

Call for Participation in the 1st Shared Task on Multilingual Clause-level Morphology

Co-located with the **2nd Workshop on Multilingual Representation Learning (MRL) at EMNLP**

8 December 2022, Abu Dhabi

Description and Objectives

Morphology has been widely studied as a word-level task, although in many languages it has complex hierarchical relationships with different layers of language, such as phonetic, syntactic or semantic representations of phrase or sentence-level utterances. The extent of this relationship as well as its complexity, however, still remain unknown. The new shared task on multilingual clause-level morphology aims to investigate methods for morphological analysis or generation of different forms in languages with varying typology, where the modeling and alignment of morphosyntactic structure is accomplished at the level of clauses.

The shared task aims to provide a new benchmark that can help bring novel understandings in:

- The relationship between morphology and syntax in different languages
- How morphosyntactic structure aligns across languages with varying typology
- The performance of conventional statistical methods for language modeling or representation learning in learning abstract linguistic features that can generalize across forms and languages
- The limitations of conventional methods for morphological or syntactic modeling as well as the specifications required for developing more comprehensive and theoretically complete models of language

Languages

The shared task will initially include six languages from different language families and with varying morphological characteristics: English, French, German, Hebrew, Russian and Turkish. We anticipate the extension of the benchmark to include more languages as time and resources become available.

Tasks

The shared task can be studied in terms of three parts.

Task 1: Inflection

In this task the input is verbal *lemma* (the form given as a lexicon entry) and a specific set of *inflectional features*. The task requires generating the desired output clause manifesting the features.

Examples

	Input	Output
English	give IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)	I will give him to her
German	geben IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)	Ich werde ihn ihr geben
Turkish	vermek IND;FUT;NOM(1,SG);ACC(3,SG);DAT(3,SG)	Onu ona vereceğim
Hebrew	נתן IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)	אתן אותו לה

Task 2: Reinflection

In this task the input is an *inflected clause*, accompanied by its *features*, and a *new set of features* representing the desired form. The task is to generate the desired output that will represent the desired features.

Examples

	Input	Output
English	I will give him to her IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM) IND;PRS;NOM(1,PL);ACC(2);DAT(3,PL);NEG	We don't give you to them
German	Ich werde ihn ihr geben IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM) IND;PRS;NOM(1,PL);ACC(2,SG);DAT(3,PL);NEG	Wir geben dich ihnen nicht
Turkish	Onu ona vereceğim IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM) IND;PRS;PROG;NOM(1,PL);ACC(2,SG);DAT(3,PL);NEG	Seni onlara vermiyoruzem
Hebrew	נתן אותו לה IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM) IND;PRS;NOM(1,PL,MASC);ACC(2,SG,MASC);DAT(3,PL,FEM);NEG	אנחנו לא נותנים אותך לה

Task 3: Analysis

This task is the opposite of task 1, where a system is required to analyze given *clauses* and generate the *lemma* and *features* underlying them.

Examples

	Input	Output
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English	I will give him to her	give IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)
German	Ich werde ihn ihr geben	geben IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)
Turkish	Onu ona vereceğim	vermek IND;FUT;NOM(1,SG);ACC(3,SG);DAT(3,SG)
Hebrew	אתן אותו לה	נתן IND;FUT;NOM(1,SG);ACC(3,SG,MASC);DAT(3,SG,FEM)

Participation

Interested parties are invited to join the mailing list at participants-mcmsharedtask-2022@googlegroups.com to be involved in the competition.

All participating systems will be evaluated together with our baselines against the same held-out test set, to be released shortly before evaluation. Submitted systems can compete in some or all sub-tasks.

Participating teams will be invited to submit a short paper describing their work to the MRL workshop and to present it in a special session in the workshop.

Important Dates

May 16, 2022: Release of training and development data

July 20, 2022: Release of testing data

July 30, 2022: Deadline for submission of systems

August 15, 2022: Release of rankings and results

September 7, 2022: Deadline for submitting system description papers

Evaluation

System outputs will be evaluated using standard evaluation metrics used in morphological analysis and inflection, including the exact match accuracy ratings (precision, recall and F-1) as well as metrics for generated text, such as the edit distance.

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