

Zheng Zhang

247 Fitzpatrick Hall, Notre Dame, IN
Department of Computer Science and Engineering
University of Notre Dame

zzhang37@nd.edu
+1 651 276 1867
zhengzhang.me

EDUCATION

Ph.D.	Computer Science and Engineering University of Notre Dame, Notre Dame, IN Advisor: Toby Jia-Jun Li	2022-present
M.S.	Computer Science University of Rochester, Rochester, NY Advisor: Zhen Bai	2019-2021
M.S.	Computer Science and Engineering University of Minnesota, Minneapolis, MN Advisor: Haiyi Zhu	2017-2019
B.S.	Software Engineering Shaanxi Normal University, Xi'an, China	2013-2017

RESEARCH AREAS

Design and develop human-AI collaborative systems that boost individual productivity and well-being. Understand and refine AI model interactions within societal and practical contexts.

Keyword: Human-Computer Interaction, Human-AI Interaction, Human-centered AI, Human-in-the-loop
Machine Learning, Natural Language Processing, Social Computing

PROFESSIONAL EXPERIENCE

2023	Amazon Web Services (AWS) AI , Applied Scientist Intern & Part-time Intern with <i>Alex Williams, Erran Li</i> Conversational Steering Strategies with Code Generation Failures in Large Language Models
2022	Apple Inc. , AI/ML Research Intern with <i>Alistair Conkie, Ladan Golipour</i> Zero-shot Learning for Foreign Accent Conversion
2021-PRESENT	University of Notre Dame , Graduate Research Assistant with <i>Toby Jia-Jun Li</i>
2019-2021	University of Rochester , Graduate Research Assistant with <i>Zhen Bai</i>
2017-2019	University of Minnesota , Graduate Research Assistant with <i>Haiyi Zhu</i>

PUBLICATIONS

** denotes equal contribution*

Under-reviewed Manuscripts and Pre-prints

- 2023 **Zheng Zhang**, Alex Williams, Jonathan Buck, Xiaopeng Li, Matthew Lease, and Li Erran Li. "Understanding Conversational Steering Strategies with Code Generation Failures in Large Language Models." *Under review.*
- 2023 Jie Gao, Yuchen Guo, Giannieve Lim, Tianqin Zhan, **Zheng Zhang**, Toby Jia-Jun Li, and Simon Tangi Perrault. "CollabCoder: A GPT-Powered Workflow for Collaborative Qualitative Analysis." arXiv preprint arXiv:2304.07366.

