Chapter 11
A Study on Models and Methods of Information Retrieval System

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ABSTRACT

Information Retrieval (IR) is the action of getting the information applicable to a data need from a pool of information resources. Searching can be depends on text indexing. Whenever a client enters an inquiry into the system, an automated information retrieval process becomes starts. Inquiries are formal statements which is required for getting an input (Rijsbergen, 1997). It is not necessary that the given query provides the relevance information. That query matches the result of required information from the database. It doesn't mean it gives the precise and unique result likewise in SQL queries (Rocchio, 2010). Its results are based on the ranking of information retrieved from server. This ranking based technique is the fundamental contrast from database query. It depends on user application the required object can be an image, audio or video. Although these objects are not saved in the IR system, but they can be in the form of metadata. An IR system computes a numeric value of query and then matches it with the ranking of similar objects.

INTRODUCTION

Information retrieval (IR) is the action of getting the information applicable to a data need from a pool of information resources. Searching only depend on text indexing. Whenever a client enters an inquiry into the system, an automated information retrieval process becomes activated. Inquiries are formal statements which is required for getting an input (Rijsbergen, 1997). It is not necessary that the given query provides the relevant information. That query matches the result of required information from the database. It doesn't mean it gives the precise and unique result likewise in SQL queries (Rocchio, 2010). Its results are based on the ranking of information retrieved from server. This ranking based technique is the fundamental contrast from database query. It depends on user application, the required

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object can be an image, audio or video. Although these objects are not saved in the IR system, but they can be in the form of metadata. An IR system computes a numeric value of query and then matches it with the ranking of similar objects. However user appears the result having top rank object/ article/ text as shown in Figure 1.

The above figure reflects all results of *information retrieval* in the form of Wikipedia, pdf, ppt etc. This query provides approximate fifty lakh results. But the user can change the query according to requirements. For example user can ask for *information retrieval pdf* as shown in Figure 2. As it is reduce the number of results. Now it shows eighteen lakh results.

All IR system works on general concept of retrieval. Whenever a query is forwarded to web server, searching will start in the pool of resources present in database. After searching, an indexing will take place and provides similar kind of objects. All the retrieved document or objects will display on user screen in ranked way. Basic IR architecture is explained in below Figure 3.

Next section depicts on background of IR which throws some light on work which already been done in this field.

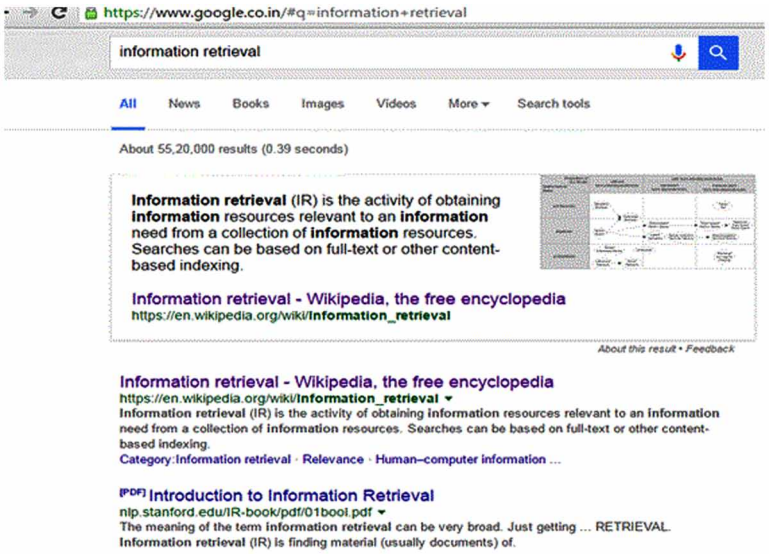
BACKGROUND

This section explains literature by eminent researchers in this field.

Santofimia et al. (2012) explains the rule based approach for automatic service composition. They discussed that how the system can be improved by amalgamation of automatic service composition with reasoning capability for a distributed system.

Next section provides the detailed descriptionof IR models.

Figure 1. Query on Web Search Engine



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