Semi-Automated Construction of Sense-Annotated Datasets for Practically any Language

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Introduction

Word **S**ense **D**isambiguation **(WSD)**: task of identifying the meaning of a word in context.

The man deposited money into the ***bank.***

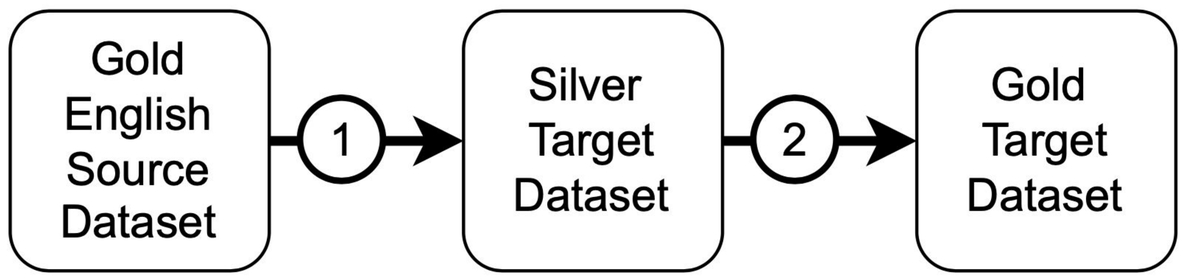
High-quality (Gold) sense-annotated datasets are essential for evaluating WSD systems but are often ***restricted to high-resource languages or limited in scope.***

Outline

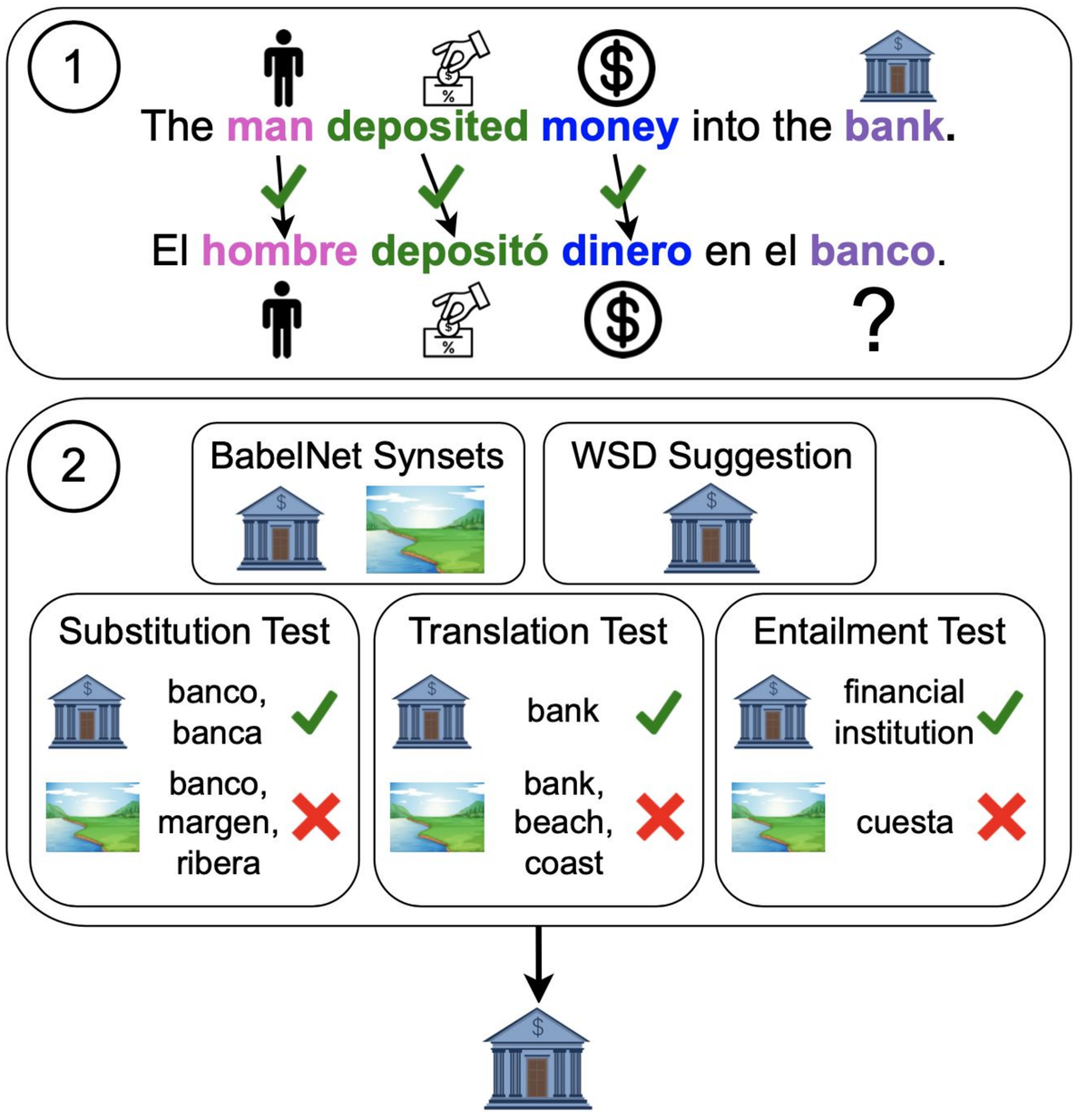
Our ***language-agnostic pipeline*** for creating sense-annotated datasets has two parts**:**

