Algorithm for information retrieval optimization

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This article discusses and describes a Document Ranking OPTimization (DROPT) algorithm for information retrieval (IR) in a web-based and designated databases environment. Specifically, the technique was first borne out in Agbele 2014. Conversely, as the volume of information available online and in designated databases is growing continuously, ranking algorithms can play a major role in the context of search results. In this paper, a DROPT technique for documents retrieved from a corpus is developed with respect to document index keywords and the query vectors. This is based on calculating the weight \( w_{ij} \) of keywords in the document index vector, calculated as a function of the frequency of a keyword \( kj \) across a document \( d_i \). The purpose of DROPT technique is to reflect how human users can judge the context changes in IR result rankings according to information relevance. Our technique for IR optimization is generic for ranking retrieved documents. This article found out that it is possible for DROPT technique to overcome some of the limitations of existing traditional \( \text{tf x idf} \) algorithms via adaptation. We believe this technique can improve individual users' retrieval performance with promising results.

Biography

Kehinde Kayode completed his undergraduate in Computer Science BSc (Hons) from Ondo State University in January 1998. He completed his NYSC in December 1998. He completed his MTech degree in 2005 from Federal University of Technology Akure, Nigeria whilst working full-time as a Graduate Assistant, Computer Science Department, University of Ado-Ekiti, Nigeria. He was promoted to Assistant Lecturer on completion of his MTech degree. He completed his PhD in 2014 from University of the Western Cape, Cape Town, South African and writing fellowship awards from University of the Western Cape, Computer Science Department, RSA. He joined Adeleke University, Nigeria in August 2014 as a Lecturer I. Later he joined Elizade University in March 2015 as a Senior Lecturer. He has published more than 20 papers in reputed journals.

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