

A novel approach for Contextual Information Retrieval by dynamically mapping of Ontology

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I. Abstract:

In this research researchers have proposed the technique for extracting the context from the webpages. The technique main objective is to extract the localized contextual meaning from the already existing dataset. The technique has standard procedure to follow. This paper represent the procedural steps for the extracting the context from raw dataset and give some insight to the data. Here in this paper we have proposed the algorithm for mapping of the ontology as well as extracting context from the ontology.

II.Introduction

As we all know the schema matching is the key component of the any information retrieval system and schema represents the overall frame of the data and how data will be stored in the data store. Nowadays the storage of the data is not the issue but the retrieval of the contextual information is the issue to be solved and for the information retrieval the first step is the systematic organization of the metadata schema or using ontology mapping with the database schema. The ontology binding with the database schema is the most dynamic and reliable technique to be implement.

III.Context generator

After the conversion of the webpage document into the resource description format and in the extensible mark-up format. Now the next step is to generate the context of that particular document in reference to the domain of that webpage and different information based on the context of the webpage.

The context generator will generate the context based on the information of the RDF. After that it will get stored in the local dataset for the ontology generation of that context

Algorithm Name: Dynamic Ontology
Purpose: Dynamic Retrieval of search query based on ontology
Input: Provider URL engines
Output: Contextual Dynamic Ontology
Function: Dynamic Onto
Start
{ Steps:
<ol style="list-style-type: none"> 1. Read a URL from the set of provider of the URL Engine 2. Extract the Context from the document 3. Download the filtered contextual web documents 4. Verify the availability of the document to maintain consistency <ol style="list-style-type: none"> a. Check the document publication date <ol style="list-style-type: none"> i. If the document is new <ol style="list-style-type: none"> 1. It will store in the repository ii. If the document is old <ol style="list-style-type: none"> 1. It will skip the page or update it 5. It will identify and crawl the keywords of the documents 6. Design and build the ontology based on the above reference of the documents and context keywords generated. 7. Develop the ontology in the form of the resource description format to map with the ontology
}
end

Algorithm 1:-Dynamic Contextual

The above algorithm is based on the dynamic contextual mapping of the ontology and how we can extract the contextual keyword. The overall pedagogy of the algorithm and the script is as described above.

The overall steps of the algorithm working is represented in the given figure described below which ensures the working and flow of the algorithm.

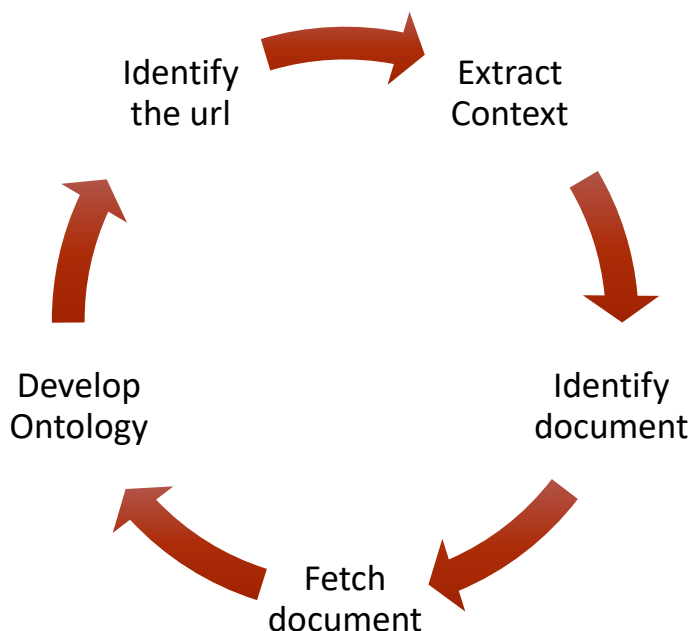


Figure 4. 1:-Contextual Algorithm Life Cycle

The above figure represent the overall working flow of the contextual algorithm with the stepping steps of the process. Overall the outcome of the algorithm will work as the input for the further process to generate the dynamic ontology with context and this process is the perpetual process which is dynamic and it will grow by the increase in the context of the ontology.

The mapping is the limitation of the existing system. So in this research using the above framework we have designed the dynamic designed mapping process of the ontology.

Actually mapping can be defined as the Mapping process of the ontology. Here mapping means the linking of the ontology with the dataset loaded in the search query or the resource identifier of the webpage document.

In short the main purpose of the mapping is just to identify the context of the particular document and mapped the associate semantic context with it. There are many different component we have used in the above mentioned onto studio framework each component is inter dependent on each other and can give and take request and response from each component. Actually the component in the framework is not component but rather the individual process.

Each process in the framework has the particular script running behind the individual process. Starting from the xml import to user and ontology management each process has some output and that out can be act as an input for the other process in the framework.

The overall aim of the proposed framework onto studio is to overcome the existing system limitation by applying the dynamism to mapping process of the ontology by using the aggregator engine script which will continue keep a track of the new keyword or query pattern and thus we can dynamically mapped the

5.1. References

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