

International Journal on Islamic Applications in Computer Science and Technology

Volume 11 Issue 2

June 2023

International Journal on Islamic Applications in Computer Science And Technology

Volume 11, Issue 2, June 2023

EDITED BY

Prof. Dr. Mohammed Zeki Khedher

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.

Some of the papers published in this periodical may contain personal opinions which are the responsibilities of the authors and are not necessarily agreed by the editor of the periodical

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. In its current version, and permission for use must always be obtained from Design for Scientific Renaissance.

Design for Scientific Renaissance

Malaysia

Typesetting: Camera-ready by author

Editor-In-chief

- Prof. Dr. Mohammed Zeki Khedher, Jordan University, Jordan

Advisors

- Prof. Dr. Zaghloul al-Najjar, The World Islamic Science and Education University, Jordan
- Prof. Dr. Hany Ammar, West Virginia University, USA
- Prof. Dr. Idris Al-Kharchaf, University of Mohammed V, Rabat, Morocco

Managing Editor

- Prof. Dr. Akram M. Zeki, International Islamic University Malaysia, Malaysia

Assistant Editor

- Dr. Mustafa Ali Abuzaraida, Misurata University, Libya

Editors

- Prof. Dr. Abdelhak Lakhouaja, Mohammed First University, Morocco
- Prof. Dr. Abdelkader Adla, University of Oran 1 Ahmed Benbella, Algeria
- Prof. Dr. Abdeslam JAKIMI, Moulay Ismail University, Meknes, Morocco
- Prof. Dr. Adnan Abdul-Aziz Gutub, Umm Al-Qura University, Makkah, Saudi Arabia
- Prof. Dr. Ahmed Ferchichi, University of Tunisia, Tunisia
- Prof. Dr. Teddy Montoro, Universitas Siswa Bangsa International, Indonesia.
- Dr. Abdelbasit Mohamed Sharif Mohamed, International University of Africa, Sudan
- Dr. Abdellah Yousfi, University of Mohamed V, Morocco
- Dr. AbdulSattar M. khidhir, Mosul Technical Institute, Iraq
- Dr. Ali A. Alwan, International Islamic University Malaysia, Malaysia
- Dr. Hikmat Ullah Khan, COMSATS Institute of Information Technology, Pakistan
- Dr. Ibrahim Suliman Ahmed Ashmaiq, International Islamic University Malaysia, Malaysia
- Dr. Jamil Itmazi, Palestine Ahliya University, Palestine
- Dr. Marzanah A. Jabar, Universiti Putra Malaysia, Malaysia
- Dr. Mohamed Tahar Ben Othman, Qassim University, Saudi Arabia
- Dr. Mohammad Abdolshah, Islamic Azad University, Iran
- Dr. Mohammad Said Desouki, Higher Institute of Applied Science and Technology, Syria
- Dr. Nor Hasbiah Ubaidullah, Sultan Idris Education University, Malaysia
- Dr. Omar Tayan, Taibah University, Saudi Arabia
- Dr. Rashid A. Saeed, Sudan University of Science and Technology, Khartoum, Sudan
- Dr. Talaat Wahby, Sudan University of Science and Technology, Sudan
- Dr. Yousef Daradkeh, Salman Bin Abdulaziz University, Saudi Arabia
- Dr. Yousef Farhaoui, Moulay Ismail University, Morocco
- Dr. Youssef Iraqi, Khalifa University, UAE
- Dr. Youssef Zaz, Abdelmalek Essaadi University, Morocco

Foreword

By the grace of Allah, it is a great pleasure to introduce this issue of: The International Journal on Islamic Applications in Computer Science and Technology

With the beginning of the 11th year of the publication of this Journal, this issue is the 41st of this journal. We thank Allah for enabling us to continue all through these years. With the wide specialization of this Journal, it attracted contributions from researchers from all over the world. We pray to Allah to put his "Baraka" in the contents of the Journal and spread the fruits of its contents in the future.

This issue contains four papers. The first one is entitled: Using Automatic Question Generation Web Services Tools to Build a Quran Question-and-Answer Dataset.

