Most of today's Web content is mainly suitable for human consumption. Usage of the Web today involves humans consuming information and seeking, searching and getting in touch with other human beings. The first and foremost aim of the Semantic Web Technology is to include logic to the today's Web, in other words the properties of objects, expressing the meaning of data, and the complex relationships existing between them by a series of formal rules, which would make an information accessible to machines.

## RESOURCE DESCRIPTION FRAMEWORK

RDF (RESOURCE DESCRIPTION FRAMEWORK) is a description language, accepted as a World Wide Web Consortium (W3C) standard which aims to capture the semantics of data represented on the Web. It is important to note that while RDF uses XML as an underlying representation, it does not conceptually depend on XML syntax. RDF/RDFS are at a different level of abstraction than XML. The RDF is based on several fundamental concepts. The first concept is "resources."

Resources are the basic objects or "things" that are to be described in the domain (e.g., articles, books, authors, electronic resources, etc.). In most applications, the URI is the uniform resource locator (URL) of a Web page, a part of a Web page (e.g., anchor URL), or a link to a document available on a Web server. Another essential concept is "classes," which are basically collections of objects and things with common properties.

A third important concept is "properties." Properties describe relations between other classes or resources. For example, the "article" class may have the properties "has\_author," "appears in journal," "has publication date," and so on.

## SYSTEM MODEL

Existing system uses Conventional web search which evaluates the answer with the exact word stored in the database. Therefore it leads to the drawback that even if the candidate uses another word which gives the same meaning it will result in poor grades.

### A) Limitations in conventional web search

For searching and retrieving results Conventional search is the widely used searching method now-a-days. According to the keywords the documents and contents are retrieved which is the main drawback of the existing system. So based on the query the system may not provide the relevant information. Here we are not considering the semantics of the query. It is a mere keyword based search. Web services associated with the retrieved content is also required by the user. But these generic search engines will not provide the web services associated with the request automatically.

To avoid the issues in proposed system, Semantic Information Extraction in University Domain (SIEU) is designed. SIEU retrieves the semantically relevant information for the query given by user considering the context of the query and semantics. The query is analyzed based on Semantics by the following procedures:

- The user query is initially analyzed grammatically and syntactically by parsing.
  - The related synsets for the keywords in the query are retrieved.
  - The domain related keywords in the ontology are retrieved to form the refined query.
- The results obtained in SIEU are more relevant by adopting the following procedure
- The refined queries that serve as the input for the search engine are formed based on the semantic analysis of the user query.
  - The web links retrieved for all the newly formed refined queries are re-ranked based on the domain specific information.

**B) Need for semantic web**

As pointed out earlier these are the limitations present in the conventional web search which can be eradicated by building a semantic search engine, thereby analyzing the meaning of the query and providing even more appropriate results to the users through keyword expansion.

**PROPOSED SYSTEM**

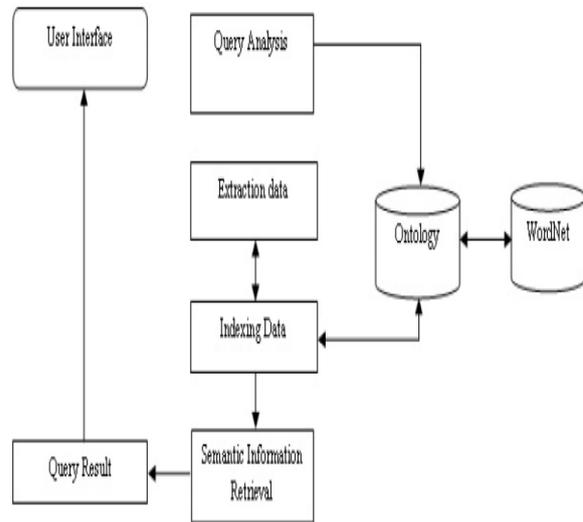
The system of the concept in semantic web enrich the evaluation method such that the paper correction method, it involves the following process, they are

- Initially the Key points for the questions are to be stored.
- Later the students answer script is provided
- Based on the question and key word given the mark gets evaluated.
- Here the semantic is used in case of any word have a similar meaning but different word provides the formation of ontology expressions.

The question paper will be stored in the online database. When we login the question paper will be fetched from the database and shown to us. For that the user requires candidate username and password. A separate text box is provided for answers. Once the candidate finishes answering they are matched with Semantic web in the Ontology. For each answers separate semantic web is pre-stored and they are matched and evaluated according to the depth of the expression. For example, it not necessary that the candidate has to use the exact word in the answer. Even though he uses a different word to express the same meaning he is ranked based on the depth of the expression used. Ontology consists of all the data that are stored. It has both wanted and unwanted data's of the particular answer. The keyword used in the query plays an important role in retrieving the wanted data among the unwanted ones.

- Those retrieved data are the results of the query

- Ontology obtains the information from WordNet and provides the needed information by extracting the data through Semantic Information Retrieval.
- Finally it is displayed in the User Interface which is candidate's computer screen.



**Semantic Document Retrieval Model**

**CONCLUSION**

Thus the semantic evaluation based model has successes the model in which the modulation of the product is based upon the keyword search in the content by means of the semantic search. The result develops the minimization of the manual work which leads to the technology into the smart way and information based functionality by means ontology structure.

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