

# Zihao He

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## Research Interest

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Natural Language Processing, Computational Social Science, Multimodal Representation Learning, Graph Representation Learning

## Education

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### 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

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### [20] Characterizing Online Eating Disorder Communities with Large Language Models

Minh Duc Chu, Aryan Karnati, [Zihao He](#), Kristina Lerman

Under Review of CSCW 2024.

### [19] IsamasRed: A Public Dataset Tracking Reddit Discussions on Israel-Hamas Conflict

Kai Chen, [Zihao He](#), Keith Burghardt, Jingxin Zhang, Kristina Lerman

Under Review of ICWSM 2024.

### [18] 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

Under Review of TWEB.

### [17] On the Affective Alignment of Language Models with Partisan Perspectives

[Zihao He](#), Siyi Guo, Ashwin Rao, Kristina Lerman

Under Review of ACL ARR December 2024.

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

[Zihao He](#), Ashwin Rao, Siyi Guo, Negar Mokherian, Kristina Lerman

Under Review of EACL 2024.

### [15] 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.

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

[Zihao He](#), Jonathan May, Kristina Lerman

ICWSM 2024.

### [13] Radicalized by Thinness: Using a Model of Radicalization to Understand Pro-Anorexia Communities on Twitter

Kristina Lerman, Aryan Karnati, Shuchan Zhou, Siyi Chen, Sudesh Kumar, [Zihao He](#), Joanna Yau, Abigail Horn

Preprint, 2023.

### [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

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

## Academic Services

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### Reviewer

- EMNLP 2022, ACL 2023
- SIGKDD 2022&2020, WSDM 2021&2020, WWW 2021, CCS 2021
- TrustNLP@ACL 2023, R<sup>2</sup>HCAL@AAAI 2023, TEACH@ICML 2023, Connection Science 10/2022

## Awards & Achievements

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- 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