

Deep Learning Based-Object-classes Semantic Classification of Arabic Texts

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Abstract : We proposes in this paper a Deep Learning based approach to classify text in order to enrich an Arabic ontology based on the objects classes of Gaston Gross. Those object classes are defined by taking into account the syntactic and semantic features of the treated language. Thus, our proposed approach is a hybrid one. In fact, it is based on the one hand on the object classes that represents a knowledge based-approach on classification of text and in the other hand it uses the deep learning approach that use the word embedding-based-approach to classify text. We have applied our proposed approach on a corpus constructed from an Arabic dictionary. The obtained semantic classification of text will enrich the Arabic objects classes ontology. In fact, new classes can be added to the ontology or an expansion of the features that characterizes each object class can be updated. The obtained results are compared to a similar work that treats the same object with a classical linguistic approach for the semantic classification of text. This comparison highlight our hybrid proposed approach that can be ameliorated by broaden the dataset used in the deep learning process.

Keywords : deep-learning approach, object-classes, semantic classification, Arabic

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