WASSA 2024

The 14th Workshop on Computational Approaches to Subjectivity, Sentiment, & Social Media Analysis

Proceedings of the Workshop

August 15, 2024

©2024 Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL) 317 Sidney Baker St. S Suite 400 - 134 Kerrville, TX 78028 USA Tel: +1-855-225-1962 acl@aclweb.org

ISBN 979-8-89176-156-8

Introduction

Since 2010, WASSA has brought together researchers working on Subjectivity, Sentiment Analysis, Emotion Detection and Classification and their applications to other NLP or real-world tasks (e.g. public health messaging, fake news, media impact analysis, social media mining, computational literary studies) and researchers working on interdisciplinary aspects of affect computation from text.

In the past years we have noticed that WASSA offers a platform to researchers investigating sentiment and emotion in lesser-resourced languages. We continued these efforts in the 2024 edition by featuring a Special Track on multilinguality and the social bridge between high- and lesser-resourced languages/communities. However, this year the majority of accepted papers (18 of 29) only perform experiments in English, another six include English and other languages, and only seven are entirely non-English. This emphasizes the need to continue promoting such a multilingual track.

The topics of this edition of WASSA range from complex sentiment relations (entity-level, long documents, long-term narratives), mitigating unwanted subjectivity and biases in models, and advancing towards high-level social implications of subjective NLP. The ubiquity of Large Language Models is also a common theme among the papers.

This year's edition again featured two shared tasks: Shared-Task 1: Empathy Detection and Emotion Classification, which is already the fourth run of this shared task using a new, unpublished extension of the dataset used last year. SharedTask 2: Explainability of Cross-lingual Emotion Detection, on the other hand, is the first shared task on on explainability of cross-lingual emotion detection.

For the main workshop, we received 57 direct submissions, of which 29 papers were accepted (acceptance rate of 53%). For Shared Task 1 we received 12 system description paper submissions, while for Shared Task 2 we received 10 papers. Furthermore, one ARR and one Findings paper will be presented in the poster session. In total, 55 papers will be presented at the workshop.

Following the tradition of the last two years, we again decided to award the best paper. The winner of the Best Paper Award of this year's WASSA is *Context is Important in Depressive Language: A Study of the Interaction Between the Sentiments and Linguistic Markers in Reddit Discussions by Neha Sharma and Kairit Sirts*. Simultaneously, we wish to promote the work in the Special Track, and therefore decided to award a Special Track Best Paper award to *Loneliness Episodes: A Japanese Dataset for Loneliness Detection and Analysis by Naoya Fujikawa, Nguyen Quang Toan, Kazuhiro Ito, Shoko Wakamiya, and Eiji Aramaki.*

On top of the main workshop and shared task presentations, we are happy to have an invited speaker who agreed to give a hybrid keynote at WASSA 2024: Professor Debora Nozza from Bocconi University.

We would like to thank the ACL Organizers and Workshop chairs for their help and support during the preparation. We also thank the OpenReview support team for their technical support. Finally, we especially thank the program committee for the time and effort they spent on reviewing, especially to those who were willing to perform emergency reviews. The quality of the program is a reflection of this hard work.

Orphée De Clercq, Jeremy Barnes, Valentin Barriere, Shabnam Tafreshi, Joao Sedoc and Roman Klinger

WASSA 2024 Program Chairs

Organizing Committee

Program Chairs

Orphée De Clercq, Ghent University, Belgium Valentin Barriere, Centro Nacional de Inteligencia Artificial, Chile Jeremy Barnes, University of the Basque Country UPV/EHU, Spain Roman Klinger, Otto-Friedrich Universität Bamberg, Germany João Sedoc, New York University, USA Shabnam Tafreshi, University of Maryland, USA

Shared Task 1 Chairs

Salvatore Giorgi, National Institute of Drug Abuse, Baltimore, USA Valentin Barriere, Centro Nacional de Inteligencia Artificial, Chile João Sedoc, New York University, USA Shabnam Tafreshi, University of Maryland, USA

Shared Task 2 Chairs

Aaron Maladry, Ghent University Pranaydeep Singh, Ghent University Els Lefever, Ghent University

