

Zihao He

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RESEARCH INTERESTS

Societal Impacts of LLMs, Alignment and Safety, NLP, Multimodal Representation Learning

EDUCATION

University of Southern California

Ph.D. in Computer Science

Los Angeles, CA, U.S.

08/2019 - 12/2024 (*expected*)

- Advisor: Prof. Kristina Lerman

Tsinghua University

M.Eng. in Computer Technologies (Transferred)

Beijing, China

09/2018 - 06/2019

Beijing University of Posts and Telecommunications

B.Eng. in Communications Engineering

Beijing, China

09/2014 - 06/2018

SELECTED PUBLICATIONS AND PREPRINTS

Societal Impacts of LLMs

- 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
To appear in *Proceedings of EMNLP'24* [[Preprint](#)]
- Improving and Assessing the Fidelity of Large Language Models Alignment to Online Communities
Minh Duc Chu, **Zihao He**, Rebecca Dorn, Kristina Lerman
arXiv:2408.09366 [[Preprint](#)]
- Reading Between the Tweets: Reading Between the Tweets: Deciphering Ideological Stances of Interconnected Mixed-ideology Communities
Zihao He, Ashwin Rao, Siyi Guo, Negar Mokherian, Kristina Lerman
In *Findings of EACL'23* [[Paper](#)]

Alignment and Safety

- How Susceptible are Large Language Models to Ideological Manipulation?
Kai Chen, **Zihao He**, Jun Yan, Taiwei Shi, Kristina Lerman
To appear in *Proceedings of EMNLP'24* [[Preprint](#)] **Best Paper Runner-up at SeT LLM @ ICLR 2024**
- Whose Emotions and Moral Sentiments Do Language Models Reflect?
Zihao He, Siyi Guo, Ashwin Rao, Kristina Lerman
In *Findings of ACL'24* [[Paper](#)] [[Media Coverage](#)]

Multimodal Machine Learning

- ALCAP: Alignment-Augmented Music Captioner
Zihao He, Weituo Hao, Wei-Tsung Lu, Changyou Chen, Kristina Lerman, Xuchen Song
In *Proceedings of EMNLP'23* [[Paper](#)]

Representation Learning

- Infusing Knowledge from Wikipedia to Enhance Stance Detection
Zihao He, Negar Mokherian, Kristina Lerman
In *Proceedings of WASSA'22* [[Paper](#)]

- Speaker Turn Modeling for Dialogue Act Classification
Zihao He, Leili Tavabi, Kristina Lerman, Mohammad Soleymani
In *Findings of EMNLP'21* [[Paper](#)]
- Detecting Polarized Topics Using Partisanship-aware Contextualized Topic Embeddings
Zihao He, Negar Mokhberian, António Câmara, Andrés Abeliuk, Kristina Lerman
In *Findings of EMNLP'21* [[Paper](#)] [[Media Coverage](#)]
- 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
In *Companion Proceedings of the Web Conference'20* [[Paper](#)]

INDUSTRIAL EXPERIENCE

Research Scientist Intern @ ByteDance

San Jose, CA, U.S.

Speech, Audio, and Music Intelligence Team

05/2023 – 08/2023, 05/2022 – 08/2022

- Mentors: Weituo Hao, Xuchen Song
- Projects: Improving Music Interpretation Generation by Music-Text Alignment; Pretraining of Audio-Language Models

Applied Scientist Intern @ Amazon

Seattle, WA, U.S. (Remote)

Amazon Kids Team

05/2021 – 08/2021

- Mentors: Matthew Butler
- Project: Text Embedding-based Book Personalization

Algorithm Development Intern @ DiDi Global

Beijing, China

Research Team

04/2019 – 07/2019

- Mentors: Chao Feng
- Project: Multi-task Learning for Multi-label Driver Misbehavior Classification

HONORS AND AWARDS

- Graduate School Travel Award, University of Southern California. 2024.
- Annenberg Fellowship, University of Southern California. 2019.
- National Scholarship for Excellent Academic Performance (top 1.2%). 2018.

SERVICES

- PC/Reviewer: ACL Rolling Review, EMNLP, ACL, NAACL, SIGKDD, WSDM, WWW, CSS

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

KEY SKILLS

Programming Languages

Python, C++, Java, HTML

Machine Learning Libraries

PyTorch, Transformers, Scikit-Learn, NumPy, Pandas