IJASAT

International Journal on Islamic Applications in Computer Science and Technology

Volume 5 Issue 1

March 2017

International Journal on Islamic Applications in Computer Science And Technology

Volume 5, Issue 1, March 2017

EDITED BY

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ISSN (Online): 2289-4012

International Journal on Islamic Applications in Computer Science and Technology is published both in traditional paper form and in Internet. This journal is published at the website http://sign-ific-ance.co.uk, maintained by Design for Scientific Renaissance, Malaysia.

Design for Scientific Renaissance

Malaysia

Typesetting: Camera-ready by author

FORWARD

By the grace of Allah, it is a great pleasure to introduce the issue No. 16 which is the first in the fifth volume of: **The International Journal on Islamic Applications in Computer Science and Technology**

The success and the welcome of this Journal by researchers from many countries, gave us great encouragement for continuing issuing in the due time. This Journal is aimed at publishing original research papers in the field of Islamic Applications in computer science and technology. This field is catching a momentum in the recent years. As a Journal interested in this field, it is the first International Journal of its specific field. As research is growing in this field, we hope that this Journal will be a platform for researchers working in the field to publish their research.

This issue comes after IMAN2016 conference, which was supposed to take place in Sudan, but then took place as an online conference due to unforeseen circumstances. However, all papers supposed to be delivered during the conference were uploaded online during the conference dates. Some of the papers in this issue are among those papers of the conference.

This issue contains six papers. Five of them are related to Quran and one related to pilgrimage. The first one is entitled: **Multiword corpus of the Holy Quran.** This paper is the first attempt made to deal with multiword in Quran in corpus form. It is based on presenting multiword corpus of Quran based on roots of the word rather than the word itself. This combines the relations between same words in addition to other words with common roots. This enriches the corpus since Arabic language word structure is based on root of the word. This corpus should enable future research in going deep in analyzing Quran ontology, Arabic language studies and inter relations between Quran and other Islamic resources, e.g. "Hadith", "Fiqh", "Usool" etc.

The second paper is entitled: **Evaluation Criteria for Computational Quran Search.** This paper reviews search tools constructed for Information Retrieval from the Holy Quran. This paper evaluates these different search tools against 13 criteria depending on: search features, output features, precision of the retrieved verses, recall database size and types of database contents. Based on this survey, it was concluded that most of the existing Quran search tools still cannot solve the problem of ambiguity in the retrieved results because these tools use traditional query analysis and make limited usage of Quran ontologies.

The third paper is of the title: **Authentication Systems of Digital Quran, a Review.** This study introduces a far reaching review of cutting edge, discourse, and an examination study of works led here. An answer is critically expected to give a decent substance security, and respectability of electronic adaptation of the Holy Quran. This study closes by abridging issues, strategy and prospects for verifying electronic adaptation of Quran.

The fourth paper is entitled: **Developing a Centralised Approach for authentication of Online Quran with Assistance of Muslim Scholars.** As it is a big challenge for the users to identify the valid copy of digital (online) Quran .The Muslims everywhere in the world are facing deficiency of attentiveness in distribution of fake digital versions of Quran without acknowledgment of approved Muslims scholars. Muslims around the world individuals as well as groups have been putting huge effort to detect and eradicate illegal copies of Holy Quran. The paper proposes that there should be one committee of Muslims scholars and IT

experts which has both type of technological and Islamic knowledge about Quran. The paper proposes a digital Quran centralized authentication system by using latest authentication approach. The system is aimed to combine sophisticated knowledge of our outstanding Muslim scholars and extraordinary technological experts to provide the authentic, valid and error proof digital Quran to every Muslim.

The fifth paper is entitled: **Intelligent Information Retrieval Approach using Discrete Wavelet Transform for Holy Quran in Smartphone Application.** This paper tries to solve the Verses of Quran retrieval problem by proposing a novel document model, termed the Dynamic Document Model with Discrete Wavelet Transforms (DDMDWT). The DDMDWT exploits the variations in Verses of Quran length and mathematical transforms for document representation. The proposed model will enhance the existing term signal concept by additionally taking into consideration differing lengths of Verses of Quran. We designed and implemented an intelligent Quranic retrieval (IQR) Android application. In this IQR, the DDMDWT model contributes to reducing the time complexity of SBIRM and decreasing the index size by 20.98%, all while achieving improvement in precision, recall, F-measure, and MAP with compared to SBIRM. This paper also demonstrates how the DDMDWT model delivers a notable increase in the precision of the P@1 and P@3.

The sixth paper is entitled: **Requirements Model For Hajj and Umrah Mobile Healthcare System (HUMHS).** Due to pilgrims mobility in different religious places, proper healthcare procedures become a major concern. Providing proper and accurate patients' healthcare during religious pilgrims "Hajj and Umrah" is a big challenge especially for elder people. Many people do not know how to convey their medical history or even their current medication. A mobile healthcare informatics system, where patients can have the details of their medical history, can be an adequate solution. The objective of the study is to develop the requirements for healthcare mobile cloud application that can improve healthcare procedures during Hajj and Umrah.

Editor-In-Chief

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