



Publications Template

#	Research Title	Field	Abstract	Year of Publication Publishing	Publishing Link "URL"
1	A Comprehensive Taxonomy of Arabic Discourse Coherence Relations.	Natural Language Processing	Discourse coherence is the property of well-written texts that makes them meaningful. Generally, a sentence is not understood in isolation, but with respect to other sentences. The problem of identifying a complete set of Arabic discourse coherence relations has not been fully addressed. Often, coherence relations are shown in explicit manners, but implicit relations are common in Arabic texts. An approach to recognize both explicit and implicit Arabic	2012	https://conferencealerts.com/show-event?id=ca1868a3



			relations is introduced, based on studying cue phrases, and the different Arabic rhetoric structures respectively. A taxonomy of 47 Arabic relations is reached. A comparison between Arabic and English cue phrases has shown that all English Rhetorical Structure Theory (RST) coherence relations are also contained in the Arabic coherence relation's set. Additionally, extra 12 Arabic explicit coherence relations and 4 implicit relations are recognized.		
2	Arabic Discourse Segmentation Based on Rhetorical Methods	Natural Language Processing	The discourse segmentation problem in Arabic language has not been fully addressed. A technique to segment Arabic discourse into complete sentences is presented. The technique is derived from Arabic	2011	https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.369.965&rep=rep1&type=pdf



			<p>Rhetorical system by exploiting the main crucial connector "و" as defined by Arabic linguists almost one thousand years ago. This approach categorizes the six known rhetorical types of "و" into two classes: segment and unsegment, known as, "Fasl" and "Wasl". Segmentation places are decided according to the type of connector "و". A set of twenty two syntactic and semantic features devised from "Fasl and Wasl" rhetorical methods, are chosen to categorize each type of "و". The system undergoes the learning and testing stages, using SVM machine learning technique to identify the types of the connector "و". An Arabic discourse corpus is particularly</p>		
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			developed for this experiment. We achieved results with an accuracy of 97.95% of discourse segmentation.		
3	Recognizing Unsignaled Discourse Coherence Relations Using Syntactic and Semantic Features.	Natural Language Processing	We present a classifier of unsignaled (implicit) discourse coherence relations between sentences. Our classifier considers syntactic and semantic features of the sentences being annotated. It consists of two phases: learning and testing. In the learning phase; syntactic and semantic features which characterize each type of coherence relation are extracted. In the testing phase; the relation between two sentences is recognized in three steps: parsing of the two sentences to get their syntactical features using the ATN parser, obtaining the semantic representation of each	2010	http://ecsjournal.org/JournalArticle.aspx?articleID=269



			<p>sentence using Case Frame method and, finally, applying a rule based classifier to find the relation type. The significance of this classifier; compared to other similar works; is that it does not rely on word pair statistics, phrasal patterns or discourse dependency structures which, in turn, depend on the discourse domain or the style of writing. Although our classifier is tested with the ambiguous relations: Elaboration, Antithesis and Motivation, which are not often signaled with cue phrases, it achieves an accuracy of 32.76 % with 2.43 % improvement over the best previous known results for similar works.</p>		
4	A Fast Neural Network Arabic Charter Classifier using Walsh_	Pattern Recognition	This paper describes a neural-based supervised classifier trained using	1994	In the proceedings of the 11th Radio Science Conference, Egypt, 1994.



	Hadamard transform-based dimension reduction technique.		the best Walsh coefficients of the vertical projection of the Arabic characters' binary images. Testing results using Arabic characters of different fonts and sizes showed that the proposed technique is promising. Advantages of using the Walsh – Hadamard transformation as a feature extraction method are discussed.		
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