

DismemBERT: Detecting Diachronic Lexical Semantic Change Using BERT Embeddings in an Unsupervised Knowledge-Free Setting

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Abstract

This document contains the instructions for preparing a paper submitted to COLING-2020 or accepted for publication in its proceedings. The document itself conforms to its own specifications, and is therefore an example of what your manuscript should look like. These instructions should be used for both papers submitted for review and for final versions of accepted papers. Authors are asked to conform to all the directions reported in this document.

1 Introduction

Here is something regarding semantic change (Schlechtweg et al., 2018)

2 Related Work

2.1 Diachronic Lexical Semantic Change

With an increasing interest in Diachronic Lexical Semantic Change (LSC) there is a multitude of approaches and three different word representations are commonly used (Schlechtweg et al., 2019).

First are semantic vector representations such as word2vec (Mikolov et al., 2013), which represents each word with two different vectors for each time period respectively (Hamilton et al., 2016a; Hamilton et al., 2016b). The vectors itself represent the co-occurrence statistics of the word in the given time period.

Second is the use of distributional representations of words. To this end (Frermann and Lapata, 2016) use Bayesian learning.

Third is

2.2 Word Sense Disambiguation

2.3 Unsupervised Knowledge-free Sense Modelling

3 Corpora

	t1	t2
English	1810-1860	1960-2010
German	1810-1860	1945-1990
Swedish	1800-1830	1900-1925
Latin	-200-0	0-2000

The Corpora for evaluation are from the SEMEVAL 2020 Task 1: "Unsupervised Lexical Semantic Change Detection". They contain lemmatized text for English, German, Swedish and Latin. For each language two corpora are available from two distinct time periods. The respective time periods can be seen in ref to table.

4 Framework

5 Experiments

6 Evaluation

Hi

7 Conclusion

References

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- Tomas Mikolov, Kai Chen, Greg Corrado, and Jeffrey Dean. 2013. Efficient estimation of word representations in vector space. *arXiv preprint arXiv:1301.3781*.
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