The First Workshop on Intelligent and Interactive Writing Assistants

Proceedings of the Workshop

May 26, 2022
The In2Writing organizers gratefully acknowledge the support from the following sponsors.
Introduction

We are excited to welcome you to the First Workshop on Intelligent and Interactive Writing Assistants (In2Writing 2022). The workshop is being held in a remote/in-person hybrid format, on May 26, 2022, in conjunction with ACL 2022, which will take place from May 22-27, 2022.

This interdisciplinary workshop aims to bring together researchers from the NLP and human-computer interaction (HCI) communities and industry practitioners and professional writers to discuss innovations in building, improving, and evaluating intelligent and interactive writing assistants. For the first edition of this workshop, the program includes 6 invited talks, 1 presentation session (best paper), 1 poster and demo session, and 2 panel discussions entitled “Understanding the impact of writing assistants on ownership, authenticity, originality, and confidence” and “Bridging NLP and HCI community to design and build writing assistants.”

We received 19 submissions this year, which comprised 17 long papers and 2 short papers. Every submission received a meta-review and at least three reviews. When making our selections for the program, we carefully considered the reviews, meta-reviews, and fit for the theme of the workshop. The 20 members of the Program Committee did an excellent job reviewing the submitted papers. We sincerely thank them for their essential role in selecting the accepted papers and helping produce a high-quality program for the conference. Our goal was to create a balanced program that encompasses topics across NLP and HCI while accommodating as many favorably rated papers as possible. Among 19 submissions, we accepted 8 papers (leading to an overall acceptance rate of 42.11%) and conditionally accepted 6 papers. For conditionally accepted papers, authors were allowed to revise their submissions based on reviews, and the final acceptance was given after ACs reviewed the revised version. Among the accepted papers, 4 papers were cross-submissions, which were already presented in other venues, but went through the same review process as other submissions. They have been included in these proceedings as extended abstracts.

A conference of any scale requires advice, help, and enthusiastic participation of many parties, and we have a big ‘thank you’ to say to all of them. We thank our six invited speakers, Lillian-Yvonne Bertram (Northeastern University), Elizabeth Clark (Google NY), Claire L. Evans, Daniel Gissin (AI21 Labs), Timo Mertens (Grammarly), and Melissa Roemmele (RWS Group) for enriching the workshop with their talks. We would also like to thank all our invited panelists Jill Burstein (Duolingo), Courtney Napoles (Grammarly), Melissa Roemmele (RWS Group), Qian Yang (Cornell University), Simon Bouisson, Sherry Wu (University of Washington), and Ekaterina Kochmar (University of Bath) and making our workshop a vibrant and diverse place for stimulating discussions on a variety of relevant topics.

We would also like to gratefully acknowledge the support of our sponsors: Grammarly and AI21 Labs.

We thank our program committee members for committing their time to help us select an excellent technical program. We also thank all the authors who submitted to the workshop and all conference participants for making the first edition of In2Writing a success and for their contributions to growing the research areas of intelligent and interactive writing assistants with their fine work.

Finally, it is our great pleasure to welcome you in-person and virtually to the conference. We hope that you will have an enjoyable and productive time and leave with fond memories of In2Writing 2022!

John Joon Young Chung, Katy Ilonka Gero, Daniel Gissin, Ting-Hao ’Kenneth’ Huang, Dongyeop Kang, Mina Lee, and Vipul Raheja
The In2Writing Workshop Organizing Committee
Organizing Committee

Ting-Hao 'Kenneth' Huang, Pennsylvania State University
Vipul Raheja, Grammarly
Dongyeop Kang, University of Minnesota
John Joon Young Chung, University of Michigan
Daniel Gissin, AI21Labs
Mina Lee, Stanford University
Katy Ilonka Gero, Columbia University
Program Committee

