

A review of Yorùbá automatic speech recognition

Abstract

Automatic Speech Recognition (ASR) has recorded appreciable progress both in technology and application. Despite this progress, there still exist wide performance gap between human speech recognition (HSR) and ASR which has inhibited its full adoption in real life situation. A brief review of research progress on Yorùbá Automatic Speech Recognition (ASR) is presented in this paper focusing of variability as factor contributing to performance gap between HSR and ASR with a view of x-raying the advances recorded, major obstacles, and chart a way forward for development of ASR for Yorùbá that is comparable to those of other tone languages and of developed nations. This is done through extensive surveys of literatures on ASR with focus on Yorùbá. Though appreciable progress has been recorded in advancement of ASR in the developed world, reverse is the case for most of the developing nations especially those of Africa. Yorùbá like most of languages in Africa lacks both human and materials resources needed for the development of functional ASR system much less taking advantage of its potentials benefits. Results reveal that attaining an ultimate goal of ASR performance comparable to human level requires deep understanding of variability factors.

Keywords — Automatic speech recognition, robust ASR, variability in ASR; Yorùbá speech processing