(1) Automatic Silver Dataset Creation: translation, alignment, and filtering

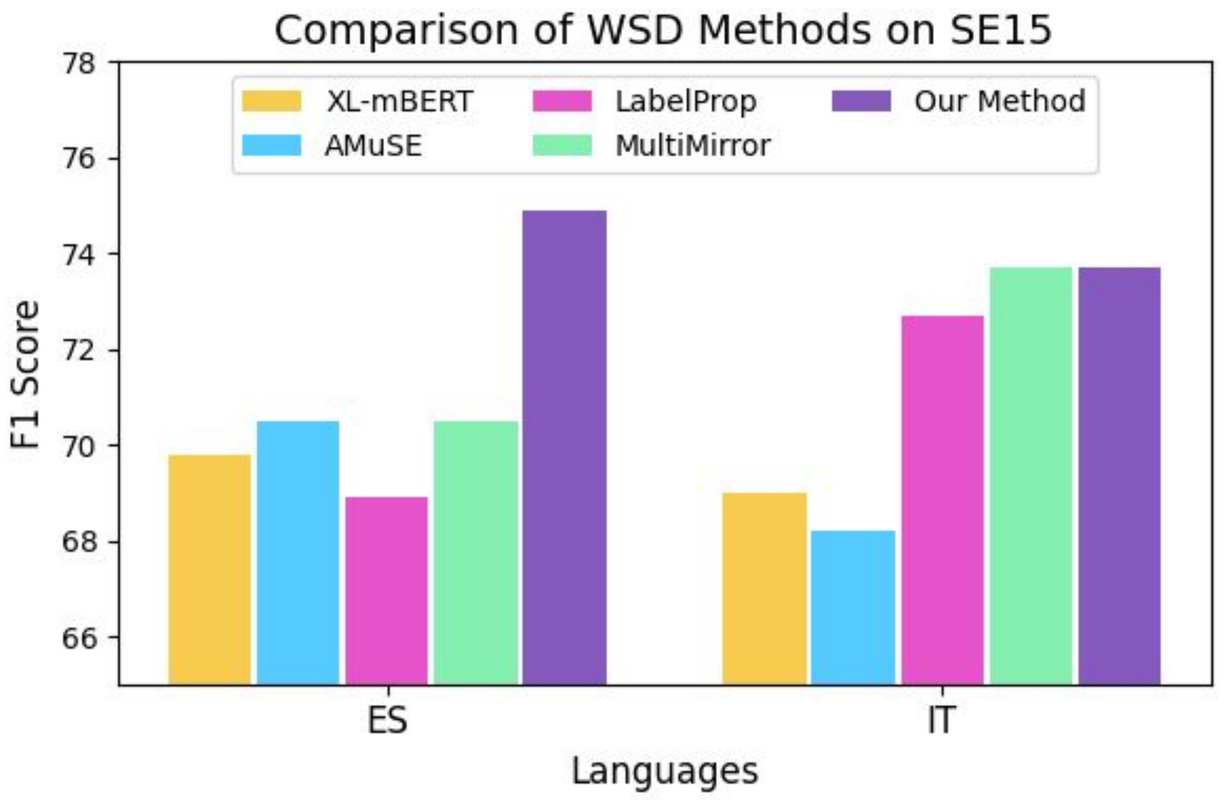
(2) Manual Gold Annotation Procedure: WSD system suggestions, BabelNet synsets, and three tests