Program Committee

Reviewers

Wazir Ali
Murali Balusu, Sivaji Bandyopadhyay, Mohamad Hardyman Barawi, Tilman Beck
Gustave Cortal
Luna De Bruyne, Ellen De Geyndt, Loic De Langhe, Florian Debaene
Annerose Eichel
Neele Falk
Thomas Nikolaus Haider
Imezadelajara Imezadelajara, Molly E. Ireland, Gabriel Iturra-Bocaz
Kokil Jaidka, Aditya Joshi
Akbar Karimi, Elma Kerz, Khalid Al Khatib, Joni Kruijsbergen
Sofie Labat, Natalia V Loukachevitch
Aaron Maladry, Eugenio Martínez-Cámara, Amita Misra, Ashutosh Modi, Petter Mæhlum
Constantin Orasan
Gabriele Pergola, Flor Miriam Plaza-del-Arco
Sunny Rai, Irene Russo
Oscar Sainz, Salim Sazzed, Raksha Sharma, Melanie Siegel, Pranaydeep Singh, Phillip Smith, Colin Swaelens
Zeerak Talat, Enrica Troiano
Cynthia Van Hee, Jens Van Nooten, Eva Maria Vecchi, Aswathy Velutharambath, Fabián Vil- lena
Jingjing Wang, Azmine Toushik Wasi, Michael Wiegand, Tak-Lam Wong, Amelie Wuehrl
Maria Jose Zambrano, Chrysoula Zerva

Keynote Talk Invited 1

Debora Nozza Bocconi University

Bio: Debora Nozza is an Assistant Professor in Computing Sciences at Bocconi University. Her research interests mainly focus on Natural Language Processing, specifically on the detection and counter-acting of hate speech and algorithmic bias on Social Media data in multilingual context. She was awarded a ≤ 1.5 m ERC Starting Grant project 2023 for research on personalized and subjective approaches to Natural Language Processing. Previously, she was awarded a $\leq 120,000$ grant from Fondazione Cariplo for her project MONICA, which focuses on monitoring coverage, attitudes, and accessibility of Italian measures in response to COVID-19.

She organized the 7th Workshop on Online Abuse and Harms (WOAH) at ACL 2023 and the ICWSM 2023 Data Challenge: Temporal social data at ICWSM 2023. She was one of the organizers of the task on Automatic Misogyny Identification (AMI) at Evalita 2018 and Evalita 2020, and one of the organizers of the HatEval Task 5 at SemEval 2019 on multilingual detection of hate speech against immigrants and women in Twitter.

Table of Contents

Enhanced Financial Sentiment Analysis and Trading Strategy Development Using Large Language Models Kemal Kirtac and Guido Germano
SEC: Context-Aware Metric Learning for Efficient Emotion Recognition in Conversation Barbara Gendron and GaelGuibon GaelGuibon11
Modeling Complex Interactions in Long Documents for Aspect-Based Sentiment AnalysisZehong Yan, Wynne Hsu, Mong-Li Lee and David Roy Bartram-Shaw23
<i>Hierarchical Adversarial Correction to Mitigate Identity Term Bias in Toxicity Detection</i> Johannes Schäfer, Ulrich Heid and Roman Klinger
A Systematic Analysis on the Temporal Generalization of Language Models in Social Media Asahi Ushio and Jose Camacho-Collados
LLaMA-Based Models for Aspect-Based Sentiment Analysis Jakub Šmíd, Pavel Priban and Pavel Kral
A Multi-Faceted NLP Analysis of Misinformation Spreaders in Twitter Dimosthenis Antypas, Alun D. Preece and Jose Camacho-Collados
<i>Entity-Level Sentiment: More than the Sum of Its Parts</i> Egil Rønningstad, Roman Klinger, Erik Velldal and Lilja Øvrelid
MBIAS: Mitigating Bias in Large Language Models While Retaining ContextShaina Raza, Ananya Raval and Veronica Chatrath
Polarization of Autonomous Generative AI Agents Under Echo Chambers Masaya Ohagi 112
<i>Know Thine Enemy: Adaptive Attacks on Misinformation Detection Using Reinforcement Learning</i> Piotr Przybyła, Euan McGill and Horacio Saggion125
The Model Arena for Cross-lingual Sentiment Analysis: A Comparative Study in the Era of Large Language Models Xiliang Zhu, Shayna Gardiner, Tere Roldán and David Rossouw
Guiding Sentiment Analysis with Hierarchical Text Clustering: Analyzing the German X/Twitter Discourse on Face Masks in the 2020 COVID-19 Pandemic Silvan Wehrli, Chisom Ezekannagha, Georges Hattab, Tamara Sonia Boender, Bert Arnrich and Christopher Irrgang
Emotion Identification for French in Written Texts: Considering Modes of Emotion Expression as a Step Towards Text Complexity Analysis Aline Étienne, Delphine Battistelli and Gwénolé Lecorvé
Comparing Tools for Sentiment Analysis of Danish Literature from Hymns to Fairy Tales: Low-Resource Language and Domain Challenges Pascale Feldkamp, Jan Kostkan, Ea Lindhardt Overgaard, Mia Jacobsen and Yuri Bizzoni 186
Multi-Target User Stance Discovery on Reddit Benjamin Steel and Derek Ruths 200