Since there is a lack of a Quran question-and-answer corpus, this research paper aimed to create a valuable dataset for the research community using automatic question generation models. All the tools were reviewed as black boxes, not as computational linguistics algorithms, compared them, and explored their features and drawbacks. We then identified freely available tools, which are the Explore AI Question Generation demo, the Cathoven Question Generator, the Questgen Question Generator, and the Lumos Learning Question Generator. Lastly, a corpus of Quran questions and answers is created using these web service tools. This experiment indicates that these tools' performance varies in terms of many criteria, both the tools' performance in general and in terms of specific standards that measure the quality of the generated questions and answers. The Cathoven Question Generator was found to be the best tool in terms of general performance. Using these tools, we generated 40,585 questions and answers based on the English translation of the Quran.

The second paper is entitled: Stylometric Authentication of an Uncredible Extra-Hadith Collection

In this paper, a survey on the stylometric authentication of an uncredible extra-dataset claimed to be a part of the Hadith, but for which religious scholars showed that it was probably not (i.e., fabricated or weak collection). The extra-Hadith collection is analyzed and compared to the genuine certified Hadith book of Bukhari. For that purpose, we present a stylometric approach based on the author style of the Matn (i.e., pure speech of the Prophet -Pbuh) Two experiments were conducted and commented: the first experiment is an authorship attribution on 19 text segments; and the second experiment is an automatic document clustering on 15 text segments. In the first experiment, we used character 4-grams and the nearest neighbor classification technique with Manhattan distance. In the 2nd experiment, a Hierarchical Clustering with Manhattan distance and Spearman distance was used. The results of both classification and clustering experiments show a difference in author style between the uncredible extra-Hadith collection (or at least a main part of it) and the genuine Bukhari Hadith. Although the authentication technique is made here at the subset level (i.e., text subsets of about 500 words each), the obtained results give a scientific agreement to the Islamic religious scholars about their evaluation on the doubtful collection: the uncredible collection, or at least a main part of it, does not have the same author style as the genuine Hadith one.

The third paper is entitled: Islamic Ontology Coverage Evaluation

In this work, the data-driven evaluation method is applied to evaluate the adequacy of the available Quranic Ontologies, namely QuranOntology and Qurany, in covering the topical concepts for one of the Islam pillars, particularly the Hajj domain. The results show that the existing ontologies do not deeply cover Islamic topics. In addition, the QuranOntology concepts coverage represents 1% precision related to Hajj terminology. On the other hand, only 14 out of 160 Hajj keywords are matched with the ontology concepts, representing approximately a recall of 8.75 %. Therefore, there is a strong need to build knowledge resources that enrich the coverage of Islamic topics.

The fourth paper is entitled: Decolonising the reading lists of Arabic, Islamic and Middle Eastern Studies

The purpose of this study is to examine and compare diversity of author ethnicity in the two universities' reading list. Moreover, this work investigates the claim that "Western authors dominate the university curricula". The analysis of reading lists of Arabic, Islamic and Middle Eastern Studies at the University of Leeds shows evidence of ethnicity bias – supporting the claim. In this study, we present an initial analysis of undergoing PhD research. Several questions remain to be answered regarding the students' and lecturers' perspectives on reading lists and their understanding of diversity and decolonising the curriculum, which will be investigated in future research.

TABLE OF CONTENTS

Title / Authors	Page No.
Using Automatic Question Generation Web Services Tools to Build a Quran Question-and-Answer Dataset	1
Sarah Alnefaie, Eric Atwell, Mohammad Ammar Alsalka	
Stylometric Authentication of an Uncredible Extra-Hadith Collection	12
Halim Sayoud	
Islamic Ontology Coverage Evaluation	19
Sanaa Alowaidi, Eric Atwel, Mohammad Ammar Alsalka	
Decolonising the reading lists of Arabic, Islamic and Middle Eastern Studies	29
Rawan Bin Shiha, Eric Atwell, Noorhan Abbas	