Program Committee
Jordan Huffaker, University of Michigan
Minsuk Chang, Naver AI Lab
Hwaran Lee, Naver AI Lab
Risako Owan, University of Minnesota
Shirley Anugrah Hayati, GaTech
Chieh-Yang Huang, Penn State University
Alex Tamkin, Stanford University
Gabriel Poesia, Stanford University
Dae Hyun Kim, Stanford University
Joon Sung Park, Stanford University
Alex Calderwood, UCSC
Kenneth Arnold, Calvin University
Melanie Subbiah, Columbia University
Chris Kedzie, Rasa
Wanyu Du, University of Virginia
Dhruv Kumar, Grammarly
Arjun Akula, UCLA
Xinyu Hua, Bloomberg AI
Melissa Roemmele, RWS Language Weaver
Vivian Liu, Columbia University

Invited Speakers and Panelists
Lillian-Yvonne Bertram, Northeastern University
Claire L. Evans
Elizabeth Clark, University of Washington
Timo Mertens, Grammarly
Melissa Roemmele, RWS Group
Daniel Gissin, AI21Labs
Ekaterina Kochmar, University of Bath
Jill Burstein, Duolingo
Sherry Wu, University of Washington
Qian Yang, Cornell University
Simon Bouisson
Table of Contents

**Data-to-text systems as writing environment**
Adela Schneider, Andreas Madsack, Johanna Heininger, Ching-Yi Chen and Robert Weißgraeber

1

**A Design Space for Writing Support Tools Using a Cognitive Process Model of Writing**
Katy Gero, Alex Calderwood, Charlotte Li and Lydia Chilton ............................................. 11

**A Selective Summary of Where to Hide a Stolen Elephant: Leaps in Creative Writing with Multimodal Machine Intelligence**
Nikhil Singh, Guillermo Bernal, Daria Savchenko and Elena Glassman ................................. 25

**A text-writing system for Easy-to-Read German evaluated with low-literate users with cognitive impairment**
Ina Steinmetz and Karin Harbusch ......................................................................................... 27

**Language Models as Context-sensitive Word Search Engines**
Matti Wiegmann, Michael Völske, Benno Stein and Martin Potthast .................................. 39

**Plug-and-Play Controller for Story Completion: A Pilot Study toward Emotion-aware Story Writing Assistance**
Yusuke Mori, Hiroaki Yamane, Ryoei Shimizu and Tatsuya Harada ....................................... 46

**Text Revision by On-the-Fly Representation Optimization**
Jingjing Li, Zichao Li, Tao Ge, Irwin King and Michael R. Lyu ............................................... 58

**The Pure Poet: How Good is the Subjective Credibility and Stylistic Quality of Literary Short Texts Written with an Artificial Intelligence Tool as Compared to Texts Written by Human Authors?**
Vivian Emily Gunser, Steffen Gottschling, Birgit Brucker, Sandra Richter, Dilan Canan Çakir and Peter Gerjets .................................................................................................................. 60

**Interactive Children’s Story Rewriting Through Parent-Children Interaction**
Yoonjoo Lee, Tae Soo Kim, Minsuk Chang and Juho Kim ....................................................... 62

**News Article Retrieval in Context for Event-centric Narrative Creation**
Nikos Voskarides, Edgar Meij, Sabrina Sauer and Maarten de Rijke ........................................ 72

**Unmet Creativity Support Needs in Computationally Supported Creative Writing**
Max Kreminski and Chris Martens ......................................................................................... 74

**Sparks: Inspiration for Science Writing using Language Models**
Katy Gero, Vivian Liu and Lydia Chilton .................................................................................. 83

**ChipSong: A Controllable Lyric Generation System for Chinese Popular Song**
Nayu Liu, Wenjing Han, Guangcan Liu, Da Peng, Ran Zhang, Xiaorui Wang and Huabin Ruan 85

**Read, Revise, Repeat: A System Demonstration for Human-in-the-loop Iterative Text Revision**
Wanyu Du, Zae Myung Kim, Vipul Raheja, Dhruv Kumar and Dongyeop Kang .................... 96