EMNLP 2021

The 8th Workshop on Argument Mining (ArgMining 2021)

Proceedings of the Workshop

November 10 - 11, 2021
Online and in Punta Cana, Dominican Republic

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Introduction

Argument mining (also known as "argumentation mining") is a young and gradually maturing research area within computational linguistics. At its heart, argument mining involves the automatic identification of argumentative structures in free text, such as the conclusions, premises, and inference schemes of arguments as well as their interrelations and counter-considerations. To date, researchers have investigated argument mining on genres such as legal documents, product reviews, news articles, online debates, user-generated web discourse, Wikipedia articles, academic literature, persuasive essays, tweets, and dialogues. Recently, also argument quality assessment and generation came into focus. In addition, argument mining is inherently tied to stance and sentiment analysis, since every argument carries a stance towards its topic, often expressed with sentiment.

Argument mining gives rise to various practical applications of great importance. In particular, it provides methods that can find and visualize the main pro and con arguments in a text corpus — or even on in an argument search on the web — towards a topic or query of interest. In instructional contexts, written and diagrammed arguments represent educational data that can be mined for conveying and assessing students' command of course material. In information retrieval, argument mining is expected to play a salient role in the emerging field of conversational search. And with the IBM Debater Project, technology based on argument mining recently received a lot of media attention.

While solutions to basic tasks such as component segmentation and classification slowly become mature, many tasks remain largely unsolved, particularly in more open genres and topical domains. Success in argument mining requires interdisciplinary approaches informed by NLP technology, theories of semantics, pragmatics and discourse, knowledge of discourse in application domains, artificial intelligence, information retrieval, argumentation theory, and computational models of argumentation.

The community around ArgMining is constantly growing. This year's edition of the workshop had 39 valid submissions (27 in 2017, 32 in 2018, 41 in 2019, and 30 in 2020). Among the submitted papers, there were 23 full papers, 9 short papers, and 7 shared-task papers. Out of the 39 papers, 11 full papers, 4 short papers, and 6 shared-task papers have been accepted, resulting in an overall acceptance rate of 54%. All the papers are included in the proceedings at hand.

Given the duration of the workshop (1.5 days) and its format (hybrid), we decided to give all the authors the possibility to present their work orally. Long papers were given 15 min for the talk and 5 min for the discussion, while the short papers were given 10 min for the talk and 2 min for discussion. We were delighted to have Professors Anthony Hunter from University College London and Lu Wang from the University of Michigan as keynote speakers. The speakers addressed interesting topics related to persuasion and argument generation.

The ArgMining 2021 workshop program covered the Quantitative Summarization–Key Point Analysis Shared Task, and also featured a best paper award, thankfully sponsored by IBM. Both the shared task and award are announced on the official workshop website chaired by Roxanne El Baff: `https://2021.argmining.org/`.

Khalid Al-Khatib, Yufang Hou, and Manfred Stede
(ArgMining 2021 co-chairs)

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Yufang Hou, IBM Research Dublin (chair)
Manfred Stede, Universität Potsdam (chair)

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Henning Wachsmuth, Paderborn University
Vern R. Walker, Maurice A. Hofstra University
Zhongyu Wei, Fudan University
Magdalena Wolska, Bauhaus-Universitat Weimar

Invited Speakers:

Anthony Hunter, University College London
Lu Wang, University of Michigan

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09:30 – 10:30 **Invited Talk 1**

10:30 – 11:00 ***Coffee Break***

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Muhammad Mahad Afzal Bhatti, Ahsan Suheer Ahmad and Joonsuk Park

11:20 – 11:40 *Multi-task and Multi-corpora Training Strategies to Enhance Argumentative Sentence Linking Performance*
Jan Wira Gotama Putra, Simone Teufel and Takenobu Tokunaga

11:40 – 12:00 *Explainable Unsupervised Argument Similarity Rating with Abstract Meaning Representation and Conclusion Generation*
Juri Opitz, Philipp Heinisch, Philipp Wiesenbach, Philipp Cimiano and Anette Frank

12:00 – 13:00 ***Lunch Break***

Session 2

13:00 – 13:20 *Knowledge-Enhanced Evidence Retrieval for Counterargument Generation*
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13:20 – 13:40 *On Classifying whether Two Texts are on the Same Side of an Argument*
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13:40 – 13:52 *Multilingual Counter Narrative Type Classification*
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13:52 – 13:64 *Predicting Moderation of Deliberative Arguments: Is Argument Quality the Key?*
Neele Falk, Iman Jundi, Eva Maria Vecchi and Gabriella Lapesa

14:04 – 14:16 *Self-trained Pretrained Language Models for Evidence Detection*
Mohamed Elaraby and Diane Litman

14:16 – 14:28 *Multi-task Learning in Argument Mining for Persuasive Online Discussions*
Nhat Tran and Diane Litman

14:30 – 14:45 ***Coffee Break***

14:45 – 16:15 ***Panel Talks and Discussion***

16:15 – 16:45 ***Coffee Break***

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Session 3

16:45 – 17:05 *Image Retrieval for Arguments Using Stance-Aware Query Expansion*
Johannes Kiesel, Nico Reichenbach, Benno Stein and Martin Potthast

17:05 – 17:25 *Is Stance Detection Topic-Independent and Cross-topic Generalizable? - A Reproduction Study*
Myrthe Reuver, Suzan Verberne, Roser Morante and Antske Fokkens

17:25 – 17:45 *Exploring Methodologies for Collecting High-Quality Implicit Reasoning in Arguments*
Keshav Singh, Farjana Sultana Mim, Naoya Inoue, Shoichi Naito and Kentaro Inui

November 11, 2021

09:00 – 10:00 **Invited Talk 2**

Session 4

10:00 – 10:20 *Assessing the Sufficiency of Arguments through Conclusion Generation*
Timon Gurcke, Milad Alshomary and Henning Wachsmuth

10:20 – 10:40 *M-Arg: Multimodal Argument Mining Dataset for Political Debates with Audio and Transcripts*
Rafael Mestre, Razvan Milicin, Stuart Middleton, Matt Ryan, Jiatong Zhu and Timothy J. Norman

10:40 – 11:00 ***Coffee Break***

Session 5

11:00 – 11:20 *Citizen Involvement in Urban Planning - How Can Municipalities Be Supported in Evaluating Public Participation Processes for Mobility Transitions?*
Julia Romberg and Stefan Conrad

11:20 – 11:40 *Argumentation Mining in Scientific Literature for Sustainable Development*
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11:40 – 12:00 *Bayesian Argumentation-Scheme Networks: A Probabilistic Model of Argument Validity Facilitated by Argumentation Schemes*
Takahiro Kondo, Koki Washio, Katsuhiko Hayashi and Yusuke Miyao

12:00 – 13:00 ***Lunch Break***

13:00 – 14:30 ***Shared Task Presentation***

14:30 – 14:45 ***Break***

14:45 – 15:00 ***Concluding Remarks***