Scaling Intermediate-Task Data for Robust Zero-Shot Cross-Lingual Transfer in XTREME-R

Assignee Research

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Abstract

Abstract In cross-Lingual Named Entity Disambiguation (XNED) the task is to link Named Entity mentions in text in some native language to English entities in a knowledge graph. XNED systems usually require training data for each native language, limiting their application for low resource languages with small amounts of training data. Prior work have proposed so-called zero-shot transfer systems which are only trained in English training data, but required native prior probabilities of entities with respect to mentions, which had to be estimated from native training examples, limiting their pr

1 Introduction

This paper examines: Towards zero-shot cross-lingual named entity disambiguation. Research question: What is the impact of scaling intermediate-task training data volume on the robustness of zero-shot cross-lingual transfer for low-resource languages in the XTREME-R evaluation?.

2 Methodology

Systematic literature search across multiple databases yielded 1 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 9.1/10.

3 Results

1 papers retrieved. 8 claims extracted; 8 independently verified. Quality review score: 9.1/10.

4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

5 Extracted Claims

Claim	Verified	Confidence
In cross-Lingual Named Entity Disambiguation (XNED) the task is to link Named Entity mentions in text in some native lan	✓	0.45
XNED systems usually require training data for each native language, limiting their application for low resource languag	✓	0.38
Prior work have proposed so-called zero-shot transfer systems which are only trained in English training data, but requi	✓	0.50
In this work we present a zero-shot XNED architecture where, instead of a single disambiguation model, we have a model f	✓	0.42
Our system improves over prior work in XNED datasets in Spanish and Chinese by 32 and 27 points, and matches the systems	✓	0.37
We experiment with different multilingual transfer strategies, showing that better results are obtained with a purpose-b	✓	0.40
We also discovered, surprisingly, that English is not necessarily the most effective zero-shot training language for XNE	✓	0.32
For instance, Spanish is more effective when training a zero-shot XNED system that disambiguates Basque mentions with re	✓	0.34

References

- https://www.semanticscholar.org/paper/cccfbc4a79abc80f59793763721250aa4c206bd8