Optimization of Clusters of Web Query Sessions using Genetic Algorithm for Effective Personalized Web Search

Abstract

Personalization of web search is used for effective Information Retrieval in order to better satisfy the information need of the user on the web. The web usage mining has been used widely in Personalization of Web Search (PWS). The effectiveness of the Personalization of Web Search based on clustered web usage data depends on the quality of clusters. It is found in research that there exist no clustering algorithms that produce clusters of 100% quality. In this paper the Genetic Algorithm (GA) is used for clusters optimization in order to improve the quality of clusters for effective Personalized web search. Experiment was conducted on the data set of query sessions captured on the web in Academics, Entertainment and Sports Domain. The search results confirm the improvement in the average precision of the PWS with cluster optimization in comparison to PWS without cluster optimization.

References

- Arzanian, B., Akhlaghian, F., and Moradi, P. 2010. A Multi-Agent Based Personalized Meta-Search Engine Using Automatic Fuzzy Concept Networks, Third International Conference...
on Knowledge Discovery and Data Mining, pp. 208–211.
- Chawla, S., and Bedi, P. 2008. Improving information retrieval precision by finding related queries with similar information need using information scent. In First International Conference on Emerging Trends in Engineering and Technology, ICETET&apos;08. (pp. 486-491). IEEE.
Optimization of Clusters of Web Query Sessions using Genetic Algorithm for Effective Personalized Web Search

24(7), 881-892.
Optimization of Clusters of Web Query Sessions using Genetic Algorithm for Effective Personalized Web Search

Optimization of Clusters of Web Query Sessions using Genetic Algorithm for Effective Personalized Web Search


Index Terms

Computer Science
Software Engineering

Keywords

Web Information Retrieval Personalized Web Search Genetic Algorithms
Clustering
Optimization
Information Scent