

ABSTRACT

This paper presents Arabic Natural Language Processing (ANLP), a novel method of morphological analysis. The paper proposes the expansion of language resources in the Islamic field (Islamic computation resources), so it can be accessed and merged with other Islamic computation research to be more comprehensive. In previous studies, one of which was the Jabalin System, the system still produced less accurate morphological descriptions (MSD). This research aims to identify passive Arabic words' MSD using a neural-based classifier. The paper offers a solution to formulate and implement a morphological analysis of verses of Al-Quran. The change of active voice Arabic to passive voice Arabic using a rule-based algorithm and identifying MSD of a word using a neural-based classifier. The input of this system is active Arabic words, and the output is passive Arabic words with their MSD. This paper shows 90.78% accuracy and 92.61% F1-score using the vanilla RNN method.