Peer-reviewed Conference and Journal Publications

- 2023 Yuan Tian, **Zheng Zhang**, Zheng Ning, Toby Jia-Jun Li, Jonathan K. Kummerfeld, and Tianyi Zhang. "Interactive Text-to-SQL Generation via Editable Step-by-Step Explanations." *The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)*
- 2023 **Zheng Zhang**, Jie Gao, Ranjodh Singh Dhaliwal, and Toby Jia-Jun Li. "VISAR: A Human-AI Argumentative Writing Assistant with Visual Programming and Rapid Draft Prototyping." *In Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST 2023)*
- 2023 **Zhang, Zheng**, Zheng Ning, Chenliang Xu, Yapeng Tian, and Toby Jia-Jun Li. "PEANUT: A Human-AI Collaborative Tool for Annotating Audio-Visual Data." *In Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST 2023)*
- 2023 Simret Araya Gebreegzabher*, **Zheng Zhang***, Xiaohang Tang, Yihao Meng, Elena L. Glassman, and Toby Jia-Jun Li. "PATAT: Human-AI Collaborative Qualitative Coding with Explainable Interactive Rule Synthesis." *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI 2023)*
- 2023 Zheng Ning*, **Zheng Zhang***, Tianyi Sun, Yuan Tian, Tianyi Zhang, and Toby Jia-Jun Li. "An Empirical Study of Model Errors and User Error Discovery and Repair Strategies in Natural Language Database Queries." *In Proceedings of the 28th International Conference on Intelligent User Interfaces (IUI 2023)*
- 2022 Ying Xu, Dakuo Wang, Mo Yu, Daniel Ritchie, Bingsheng Yao, Tongshuang Wu, **Zheng Zhang**, Toby Jia-Jun Li, Nora Bradford, Branda Sun, Tran Hoang, Yisi Sang, Yufang Hou, Xiaojuan Ma, Diyi Yang, Nanyun Peng, Zhou Yu, and Mark Warschauer. "Fantastic Questions and Where to Find Them: FairytaleQA—An Authentic Dataset for Narrative Comprehension." *In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL 2022)*
- 2022 Bingsheng Yao, Dakuo Wang, Tongshuang Wu, **Zheng Zhang**, Toby Jia-Jun Li, Mo Yu, and Ying Xu. "It is AI's Turn to Ask Humans a Question: Question-Answer Pair Generation for Children's Story Books." *In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL 2022)*
- 2022 **Zheng Zhang**, Ying Xu, Yanhao Wang, Bingsheng Yao, Daniel Ritchie, Tongshuang Wu, Mo Yu, Dakuo Wang, and Toby Jia-Jun Li. "Storybuddy: A Human-AI Collaborative Chatbot for Parent-Child Interactive Storytelling with Flexible Parental Involvement." *In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022)*
- 2020 Weiwen Leung*, **Zheng Zhang***, Daviti Jibuti, Jinhao Zhao, Maximilian Klein, Casey Pierce, Lionel Robert, and Haiyi Zhu. "Race, Gender and Beauty: The Effect of Information Provision on Online

Hiring Biases. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (CHI 2020)

- 2019 Hao-Fei Cheng, Ruotong Wang, **Zheng Zhang**, Fiona O'connell, Terrance Gray, F. Maxwell Harper, and Haiyi Zhu. "*Explaining Decision-making Algorithms through UI: Strategies to Help Non-expert Stakeholders.*" In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (CHI 2019)

Posters, Extended Abstracts, Workshop Papers and Technical Reports

- 2022 Eyal Shnarch, Alon Halfon, Ariel Gera, Marina Danilevsky, Yannis Katsis, Leshem Choshen, Martin Santillan Cooper, Dina Epelboim, **Zheng Zhang**, and Dakuo Wang. "*Label Sleuth: From Unlabeled Text to a Classifier in a Few Hours.*" In *Proceedings of the The 2022 Conference on Empirical Methods in Natural Language Processing: System Demonstrations* (EMNLP Demo 2022)
- 2022 Zheng Ning, **Zheng Zhang**, Jerrick Ban, Kaiwen Jiang, Ruohong Gan, Yapeng Tian, Toby Jia-Jun Li. "*MIMOSA: Human-in-the-Loop Generation of Spatial Audio from Videos with Monaural Audio.*" *AV4D workshop: Visual Learning of Sounds in Spaces in ICCV 2022* (AV4D@ICCV 2022)
- 2021 **Zheng Zhang**, Ying Xu, Yanhao Wang, Bingsheng Yao, Daniel Ritchie, Tongshuang Wu, Mo Yu, Dakuo Wang, and Toby Jia-Jun Li. "*Building an Interactive Storytelling Conversational Agent through Parent-AI Collaboration.*" *CUI@CSCW Workshop: Inclusive and Collaborative Child-facing Voice Technologies* (CUI@CSCW 2021)

INVITED TALKS

- 2023 "VISAR: A Human-AI Argumentative Writing Assistant with Visual Programming and Rapid Draft Prototyping", AWS AI
- 2023 "Incorporating Human and AI Proficiency in the Design of AI-Enhanced Systems", UCLA HCI Lab

PROFESSIONAL SERVICE

Program Committees

HCI CHI Late-Breaking Work 2023

Paper Reviewing

HCI CHI 2022-2024, UIST 2023

NLP ARR 2023

Student Volunteering

HCI CHI 2022

AI AAAI 2020

Updated October 2023