



# Importance of Genetic Algorithm and Similarity Function in Information Retrieval

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**Abstract** – In every field information plays an important role .To collect important and relevant information in digital world is a challenging task. In this context various searching algorithms and similarity function is used to retrieve relevant information. In this paper genetic algorithm and various similarity functions are discussed. Genetic algorithm and similarity functions help to get the relevant information from the digital world. The objective of this paper is to summarize the whole process and looking into some of the known genetic algorithms and similarity functions to retrieve relevant information.

**Keywords:** Genetic Algorithm, crossover, Mutation, Similarity Functions, Information Retrieval.

ISSN : 2348-5612 © URR



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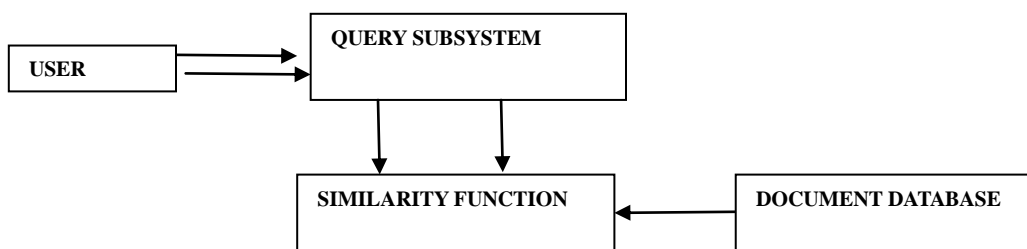
## I. INTRODUCTION

Information retrieval is a system which is used to retrieve relevant or important information from various databases or the Internet. The main objective of information retrieval is to help user to find important information quickly and accurately from the Internet or various databases . Genetic algorithm and similarity functions help to achieve this. In information Retrieval System queries are matched with database information using similarity function and genetic algorithm is used to get the optimal value from the databases.

### Information Retrieval Architecture

The various parts of Information retrieval architecture is

- (1) User
- (2) Query Subsystem
- (3) Similarity Function
- (4) Document Database



**User:** User is a person who put the request on the information retrieval system on the bases of this request information is retrieved from the database.

**Query subsystem:** Query subsystem is a system which allow user to formulate their queries and present the relevant documents retrieved by the system for user's query.

**Similarity function:** Similarity function compares both query and documents in database and give a value which measure the similarity between query and documents. With the help of this value, relevant documents from database are retrieved.