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A Framework for Name Matching in Arabic Language

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Abstract

An extensive research has been done for searching an effective algorithm for name matching that is play a vital and crucial role in many applications. Therefore, a many algorithms have been developed to measure the similarity of string but most of them designed mainly to handle Latin based languages. While, the name matching algorithms on Arabic context is rare because the dealing with Arabic context is a challenging task due to the characteristics and unique features of the Arabic language. Consequently, a framework for Arabic name matching has been proposed in this paper. The proposed framework takes a unique features of the Arabic language and the different levels of similarity for the Arabic letters such as phonetic, letter's form and keyboard similarities. Furthermore, the proposed framework has been considered transposition operation and enhanced states of insertion and deletion operations. The carried experiments in this paper have been shown the proposed framework gives more accurate results than the compared algorithms.

Keywords: Arabic Name Matching , Bigram, Matching Framework, Levenshtein Distance.

1. Introduction