

Towards Processing Arabic Minimal Syllable Automatically

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Abstract

The purpose of this paper is to try to treat the Arabic minimal syllable automatically, so as to use Arabic in the field of artificial intelligence. To this effect three technological tools are used; *Gold wave*, *SFS (Speech Filing System)*, and *Neural Net Works* to recognize automatically the minimal syllable located in first, mid, and final position of three Arabic words recorded by forty Algerian speakers of different age and sex. Eight experiments have been done in this work where the sounds have been recorded in Gold wave and treated in SFS and trained in NNW. The result show that The optimal neural net work is that of *non- ordered data* with one layer, five nodes and 150 steps because it has given an error rate of 0.0032. The findings suggest the application of this type of neural net works in all syllables and all languages too because the same principle can be used in all languages.

Key words: Arabic, minimal, syllable, Gold wave, SFS, Neural Net Works