Subjectivity Detection in English News using Large Language Models Mohammad Shokri, Vivek Sharma, Elena Filatova, Shweta Jain and Sarah Ita Levitan 215
Monitoring Depression Severity and Symptoms in User-Generated Content: An Annotation Scheme and Guidelines
Falwah Alhamed, Rebecca Bendayan, Julia Ive and Lucia Specia
RideKE: Leveraging Low-resource Twitter User-generated Content for Sentiment and Emotion Detec-tion on Code-switched RHS Dataset.Naome A Etori and Maria Gini234
POLygraph: Polish Fake News Dataset Daniel Dzienisiewicz, Filip Graliński, Piotr Jabłoński, Marek Kubis, Paweł Marek Skórzewski and Piotr Wierzchon 250
<i>Exploring Language Models to Analyze Market Demand Sentiments from News</i> Tirthankar Dasgupta and Manjira Sinha
<i>Impact of Decoding Methods on Human Alignment of Conversational LLMs</i> Shaz Furniturewala, Kokil Jaidka and Yashvardhan Sharma
Loneliness Episodes: A Japanese Dataset for Loneliness Detection and Analysis Naoya Fujikawa, Nguyen Quang Toan, Kazuhiro Ito, Shoko Wakamiya and Eiji Aramaki 280
<i>Estimation of Happiness Changes through Longitudinal Analysis of Employees' Texts</i> Junko Hayashi, Kazuhiro Ito, Masae Manabe, Yasushi Watanabe, Masataka Nakayama, Yukiko Uchida, Shoko Wakamiya and Eiji Aramaki
Subjectivity Theory vs. Speaker Intuitions: Explaining the Results of a Subjectivity Regressor Trained on Native Speaker Judgements Elena Savinova and Jet Hoek
Comparing Pre-trained Human Language Models: Is it Better with Human Context as Groups, Indi- vidual Traits, or Both? Nikita Soni, Niranjan Balasubramanian, H. Schwartz and Dirk Hovy
LLMs for Targeted Sentiment in News Headlines: Exploring the Descriptive-Prescriptive Dilemma Jana Juroš, Laura Majer and Jan Snajder
Context is Important in Depressive Language: A Study of the Interaction Between the Sentiments and Linguistic Markers in Reddit Discussions Neha Sharma and Kairit Sirts
To Aggregate or Not to Aggregate. That is the Question: A Case Study on Annotation Subjectivity in Span Prediction Kemal Kurniawan, Meladel Mistica, Timothy Baldwin and Jey Han Lau
<i>Findings of WASSA 2024 Shared Task on Empathy and Personality Detection in Interactions</i> Salvatore Giorgi, João Sedoc, Valentin Barriere and Shabnam Tafreshi
<i>RU at WASSA 2024 Shared Task: Task-Aligned Prompt for Predicting Empathy and Distress</i> Haein Kong and Seonghyeon Moon
Chinchunmei at WASSA 2024 Empathy and Personality Shared Task: Boosting LLM's Prediction with Role-play Augmentation and Contrastive Reasoning Calibration Tian Li, Nicolay Rusnachenko and Huizhi Liang

