

LREC 2022 Workshop Language Resources and Evaluation Conference 20-25 June 2022

2nd Workshop on Sentiment Analysis and Linguistic Linked Data (SALLD-2)

PROCEEDINGS

Editors: Ilan Kernerman Sara Carvalho Carlos A. Iglesias Rachele Sprugnoli

Proceedings of the LREC 2022 workshop on Sentiment Analysis and Linguistic Linked Data (SALLD-2)

Edited by: Ilan Kernerman, Sara Carvalho, Carlos A. Iglesias, Rachele Sprugnoli

ISBN: 979-10-95546-76-4 EAN: 9791095546764

For more information:

European Language Resources Association (ELRA) 9 rue des Cordelières 75013, Paris France http://www.elra.info Email: lrec@elda.org



© European Language Resources Association (ELRA)

These workshop proceedings are licensed under a Creative Commons Attribution-NonCommercial 4.0 International License

Proceedings of the 2nd Workshop on Sentiment Analysis and Linguistic Linked Data

Preface

The Linguistic Linked Open Data (LLOD) initiative was created within the Open Linguistics Working Group (OLWG) of the Open Knowledge Foundation to foster the publication of language resources in open licenses. The SALLD (Sentiment Analysis and Linguistic Linked Data) workshop aims at contributing to the LLOD initiative by providing a discussion forum about the usage of Linguistic Linked Data principles in the Sentiment Analysis field, to explore relevant principles, methodologies, resources, tools, and applications, and understand the primary approaches, their advantages, limitations, and available resources and case studies. SALLD-2 is the second edition of the workshop and is held in conjunction with LREC 2022 in Marseille, France, on June 24, 2022. It follows SALLD-1, which was co-located with LDK 2021 – 3rd Conference on Language, Data and Knowledge – in Zaragoza, Spain, on September 1, 2021. The SALLD series was initiated in the framework of the NexusLinguarum COST Action – European network for Web-centred linguistic data science (CA 18209) and has its support.

We are delighted to have a keynote talk, entitled *From Data to Meaning in Representation of Emotions*, from an invited speaker, Dr. Anna Fensel, Associate Professor at Wageningen University and Research, in the Netherlands, and at University of Innsbruck, Austria. Her current research includes emotion analysis based on knowledge graphs.

The workshop accepted five papers. Three papers are related to sentiment lexicons; one is related to the harmonization of language resources, and another to the exploitation of information available in the Linked Open Data cloud for sentiment analysis.

In the first category, the paper *Movie Rating Prediction using Sentiment Features* by Apóstolo et al. provides a new sentiment lexicon, Expanded OntoSenticNet (EON), which combines OntoSenticNet with SentiWordNet. This new language resource is used to predict movie ratings. In the same way, the paper *Sentiment Analysis of Serbian Old Novels* by Stanković et al. publishes a polarity lexicon in Serbian based on three existing lexicons (NRC, Affin, and Bing), the ontolex-lemon model and the sentiment vocabulary Marl. Finally, the paper *Evaluating a New Danish Sentiment Resource: the Danish Sentiment Lexicon, DSL* by Schneidermann and Pedersen provides an evaluation of Danish sentiment lexicons. We want to highlight the importance of publishing sentiment non-English lexicons for resource-scarce languages.

The second category has been addressed by the paper *O-Dang!* The Ontology of Dangerous Speech Messages by Stranisci et al., which defines an interoperable knowledge graph to link linguistic resources related to dangerous speech. This knowledge graph has been populated with eight language resources in Italian on dangerous speech, which shows the considerable potential of linked data technology to interlink language resources.

Finally, the use of open linked data for sentiment analysis is exploited by the paper *Correlating Facts* and *Social Media Trends on Environmental Quantities Leveraging Commonsense Reasoning and Human Sentiments* by McNamee et al. This paper analyzed how external information (e.g., temperature or pollution) can be combined with the insights of sentiment analysis.

