The 4th Workshop of Narrative Understanding (WNU2022)

Proceedings of the Workshop

July 15, 2022

Introduction

Welcome to the 4th Workshop on Narrative Understanding!

This is the 4th iteration of the workshop, which brings together an **interdisciplinary** group of researchers from AI, ML, NLP, Computer Vision and other related fields, as well as scholars from the humanities to discuss **methods to improve automatic narrative understanding capabilities.**

We are happy to present 8 papers on this topic (along with 7 non-archival papers to be presented only at the workshop). These papers take on the complex challenges presented by diverse texts in areas of film, dialogue and literature as they look to improve methods for event extraction, gender and representation bias, controllable generation, quality assessment, and other tasks related to the workshop theme. We would like to thank everyone who submitted their work to this workshop and the program committee for their helpful feedback.

We would also like to thank our invited speakers for their participation in this workshop: Maria Antoniak, Yejin Choi, Dan Goldwasser, and Andrew Piper.

Faeze, Elizabeth, Khyathi, Nader, Mohit, and Snigdha

Organizing Committee

Organizers

Nader Akoury, University of Massachusetts Amherst, USA
Faeze Brahman, Allen Institute for AI, USA
Khyathi Chandu, Meta AI, USA
Snigdha Chaturvedi, University of North Carolina, Chapel Hill, USA
Elizabeth Clark, Google Research, USA
Mohit Iyyer, University of Massachusetts Amherst, USA

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> Katherine Thai, University of Massachusetts Amherst
> Anvesh Rao Vijjini, University of North Carolina, Chapel Hill
> Chao Zhao, University of North Carolina, Chapel Hill

Keynote Talk: The Abduction of Sherlock Holmes

Yejin Choi
University of Washington, AI2

Abstract: Understanding narrative requires abductive reasoning about the best explanations to partial observations, which in turn, requires commonsense knowledge about how the world works. In this talk, I will discuss recent advances on abductive reasoning and commonsense knowledge induction.

Bio: Yejin Choi is Brett Helsel professor at the Paul G. Allen School of Computer Science & Engineering at the University of Washington and also a senior research manager at AI2 overseeing the project Mosaic. Her research investigates a wide variety problems across NLP and AI including commonsense knowledge and reasoning, neural language (de-)generation, language grounding with vision and experience, and AI for social good. She is a co-recipient of the ACL Test of Time award in 2021, the CVPR Longuet-Higgins Prize (test of time award) in 2021, a NeurIPS Outstanding Paper Award in 2021, the AAAI Outstanding Paper Award in 2020, the Borg Early Career Award (BECA) in 2018, the inaugural Alexa Prize Challenge in 2017, IEEE AI's 10 to Watch in 2016, and the ICCV Marr Prize (best paper award) in 2013. She received her Ph.D. in Computer Science at Cornell University and BS in Computer Science and Engineering at Seoul National University in Korea.

Keynote Talk: Towards Interactive Neuro-Symbolic Narrative Analysis on Social Media

Dan Goldwasser

Purdue University

Abstract: Social media is the new town square, where influential ideas are raised and debated. Understanding the narratives in these public debates is an important yet highly challenging task, requiring models that can deal with narratives built collaboratively by multiple users, each contributing short and often noisy texts. For example, a statement such as "we demand the supreme court make the right decision" can only be understood as part of a broader discussion. In this talk, I will discuss some recent and on-going work that exploits the rich social context available on social media platforms to help narrative analysis and suggest an interactive framework for several different narrative analysis tasks, capturing the main themes of the narratives and attitudes towards entities mentioned in them.

Bio: Dan Goldwasser is an Associate Professor at the Department of Computer Science at Purdue University. He is broadly interested in connecting natural language with real world scenarios and using them to guide natural language understanding. His current interests focus on grounding political discourse to support understanding real-world scenarios, using neuro-symbolic representations. Dan Completed his PhD in Computer Science at the University of Illinois at Urbana-Champaign and was a postdoctoral researcher at the University of Maryland. He has received research support from the NSF, including a recent CAREER award, DARPA and Google.

Keynote Talk: The Shape of Stories: A Research Program

Andrew Piper

McGill University

Abstract: How we tell stories is a core aspect of any story's meaning. Whether it is a tale of epiphany (St. Augustine Confessions), decline (Gibbon's Decline and Fall of the Roman Empire), or salvation (The New Testament), human stories assume shapes that transcend the meaning of the individual events contained within them. Recent work in computational narrative understanding (or computational narratology) has developed a variety of approaches to measure the shape of stories, what we could more technically call "narrative form;" In this talk, I will showcase prominent recent examples – and challenges – for the computational modeling of narrative form. The goal of the talk is to outline a coherent theoretical and methodological framework for future work that aims at understanding the functions and effects of story shape in a variety of different social contexts.

Bio: Andrew Piper is Professor and William Dawson Scholar in the Department of Languages, Literatures and Cultures at McGill University in Canada. He is the editor of the *Journal of Cultural Analytics* and directs .txtlab, a laboratory for cultural analytics at McGill. He is the author of *Enumerations: Data and Literary Study* (Chicago 2018) and most recently, *Can We Be Wrong? The Problem of Textual Evidence in a Time of Data* (Cambridge 2020).

Keynote Talk: Storytelling in Online Communities

Maria Antoniak
Cornell University

Abstract: Where and why do people share stories online? How and why should we be interested in computationally modeling these stories? In this talk, we'll explore the different locations and motivations underlying the sharing of stories in online communities, as well as different approaches to computationally measuring and representing these stories. We'll contrast these data sources with other story datasets in natural language processing, discussing both the benefits and challenges of working with data drawn from internet forums, groups, and networks.

Bio: Maria Antoniak is a PhD candidate in Information Science at Cornell University and incoming Young Investigator at the Allen Institute for AI. Her research focuses on unsupervised natural language processing methods and applications to computational social science and cultural analytics. She has a master's degree in computational linguistics from the University of Washington, and she has completed research internships at Microsoft, Facebook, Twitter, and Pacific Northwest National Laboratory.

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Program

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09:15 - 09:20   *Opening Remarks*

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10:00 - 10:30   *BREAK*

10:30 - 11:10   *Invited Talk 2*

11:10 - 11:50   *Invited Talk 3*

11:50 - 13:30   *LUNCH*

13:30 - 14:10   *Invited Talk 4*

14:10 - 15:00   *Panel Discussion*

15:00 - 15:30   *BREAK*

15:30 - 16:30   *Hybrid Poster Session*