

Zihao He

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Research Interest

Natural Language Processing, Computational Social Science

Education

University of Southern California

Los Angeles, CA, USA

Doctor of Philosophy, Computer Science; GPA: 3.91/4.00

Aug 2019 – present

Advisor: Prof. Kristina Lerman

Beijing University of Posts and Telecommunications

Beijing, China

Bachelor of Engineering, Communications Engineering; GPA: 90.38/100, Rank: 7/556

Sep 2014 – Jun 2018

Publications and Preprints

[21] **COMMUNITY-CROSS-INSTRUCT: Unsupervised Instruction Generation for Aligning Large Language Models to Online Communities**

Zihao He, Rebecca Dorn, Siyi Guo, Minh Duc Chu, Kristina Lerman

Preprint.

[20] **How Susceptible are Large Language Models to Ideological Manipulation?**

Kai Chen, Zihao He, Jun Yan, Taiwei Shi, Kristina Lerman

Preprint.

[19] **Whose Emotions and Moral Sentiments Do Language Models Reflect?**

Zihao He, Siyi Guo, Ashwin Rao, Kristina Lerman

To Appear at Findings of ACL 2024.

[18] **Large Language Models Help Reveal Unhealthy Diet and Body Concerns in Online Eating Disorders Communities**

Minh Duc Chu, Zihao He, Rebecca Dorn, Kristina Lerman

Preprint.

[17] **IsamasRed: A Public Dataset Tracking Reddit Discussions on Israel-Hamas Conflict**

Kai Chen, Zihao He, Keith Burghardt, Jingxin Zhang, Kristina Lerman

ICWSM 2024.

[16] **The Pulse of Mood Online: Unveiling Emotional Reactions in a Dynamic Social Media Landscape**

Siyi Guo, Zihao He, Ashwin Rao, Fred Morstatter, Jeffrey Brantingham, Kristina Lerman

Preprint.

[15] **Reading Between the Tweets: Deciphering Community Worldviews through Language Models and Network Interactions**

Zihao He, Ashwin Rao, Siyi Guo, Negar Mokherian, Kristina Lerman

Findings of EACL 2024.

[14] **Measuring Online Emotional Reactions to Offline Events**

Siyi Guo, Zihao He, Ashwin Rao, Eugene Jang, Yuanfeixue Nan, Fred Morstatter, Jeffrey Brantingham, Kristina Lerman

ASONAM 2023.

[13] **CPL-NoViD: Context-Aware Prompt-based Learning for Norm Violation Detection in Online Communities**

Zihao He, Jonathan May, Kristina Lerman

ICWSM 2024.

[12] **Socio-Linguistic Characteristics of Coordinated Inauthentic Accounts**

Keith Burghardt, Ashwin Rao, Siyi Guo, Zihao He, Georgios Chochlakis, Baruah Sabyasachee, Andrew Rojecki, Shri

Narayanan, Kristina Lerman

ICWSM 2024.

- [11] **ALCAP: Alignment-Augmented Music Captioner**
 Zihao He, Weituo Hao, Wei-Tsung Lu, Changyou Chen, Kristina Lerman, Xuchen Song
 EMNLP, 2023.
- [10] **Anger Breeds Controversy: Analyzing Controversy and Emotions on Reddit**
 Kai Chen, Zihao He, Rong-Ching Chang, Jonathan May, Kristina Lerman
 SBP-BRIMS, 2023.
- [9] **Infusing Knowledge from Wikipedia to Enhance Stance Detection**
 Zihao He, Negar Mokherian, Kristina Lerman
 ACL, 2022 (Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis).
- [8] **Speaker Turn Modeling for Dialogue Act Classification**
 Zihao He, Leili Tavabi, Kristina Lerman, Mohammad Soleymani
 Findings of EMNLP, 2021.
- [7] **Detecting Polarized Topics Using Partisanship-aware Contextualized Topic Embeddings**
 Zihao He, Negar Mokherian, António Câmara, Andrés Abeliuk, Kristina Lerman
 Findings of EMNLP, 2021.
- [6] **The emergence of heterogeneous scaling in research institutions**
 Keith A Burghardt, Zihao He, Allon G Percus, Kristina Lerman
 Communications Physics, 2021.
- [5] **Graph Embedding with Personalized Context Distribution**
 Zihao He, Di Huang, Yuzhong Huang, Kexuan Sun, Sami Abu-El-Haija, Bryan Perozzi, Kristina Lerman, Fred Morstatter, Aram Galstyan
 Companion Proceedings of the Web Conference, 2020.
- [4] **Training interpretable convolutional neural networks by differentiating class-specific filters**
 Haoyu Liang, Zhihao Ouyang, Yuyuan Zeng, Hang Su, Zihao He, Shu-Tao Xia, Jun Zhu, Bo Zhang
 ECCV, 2020.
- [3] **Neural style transfer with content discrimination**
 Xiyu Yan, Yeli Xing, Zihao He, Tao Dai, Yong Jiang, Shu-Tao Xia
 ICME Workshop, 2019.
- [2] **AttentionDrop for convolutional neural networks**
 Zhihao Ouyang, Yan Feng, Zihao He, Tianbo Hao, Tao Dai, Shu-Tao Xia
 ICME Workshop, 2019.
- [1] **Automatic Grassland Degradation Estimation Using Deep Learning.**
 Xiyu Yan, Yong Jiang, Shuai Chen, Zihao He, Chunmei Li, Shu-Tao Xia, Tao Dai, Shuo Dong, Feng Zheng
 IJCAI, 2019.

Experience

Research Intern@Tiktok Audio-Language Multimodal Representation Learning.	San Jose, CA, USA <i>May 2023 – Aug 2023</i>
Research Intern@Tiktok Automatic Generation of Music Interpretation (music2text).	Santa Clara, CA, USA <i>May 2022 – Aug 2022</i>
Applied Science Intern@Amazon Inc. Book Recommendation on Raw Content	Seattle, WA, USA <i>May 2021 – Aug 2021, May 2020 – Aug 2020</i>
Algorithms Development Intern@Didi Chuxing. AMulti-task Learning for Multi-label Driver Misbehavior Classification.	Beijing, China <i>Apr 2019 – July 2019</i>

Teaching Experience

- DSCI-531: Fairness in Artificial Intelligence. Instructor: Kristina Lerman. Spring 2022
- CSCI-566: Deep Learning and its Applications. Instructor: Yue Zhao. Spring 2024

Academic Services

Reviewer

- EMNLP 2022, ACL 2023, ACL ARR
- SIGKDD 2022&2020, WSDM 2021&2020, WWW 2021, CCS 2021
- TrustNLP@ACL 2023, R²HCAL@AAAI 2023, TEACH@ICML 2023, Connection Science 10/2022

Awards & Achievements

- Annenberg Fellowship, University of Southern California, 2019
- National Scholarship for Excellent Academic Performance (top 1.2%), 2018
- Meritorious Winner for the Interdisciplinary Contest in Modeling (top 10%), 2017
- Second Prize for the Chinese Mathematics Competitions (top 7.5%), 2017
- First Prize for National English Contest for College Students (top 0.6%), 2017