Abstract

In web search based applications, queries are suggested by users to search and investigate web search engines information requirements regarding user. However the queries submitted by user sometimes might not easily understood by search engines, since queries submitted by user might be short representation and should not precisely characterize users' detailed information requirements. Because numerous uncertain queries might cover an extensive assortment of topic and diverse users might desire to obtain information on based on their diverse query. Since the query based recommendation and assessment of user search goals based on user feedback sessions might improve retrieval results of web search engine for users. Determining the various number of user search goals for same query and it doesn't automatically discover user search goals based on the user specified query, clustering is performed based on K means clustering. Still K means clustering methods have some major pitfalls such as random selection of initial centroid value and selection of K value; it reduces the grouping results of pseudo documents for user search. In order to shortcoming these issues query based recommendation system and optimization based clustering is proposed in this work. In the proposed work primarily concerns a query based recommendation
system to understand user search goals through examining user search engine query logs files. It then creates and suggests the queries with the purpose to cover search goals of user. Second propose a novel Gaussian firefly algorithm (GFA) based clustering method to group similar user pseudo-documents from feedback session which can capably replicate user search goals. Then clustering results of proposed GFA is compared with existing Fuzzy C Means (FCM) and K means clustering methods for web search engines. At end of the clustering method the experimentation results is measured based on the classifier parameters such as Average Precision (AP) Voted Average Precision (VAP) and Classified Average Precision (CAP) to assess the performance accuracy of web search engine results based on the restructured web search results.

References

SIGIR Conf. Research and Development in Information Retrieval (SIGIR ’05), pp. 154-161.

**Index Terms**

Computer Science  
Algorithms

**Keywords**

User search goals  
feedback sessions  
pseudo-documents  
classified average precision (CAP)  
Voted AP (VAP)  
average precision (AP)

Information retrieval (IR)

Fuzzy C means clustering (FCM)

K-means clustering

Gaussian Firefly algorithm (GFA).