From Silver to Gold

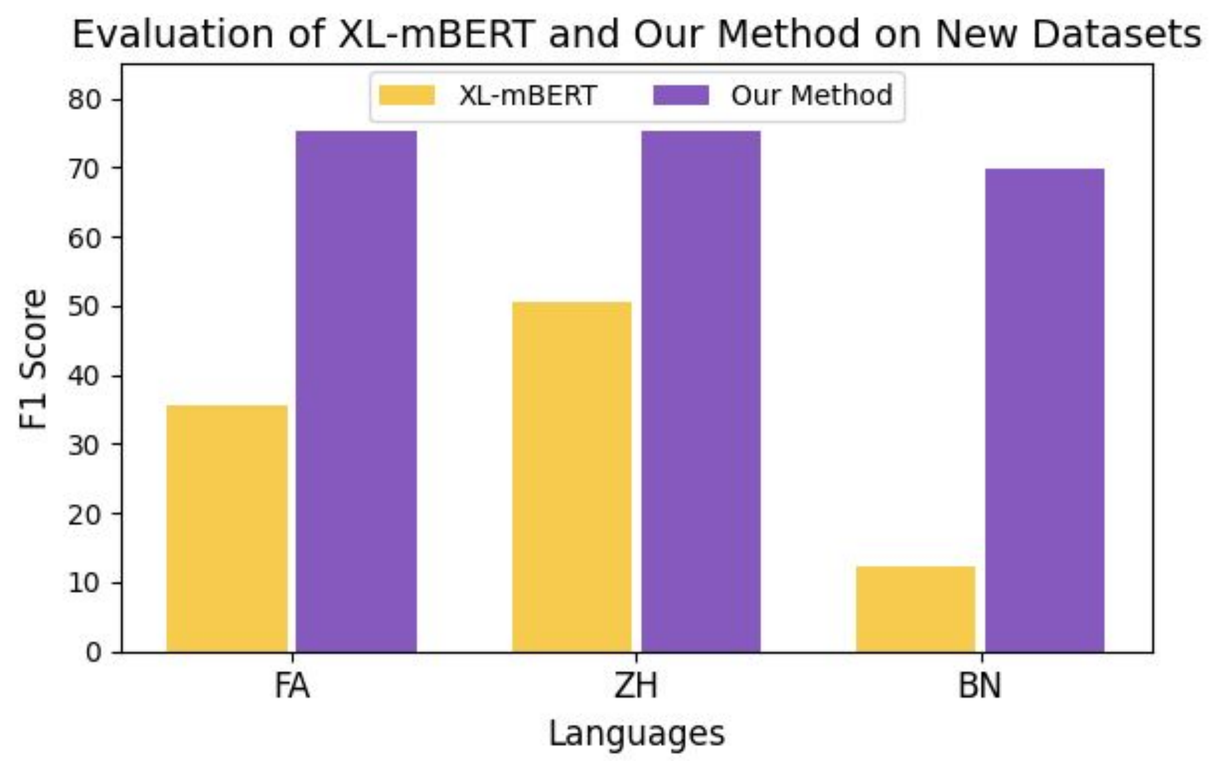


Results: IT and ES



*Our Method refers to part (1) of our pipeline using provided or verified gold translations

Results: FA, ZH, and BN



Summary

- Introduced a novel approach for automatically creating sense-annotated data for ***any language,***
- Designed an efficient annotation procedure that ***accelerates manual sense validation.***
- Created ***new parallel WSD datasets for Farsi, Chinese, and Bengali,*** verified by native speakers.
- Performed ***empirical validation*** of our method on both new and existing gold datasets, showing our method has ***competitive or superior performance*** on all datasets.

github.com/jai-riley/Sense-Projection

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