

SemEval-2018 Task 7 Subtask 1: Semantic Relation Classification in Scientific Papers

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Abstract

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Task		Subtask 1.1		Subtask 1.2	
Corpus	Embedding Model	Macro-F1	Micro-F1	Macro-F1	Micro-F1
Pre-trained DBLP v5	word2vec	88.99	78.99	64.99	38.99
ACM v9 + DBLP v10	word2vec	87.99	78.99	64.99	38.99
DBLP v5	word2vec	87.99	78.99	64.99	38.99
DBLP v10	word2vec	87.99	78.99	64.99	38.99
ACM v9 + DBLP v10	fastText	87.99	78.99	64.99	38.99
DBLP v10	fastText	87.99	78.99	64.99	38.99
ACM v9 + DBLP v10	BERT	87.99	78.99	64.99	38.99

Table 1: Comparison between different corpus using LibLinear logistic regression model (in %)

Task		Subtask 1.1		Subtask 1.2	
Model	Feature	Macro-F1	Micro-F1	Macro-F1	Micro-F1
LibLinear					
Logistic Regression	embedding only	88.99	78.99	64.99	38.99
LibLinear					
Logistic Regression	+ one-hot	88.99	78.99	64.99	38.99
LibLinear					
Logistic Regression	+ shape	88.99	78.99	64.99	38.99
LibLinear					
Logistic Regression	+ cluster	88.99	78.99	64.99	38.99
LibLinear					
Logistic Regression	+ e1, e2	88.99	78.99	64.99	38.99
Scikit Learn					
Logistic Regression	embedding only	88.99	78.99	64.99	38.99
Scikit Learn					
Logistic Regression	+ one-hot	88.99	78.99	64.99	38.99
Scikit Learn					
Logistic Regression	+ shape	88.99	78.99	64.99	38.99
Scikit Learn					
Logistic Regression	+ cluster	88.99	78.99	64.99	38.99
Scikit Learn					
Logistic Regression	+ e1, e2	88.99	78.99	64.99	38.99

Table 2: Comparison between differen feature based on LibLinear and Scikit Learn Logistic Regression model (in %)

Task	Subtask 1.1		Subtask 1.2	
Model Name	Macro-F1	Micro-F1	Macro-F1	Micro-F1
LibLinear				
Logistic Regression	88.99	78.99	64.99	38.99
Scikit Learn				
Logistic Regression	87.99	78.99	64.99	38.99
TextCNN	87.99	78.99	64.99	38.99

Table 3: Comparison between differen machine learning model using fastText embedding model on DBLP v10 corpus (in %)