Empathify at WASSA 2024 Empathy and Personality Shared Task: Contextualizing Empathy with a BERT-Based Context-Aware Approach for Empathy Detection

Arda Numanoğlu, Süleyman Ateş, Nihan Kesim Cicekli and Dilek Küçük 393

Zhenmei at WASSA-2024 Empathy and Personality Shared Track 2 Incorporating Pearson Correlation Coefficient as a Regularization Term for Enhanced Empathy and Emotion Prediction in Conversational Turns
Liting Huang and Huizhi Liang
Empaths at WASSA 2024 Empathy and Personality Shared Task: Turn-Level Empathy Prediction Using Psychological Indicators Shaz Furniturewala and Kokil Jaidka
NU at WASSA 2024 Empathy and Personality Shared Task: Enhancing Personality Predictions with Knowledge Graphs; A Graphical Neural Network and LightGBM Ensemble Approach Emmanuel Osei-Brefo and Huizhi Liang
Daisy at WASSA 2024 Empathy and Personality Shared Task: A Quick Exploration on Emotional Pat- tern of Empathy and Distress Rendi Chevi and Alham Fikri Aji
WASSA 2024 Shared Task: Enhancing Emotional Intelligence with Prompts Svetlana Churina, Preetika Verma and suchismita1510.tripathy@gmail.com suchismita1510.tripathy@gmail.com 425
hyy33 at WASSA 2024 Empathy and Personality Shared Task: Using the CombinedLoss and FGM for Enhancing BERT-based Models in Emotion and Empathy Prediction from Conversation Turns Huiyu Yang, Liting Huang, Tian Li, Nicolay Rusnachenko and Huizhi Liang
Fraunhofer SIT at WASSA 2024 Empathy and Personality Shared Task: Use of Sentiment Transformers and Data Augmentation With Fuzzy Labels to Predict Emotional Reactions in Conversations and Essays Raphael Antonius Frick and Martin Steinebach
EmpatheticFIG at WASSA 2024 Empathy and Personality Shared Task: Predicting Empathy and Emo- tion in Conversations with Figurative Language Gyeongeun Lee, Zhu Wang, Sathya N. Ravi and Natalie Parde
ConText at WASSA 2024 Empathy and Personality Shared Task: History-Dependent Embedding Utter- ance Representations for Empathy and Emotion Prediction in Conversations Patrícia Pereira, Helena Silva Moniz and Joao Paulo Carvalho
Findings of the WASSA 2024 EXALT shared task on Explainability for Cross-Lingual Emotion in Tweets Aaron Maladry, Pranaydeep Singh and Els Lefever
Cross-lingual Emotion Detection through Large Language Models Ram Mohan Rao Kadiyala
Knowledge Distillation from Monolingual to Multilingual Models for Intelligent and Interpretable Mul- tilingual Emotion Detection Yuqi Wang, Zimu Wang, Nijia Han, Wei Wang, Qi Chen, Haiyang Zhang, Yushan Pan and Anh
Nguyen
HITSZ-HLT at WASSA-2024 Shared Task 2: Language-agnostic Multi-task Learning for Explainability of Cross-lingual Emotion Detection Feng Xiong, Jun Wang, Geng Tu and Ruifeng Xu

