

Marwah Alian, Arafat Awajan, Generating Sense Inventories for Ambiguous Arabic Words, The International Arab Journal of Information Technology (IAJIT). 2021, (ISI,Scopus)

## **Abstract**

The process of selecting the appropriate meaning of an ambiguous word according to its context is known as word sense disambiguation. In this research, we generate a number of Arabic sense inventories based on an unsupervised approach and different pre-trained embeddings, such as Aravec, Fast text, and Arabic-News embeddings. The resulted inventories from the pre-trained embeddings are evaluated to investigate their efficiency in Arabic word sense disambiguation and sentence similarity. The sense inventories are generated using an unsupervised approach that is based on a graph-based word sense induction algorithm. Results show that the Aravec-Twitter inventory achieves the best accuracy of 0.47 for 50 neighbors and a close accuracy to the Fast text inventory for 200 neighbors while it provides similar accuracy to the Arabic-News inventory for 100neighbors. The experiment of replacing ambiguous words with their sense vectors is tested for sentence similarity using all sense inventories and the results show that using Aravec-Twitter sense inventory provides a better correlation value