

Document details

Back to results | 1 of 1

Full Text

View at Publisher

Export

Download

Add to List | More...

Egyptian Informatics Journal

Volume 17, Issue 3, 1 November 2016, Pages 305-314

Building CMU Sphinx language model for the Holy Quran using simplified Arabic phonemes (Article)

El Amrani, M.Y.^{a,b}, Rahman, M.M.H.^b, Wahiddin, M.R.^b, Shah, A.^b^a Computer Science and Engineering Department, Jubail University College, Saudi Arabia^b Computer Science Department, Kulliah of Information Communication Technology, International Islamic University Malaysia, Malaysia

View references (23)

Abstract

This paper investigates the use of a **simplified set of Arabic phonemes** in an **Arabic Speech Recognition** system applied to **Holy Quran**. The **CMU Sphinx 4** was used to train and evaluate a **language model** for the Hafs narration of the **Holy Quran**. The **building** of the **language model** was done using a **simplified list of Arabic phonemes** instead of the mainly used Romanized set in order to simplify the process of generating the **language model**. The experiments resulted in very low Word Error Rate (WER) reaching 1.5% while using a very small set of audio files during the training phase when using all the audio data for both the training and the testing phases. However, when using 90% and 80% of the training data, the WER obtained was respectively 50.0% and 55.7%. © 2016

Author keywords

Automatic speech recognition; Holy Quran recognition; Human voice

ISSN: 11108865 Source Type: Journal Original language: English

DOI: 10.1016/j.eij.2016.04.002 Document Type: Article

Publisher: Elsevier B.V.

References (23)

View in search results format

All Export Print E-mail Create bibliography

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert Set citation feed

Related documents

MFCC-VQ approach for Qalqalah Tajweed rule checking

Ismail, A., Kris, M.Y.I., Noor, N.M. (2014) Malaysian Journal of Computer Science

Simplified scoring methods in HMM based speech recognition

Paramonov, P., Subula, N. (2014) Proceedings - 2014 International Conference on Soft Computing and Machine Intelligence, ISCM 2014

Proposed combination of PCA and MFCC feature extraction in speech recognition system

Trang, H., Loc, T.H., Nam, H.B.H. (2015) International Conference on Advanced Technologies for Communications

View all related documents based on references

Find more related documents in Scopus based on:

Authors Keywords

Metrics

6 Mendeley Readers WITH PERCENTILE

View all metrics