UWB at WASSA-2024 Shared Task 2: Cross-lingual Emotion DetectionJakub Šmíd, Pavel Přibáň and Pavel Král483
PCICUNAM at WASSA 2024: Cross-lingual Emotion Detection Task with Hierarchical Classification and Weighted Loss Functions
Jesús Vázquez-Osorio, Gerardo Sierra, Helena Gómez-Adorno and Gemma Bel-Enguix 490
TEII: Think, Explain, Interact and Iterate with Large Language Models to Solve Cross-lingual Emotion Detection
Long Cheng, Qihao Shao, Christine Zhao, Sheng Bi and Gina-Anne Levow
NYCU-NLP at EXALT 2024: Assembling Large Language Models for Cross-Lingual Emotion and Trigger Detection
Tzu-Mi Lin, Zhe-Yu Xu, Jian-Yu Zhou and Lung-Hao Lee
Effectiveness of Scalable Monolingual Data and Trigger Words Prompting on Cross-Lingual Emotion Detection Task
Yao-Fei Cheng, Jeongyeob Hong, Andrew Wang, Anita Silva and Gina-Anne Levow 511
WU_TLAXE at WASSA 2024 Explainability for Cross-Lingual Emotion in Tweets Shared Task 1: Emo- tion through Translation using TwHIN-BERT and GPT
Jon Davenport, Keren Ruditsky, Anna Batra, Yulha Lhawa and Gina-Anne Levow
<i>Enhancing Cross-Lingual Emotion Detection with Data Augmentation and Token-Label Mapping</i> Jinghui Zhang, Yuan Zhao, Siqin Zhang, Ruijing Zhao and Siyu Bao

Program

Thursday, August 15, 2024

- 09:10 09:00 Opening Remarks
- 09:10 10:25 Session 1: Bias, Fake News, Misinformation, and Echo Chambers

POLygraph: Polish Fake News Dataset Daniel Dzienisiewicz, Filip Graliński, Piotr Jabłoński, Marek Kubis, Paweł Marek Skórzewski and Piotr Wierzchon

Know Thine Enemy: Adaptive Attacks on Misinformation Detection Using Reinforcement Learning Piotr Przybyła, Euan McGill and Horacio Saggion

Multi-Target User Stance Discovery on Reddit Benjamin Steel and Derek Ruths

Polarization of Autonomous Generative AI Agents Under Echo Chambers Masaya Ohagi

Hierarchical Adversarial Correction to Mitigate Identity Term Bias in Toxicity Detection Johannes Schäfer, Ulrich Heid and Roman Klinger

- 10:30 11:00 *Coffee Break*
- 12:00 11:00 Invited Talk: Debora Nozza
- 12:00 13:00 Lunch Break
- 13:00 14:00 Shared Task Session

Findings of the WASSA 2024 EXALT shared task on Explainability for Cross-Lingual Emotion in Tweets Aaron Maladry, Pranaydeep Singh and Els Lefever

Cross-lingual Emotion Detection through Large Language Models Ram Mohan Rao Kadiyala

Thursday, August 15, 2024 (continued)

Findings of WASSA 2024 Shared Task on Empathy and Personality Detection in Interactions Salvatore Giorgi, João Sedoc, Valentin Barriere and Shabnam Tafreshi

Fraunhofer SIT at WASSA 2024 Empathy and Personality Shared Task: Use of Sentiment Transformers and Data Augmentation With Fuzzy Labels to Predict Emotional Reactions in Conversations and Essays Raphael Antonius Frick and Martin Steinebach

- 14:00 15:30 *Poster session*
- 15:30 16:00 *Coffee Break*
- 16:00 17:30 Session 2: Sentiment and Subjectivity

Enhanced Financial Sentiment Analysis and Trading Strategy Development Using Large Language Models Kemal Kirtac and Guido Germano

Subjectivity Theory vs. Speaker Intuitions: Explaining the Results of a Subjectivity Regressor Trained on Native Speaker Judgements Elena Savinova and Jet Hoek

Comparing Tools for Sentiment Analysis of Danish Literature from Hymns to Fairy Tales: Low-Resource Language and Domain Challenges Pascale Feldkamp, Jan Kostkan, Ea Lindhardt Overgaard, Mia Jacobsen and Yuri Bizzoni

- 16:45 16:50 Best Paper Announcement
- 16:50 17:20 Best Paper Awards

Context is Important in Depressive Language: A Study of the Interaction Between the Sentiments and Linguistic Markers in Reddit Discussions Neha Sharma and Kairit Sirts

Loneliness Episodes: A Japanese Dataset for Loneliness Detection and Analysis Naoya Fujikawa, Nguyen Quang Toan, Kazuhiro Ito, Shoko Wakamiya and Eiji Aramaki

17:20 - 17:30 Closing Remarks

Thursday, August 15, 2024 (continued)