

Enhancing Arabic Named Entity Recognition Using Hybrid Parallel Techniques

M. A. Otair, Z. Otaiwi, A. Odat

Named entities recognition systems (Proper Names) are used in the development of many natural language processing applications. There is a paucity of published research in the field of identifying the named entities from texts written in Arabic. This is due to the fact that the Arabic language has a specificity regarding the complexity of spelling and morphology, which is an obstacle to the development of a technique to identify the names of the Arabic entities or the so-called Arabic Named Entity Recognition system (ANER). This paper presented the experiments conducted to identify the appropriate technique to design a robust and reliable system for identifying Arabic entities. For this purpose, this study focuses on the most common state-of-art in the field of identification of Arabic named entities, then a comparison was made between five of the most famous tools that interested in identifying the Arab entities, after that, integrated each of two tools together to get 10 different parallel techniques. The results of the comparison between the tools showed that Rosette achieved the best results followed by Madamira, while it was the worst performance results in the gate tool and for hybrid systems, the R-F (combining Rosette and Farasa) achieved the best performance with better accuracy than individual tools.

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