Ilan Kernerman Sara Carvalho Carlos A. Iglesias Rachele Sprugnoli

Organizers

Ilan Kernerman - K Dictionaries - Lexicala Sara Carvalho - Universidade de Aveiro Carlos A. Iglesias - Universidad Politécnica de Madrid Rachele Sprugnoli - Università degli Studi di Parma

Program Committee

Valerio Basile, University of Turin (ITALY) Paul Buitelaar, NUI Galway (IRELAND) Davide Buscaldi, Université Paris 13 Sorbonne (FRANCE) Erik Cambria, Nanyang Technological University (SINGAPORE) Sara Carvalho, Universidade de Aveiro (PORTUGAL) Hugo Gonçalo Oliveira, University of Coimbra (PORTUGAL) Carlos A. Iglesias, Universidad Politécnica de Madrid (SPAIN) Ilan Kernerman, K Dictionaries – Lexicala (ISRAEL) Barbara Lewandowska-Tomaszczyk, State University of Applied Sciences, Konin (POLAND) Chaya Liebeskind, Jerusalem College of Technology (ISRAEL) Francesco Mambrini, Università Cattolica del Sacro Cuore (ITALY) Kiemute Oyibo, University of Waterloo (CANADA) Marco Carlo Passarotti, Università Cattolica del Sacro Cuore (ITALY) Marco Respocher, University of Verona (ITALY) Rachele Sprugnoli, Università degli Studi di Parma (ITALY) Dimitar Trajanov, ss. Cyril and Methodius University, Skopje (NORTH MACEDONIA) Slavko Žitnik, University of Ljubljana (SLOVENIA) Arkaitz Zubiaga, Queen Mary University of London (UNITED KINGDOM)

Acknowledgement

Special thanks to Ana Todorovska, from the Faculty of Computer Science and Engineering, Ss Cyril and Methodius University, Skopje, for managing the SALLD website https://salld.org/.

Table of Contents

Invited talk: From Data to Meaning in Representation of Emotions
Anna Fensel
O-Dang! The Ontology of Dangerous Speech Messages
Marco Antonio Stranisci, Simona Frenda, Mirko Lai, Oscar Araque, Alessandra Teresa Cignarella,
Valerio Basile, Cristina Bosco and Viviana Patti 2
Movie Rating Prediction using Sentiment Features
João Ramos, Diogo Apóstolo and Hugo Gonçalo Oliveira9
Evaluating a New Danish Sentiment Resource: the Danish Sentiment Lexicon, DSL
Nina Schneidermann and Bolette Pedersen
Correlating Facts and Social Media Trends on Environmental Quantities Leveraging Commonsense Reasoning and Human Sentiments
Brad McNamee, Aparna Varde and Simon Razniewski
Sentiment Analysis of Serbian Old Novels
Ranka Stanković, Miloš Košprdić, Milica Ikonić Nešić and Tijana Radović

Workshop Program

Friday, June 24, 2022

- 14:05–15:00 *Invited talk: From Data to Meaning in Representation of Emotions* Anna Fensel
- 15:00–15:30 *O-Dang! The Ontology of Dangerous Speech Messages* Marco Antonio Stranisci, Simona Frenda, Mirko Lai, Oscar Araque, Alessandra Teresa Cignarella, Valerio Basile, Cristina Bosco and Viviana Patti
- 15:30–16:00 *Movie Rating Prediction using Sentiment Features* João Ramos, Diogo Apóstolo and Hugo Gonçalo Oliveira

16:00-16:30 Break

- 16:30–17:00 *Evaluating a New Danish Sentiment Resource: the Danish Sentiment Lexicon, DSL* Nina Schneidermann and Bolette Pedersen
- 17:00–17:30 Correlating Facts and Social Media Trends on Environmental Quantities Leveraging Commonsense Reasoning and Human Sentiments Brad McNamee, Aparna Varde and Simon Razniewski
- 17:30–18:00 *Sentiment Analysis of Serbian Old Novels* Ranka Stanković, Miloš Košprdić, Milica Ikonić Nešić and Tijana Radović

18:00–18:15 *Closure*