ACL 2023

The 8th Workshop on Representation Learning for NLP (RepL4NLP 2023)

Proceedings of the Workshop

July 13, 2023

The ACL organizers gratefully acknowledge the support from the following sponsors.

Gold



©2023 Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL) 209 N. Eighth Street Stroudsburg, PA 18360 USA Tel: +1-570-476-8006 Fax: +1-570-476-0860 acl@aclweb.org

ISBN 978-1-959429-77-7

Introduction

The 8th Workshop on Representation Learning for NLP (RepL4NLP 2023) will be hosted by ACL 2023 and held on 13 July 2023. The workshop is being organised by Burcu Can, Maximilian Mozes, Samuel Cahyawijaya, Naomi Saphra, Nora Kassner, Shauli Ravfogel, Abhilasha Ravichander, and Chen Zhao; and advised by Isabelle Augenstein, Anna Rogers, Kyunghyun Cho, and Edward Grefenstette. The workshop is organised by the ACL Special Interest Group on Representation Learning (SIGREP).

The 8th Workshop on Representation Learning for NLP aims to continue the success of the Repl4NLP workshop series, with the 1st Workshop on Representation Learning for NLP having received about 50 submissions and over 250 attendees - the second most attended collocated event at ACL'16 after WMT. The workshop was introduced as a synthesis of several years of independent *CL workshops focusing on vector space models of meaning, compositionality, and the application of deep neural networks and spectral methods to NLP. It provides a forum for discussing recent advances on these topics, as well as future research directions in linguistically motivated vector-based models in NLP. The workshop will take place in a hybrid setting, and, as in previous years, feature interdisciplinary keynotes, paper presentations, posters, as well as a panel discussion.

Organizing Committee

Workshop Organizers

Burcu Can, University of Stirling Maximilian Mozes, University College London Samuel Cahyawijaya, Hong Kong University of Science and Technology Naomi Saphra, New York University Nora Kassner, Meta Shauli Ravfogel, Bar-Ilan University Abhilasha Ravichander, Allen Institute for Artificial Intelligence Chen Zhao, New York University

Senior Advisors

Isabelle Augenstein, University of Copenhagen Anna Rogers, University of Copenhagen Kyunghyun Cho, New York University Edward Grefenstette, DeepMind Lena Voita, Meta AI

Program Committee

Program Committee

Aleksandr Drozd, RIKEN Aleksandra Piktus, University of Roma La Sapienza Alexandra Chronopoulou, Ludwig-Maximilians-Universität München Alexandre Allauzen, École Supérieure de Physique et de Chimie Industrielles de la Ville de Paris Ankur Padia, Philips Research North America Anna Tigunova, Saarland Informatics Campus, Max-Planck Institute Antonio Uva, Amazon Arjun Reddy Akula, Google Bryan Wilie, Hong Kong University of Science and Technology Caglar Gulcehre, DeepMind Chris Quirk, Microsoft Christopher Davis, University of Cambridge Denis Filimonov, Amazon Dong Zhou, Guangdong University of Foreign Studies Edwin Simpson, University of Bristol Eliezer de Souza da Silva, Norwegian University of Science and Technology Elisabetta Fersini, University of Milan-Bicocca Etsuko Ishii, The Hong Kong University of Science and Technology Eva Maria Vecchi, University of Stuttgart Faeze Brahman, Allen Institute for AI Frank Rudzicz, Dalhousie University Hai Wang, Samsung Haigin Yang, International Digital Economy Academy Hao Tang, University of Edinburgh Holy Lovenia, Hong Kong University of Science and Technology Hong Wang, UC Santa Barbara Hong Yu, Apple Hongliang Dai, The Hong Kong University of Science and Technology Izzeddin Gur, Google Jiaji Huang, AWS Jingjing Xu, Shanghai AI Lab Karl Stratos, Rutgers University Kartik Goyal, Toyota Technological Institute at Chicago Kimberly Mai, University College London Lan Du, Monash University Lili Mou, University of Alberta Lin Chen, University of Illinois at Chicago Linqing Liu, University College London Matthieu Labeau, Télécom ParisTech Menno van Zaanen, North-West University Minhao Cheng, Hong Kong University of Science and Technology Muhammad Mahbubur Rahman, George Washington University Nadi Tomeh, Université Sorbonne Paris Nord Necva Bölücü, Hacettepe University Negar Foroutan, EPFL Lausanne Nicholas Andrews, Johns Hopkins University

Paula Czarnowska, Amazon AWS Philipp Dufter, Apple Phoebe Mulcaire, Duolingo Rainer Gemulla, Universität Mannheim Robin Jia, University of Southern California Rodrigo Wilkens, UCL Santosh Kesiraju, Brno University of Technology Selçuk Köprü, eBay Sergey Feldman, Allen Institute for Artificial Intelligence Shankar Kumar, Google Shaohua Li, A*STAR Shehzaad Zuzar Dhuliawala, Swiss Federal Institute of Technology Shiva Taslimipoor, University of Cambridge Shuai Tang, Amazon Web Services Surangika Ranathunga, University of Moratuwa Tao Li, Google Tharindu Ranasinghe, Aston University Thien Huu Nguyen, University of Oregon Tiezheng YU, The Hong Kong University of Science and Technology Tom Lippincott, Whiting School of Engineering Truc-Vien T. Nguyen, Silo AI Tsuyoshi Okita, Kyushu Institute of Technology Tsvetomila Mihaylova, Aalto University Uri Alon, Carnegie Mellon University Valentin Hofmann, University of Oxford Vipul Raheja, Grammarly Vladimir Eidelman, FiscalNote, Inc. Wenliang Dai, The Hong Kong University of Science and Technology Wenxuan Zhou, University of Southern California Xia Cui, The Manchester Metropolitan University Yitong Li, Huawei Technologies Co., Ltd. Yogarshi Vyas, Amazon Yue Chen, Microsoft Yuval Pinter, Ben Gurion University of the Negev

