CoNLL 2018

Proceedings of the

CoNLL–SIGMORPHON 2018 Shared Task: Universal Morphological Reinflection

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acl@aclweb.org

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Preface

This volume contains the system description papers associated with the CoNLL-SIGMORPHON shared task in morphological reinflection held at CoNLL 2018, in Brussels, Belgium. This is the second in a two-year series of shared tasks that address supervised learning of morphology. The origin of these two tasks was the SIGMORPHON shared task in 2016, which was subsequently expanded in both 2017 and 2018, called the CoNLL-SIGMORPHON shared tasks. While the first two iterations focused on learning inflectional patterns from examples, we this year introduced a new task similar to a cloze test—a format familiar from L2-learner exams—where participants we asked to inflect words in their sentential context in a morphosyntactically appropriate way.

To support the inflection task 1 this year, we collected and curated inflection table data from 103 languages, representing a typologically and genealogically diverse data set against which to evaluate performance of the systems. We evaluated the ability to learn to inflect nouns, andjectives, and verbs from their lemmata (citation forms) into a desired target form.

For task 2, we collected annotated text data for 7 languages from the Universal Dependencies resources, and matched tokens to their UniMorph inflection tables, so that each word form would be associated with an inflection table representing all the possible forms of that word. Following this, we annotated the target words to be completed by learning algorithms with all their plausible grammatically well-formed variants for fine-grained evaluation.

Both tasks were evaluated under three different training data conditions: low, medium, and high.

A total of 15 teams with members from 17 institutions participated in the shared task with a total of 33 system submissions. Task 1 received 27 submissions and task 2 received 6. Consistent with previous SIGMORPHON and CoNLL-SIGMORPHON shared task results, neural network models performed very well in each data condition, including with a very low-resource training set.

The creation of several components in the shared task received support from DARPA I20 in the program Low Resource Languages for Emergent Incidents (LORELEI). We wish to thank the organizers of CoNLL 2018 and the parallel Universal Dependencies CoNLL shared task (Multilingual Parsing from Raw Text to Universal Dependencies) for their support and help. We also want to thank the participants and other members of the community who actively participated by providing useful commentary, advice, and feedback on the organization and structure of the tasks.

We hope the data sets, which are now available, will serve as a useful resource to develop further techniques and research to address various challenges in the learning of morphology.

MANS HULDEN & RYAN COTTERELL, on behalf of the shared task organizers
September 2018

Organizers:

Mans Hulden (co-chair)	University of Colorado
Ryan Cotterell (co-chair)	Johns Hopkins University
Jason Eisner	Johns Hopkins University
Katharina Kann	New York University
Christo Kirov	Johns Hopkins University
Arya D. McCarthy	Johns Hopkins University
Sebastian Mielke	Johns Hopkins University
Garrett Nicolai	Johns Hopkins University
Miikka Silfverberg	University of Colorado / University of Helsinki
John Sylak-Glassman	Johns Hopkins University
Ekaterina Vylomova	University of Melbourne
Géraldine Walther	University of Zurich
David Yarowsky	Johns Hopkins University

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