Invited Speakers

Swabha Swayamdipta, University of Southern California Samira Abnar, Apple Hannaneh Hajishirzi, University of Washington & Allen AI Omer Levy, Tel Aviv University & Meta AI

Table of Contents

Adversarial Clean Label Backdoor Attacks and Defenses on Text Classification Systems Ashim Gupta and Amrith Krishna
<i>Do not Mask Randomly: Effective Domain-adaptive Pre-training by Masking In-domain Keywords</i> Shahriar Golchin, Mihai Surdeanu, Nazgol Tavabi and Ata Kiapour
Grammatical information in BERT sentence embeddings as two-dimensional arrays Vivi Nastase and Paola Merlo
A Multilingual Evaluation of NER Robustness to Adversarial Inputs Akshay Srinivasan and Sowmya Vajjala
Retrieval-Augmented Domain Adaptation of Language ModelsBenfeng Xu, Chunxu Zhao, Wenbin Jiang, PengFei Zhu, Songtai Dai, Chao Pang, Zhuo Sun,Shuohuan Wang and Yu Sun
<i>Fine-grained Text Style Transfer with Diffusion-Based Language Models</i> Yiwei Lyu, Tiange Luo, Jiacheng Shi, Todd C Hollon and Honglak Lee
Enhancing text comprehension for Question Answering with Contrastive Learning Seungyeon Lee and Minho Lee 75
<i>Towards Flow Graph Prediction of Open-Domain Procedural Texts</i> Keisuke Shirai, Hirotaka Kameko and Shinsuke Mori
One does not fit all! On the Complementarity of Vision Encoders for Vision and Language Tasks Gregor Geigle, Chen Cecilia Liu, Jonas Pfeiffer and Iryna Gurevych97
SPC: Soft Prompt Construction for Cross Domain GeneralizationWenbo Zhao, Arpit Gupta, Tagyoung Chung and Jing Huang
<i>Friendly Neighbors: Contextualized Sequence-to-Sequence Link Prediction</i> Adrian Kochsiek, Apoorv Umang Saxena, Inderjeet Jayakumar Nair and Rainer Gemulla131
<i>Extracting Multi-valued Relations from Language Models</i> Sneha Singhania, Simon Razniewski and Gerhard Weikum
<i>Hierarchical Multi-Instance Multi-Label Learning for Detecting Propaganda Techniques</i> Anni Chen and Bhuwan Dhingra
Contrastive Loss is All You Need to Recover Analogies as Parallel Lines Narutatsu Ri, Fei-Tzin Lee and Nakul Verma
Syntax-Aware Graph-to-Graph Transformer for Semantic Role LabellingAlireza Mohammadshahi and James Henderson174
Improving Zero-shot Relation Classification via Automatically-acquired Entailment Templates Mahdi Rahimi and Mihai Surdeanu
<i>MUX-PLMs: Pre-training Language Models with Data Multiplexing</i> Vishvak Murahari, Ameet Deshpande, Carlos E Jimenez, Izhak Shafran, Mingqiu Wang, Yuan Cao and Karthik R Narasimhan

<i>Mixed Orthographic/Phonemic Language Modeling: Beyond Orthographically Restricted Transformers</i> (<i>BORT</i>)
Robert C Gale, Alexandra C Salem, Gerasimos Fergadiotis and Steven Bedrick
<i>Effectiveness of Data Augmentation for Parameter Efficient Tuning with Limited Data</i> Stephen Obadinma, Hongyu Guo and Xiaodan Zhu226
Relational Sentence Embedding for Flexible Semantic Matching Bin Wang and Haizhou Li. 238
Tucker Decomposition with Frequency Attention for Temporal Knowledge Graph CompletionLikang Xiao, Richong Zhang, Zijie Chen and Junfan Chen253
CLIP-based image captioning via unsupervised cycle-consistency in the latent space Romain Bielawski and Rufin VanRullen
Token-level Fitting Issues of Seq2seq Models Guangsheng Bao, Zhiyang Teng and Yue Zhang
Revealing the Blind Spot of Sentence Encoder Evaluation by HEROS Cheng-Han Chiang, Hung-yi Lee, Yung-Sung Chuang and James Glass
<i>One-Shot Exemplification Modeling via Latent Sense Representations</i> John Harvill, Mark Hasegawa-Johnson, Hee Suk Yoon, Chang D. Yoo and Eunseop Yoon 303
Sen2Pro: A Probabilistic Perspective to Sentence Embedding from Pre-trained Language Model Lingfeng Shen, Haiyun Jiang, Lemao Liu and Shuming Shi
Visual Coherence Loss for Coherent and Visually Grounded Story Generation Xudong Hong, Vera Demberg, Asad Sayeed, Qiankun Zheng and Bernt Schiele