

Xiaofei Zhou

Tenure-Track Assistant Professor, Shanghai Jiao Tong University

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Research Interest

Human-Computer Interaction, AR/VR, Educational Technology, Embodied Learning, AI in Education

Education

University of Rochester (UR)

2019-2025

Ph.D. student, Computer Science

Advisors: Dr. Zhen Bai

Carnegie Mellon University (CMU)

2018-2019

Human-Computer Interaction Institute, School of Computer Science

MS in Educational Technology and Applied Learning Sciences

Advisors: Dr. Geoff Kaufman, Prof. Ken Keodinger

Tsinghua University (THU)

2014-2018

B.Eng., Industrial Engineering with Specialization in Human Factors

Advisors: Prof. Pei-Luen Patrick Rau




Publication

Peer-Reviewed Journal Paper (Strictly Peer-Reviewed)

- J4 **Zhou, Xiaofei**, Yunfan Gong, Yushan Zhou, Yufei Jiang, and Zhen Bai. "Co-design of analogical and embodied representations with children for child-centered AI learning experiences." International Journal of Human-Computer Studies 199 (2025): 103462. (**IJHCS 2025**)
- J3 Tang, Jingwan, **Xiaofei Zhou**, Xiaoyu Wan, and Fan Ouyang. "A Systematic Review of AI Applications in Computer-Supported Collaborative Learning in STEM Education." Artificial Intelligence in STEM Education (2022): 333-358.
- J2 Jingwan Tang, **Xiaofei Zhou**, Xiaoyu Wan, Zhen Bai. "ML4STEM Professional Development Program: Enriching K-12 STEM Teaching with Machine Learning." International Journal of Artificial Intelligence in Education (2022): 1-40. (**IJAIED 2022**)
- J1 Xingchen Zhou, Pei-Luen Patrick Rau, Chi-Lan Yang, and **Xiaofei Zhou**. "Cognitive Behavioral Therapy-Based Short-Term Abstinence Intervention for Problematic Social Media Use: Improved Well-Being and Underlying Mechanisms." Psychiatric Quarterly (2020): 1-19.

Peer-Reviewed Conference Full Paper (Strictly Peer-Reviewed)

- P12 **Zhou, Xiaofei**, Hanjia Lyu, Yuxin Sa, Mengfan Li, Advait Sarkar, Jiebo Luo, Michael Daley, and Zhen Bai "Empower K-12 Teachers to Create ML-Supported Scientific Inquiries" International Conference on Artificial Intelligence in Education. 2025. (**AIED 2025**)
- P11 **Zhou, Xiaofei**, Yi Zhang, Yufei Jiang, Yunfan Gong, Chi Zhang, Alissa N Antle, and Zhen Bai. "Briteller: Shining a Light on AI Recommendations for Children." In Proceedings of the 2025 CHI conference on human factors in computing systems (**CHI 2025**)

- P10 Han, Ariel, **Xiaofei Zhou**, Zhenyao Cai, Richard Ko, Dr. Kylie A Pepler. "Teachers, Parents, and Students' Perspectives on Integrating Generative AI into Elementary Literacy Education." In Proceedings of the 2024 CHI conference on human factors in computing systems (**CHI 2024**)
- P9 **Zhou, Xiaofei**, Yushan Zhou, Yunfan Gong, Zhenyao Cai, Annie Qiu, Qinqin Xiao, Alissa N. Antle, Zhen Bai. "'Bee and I need diversity!' Break Filter Bubbles in Recommendation Systems through Embodied AI Learning." In Proceedings of the interaction design and children conference. (**IDC 2024**)
- P8 Gong, Yunfan, **Xiaofei Zhou**, Yushan Zhou, April Luehmann, Yujung Han, Zhen Bai. "Approaching 'Filter Bubble' in Recommendation Systems: A Transformative AI Literacy Learning Experience." In Proceedings of the 18th International Conference of the Learning Sciences-ICLS 2024. International Society of the Learning Sciences, 2024. (**ISLS 2024**)
- P7 **Zhou, Xiaofei**, Christopher Kok, Anita Delahay, Rebecca Quintana, and Xu Wang. "How Learning Experience Designers Make Design Decisions: The Role of Data, the Reliance on Subject Matter Expertise, and the Opportunities for Data-Driven Support." In Proceedings of the Tenth ACM Conference on Learning@ Scale, 2023. (**L@S 2023**)
- P6 DiPaola, Daniella, Katherine S. Moore, Safinah Ali, Beatriz Perret, **Xiaofei Zhou**, Helen Zhang, and Irene Lee. "Make-a-Thon for Middle School AI Educators." In Proceedings of the 54th ACM Technical Symposium on Computer Science Education V. 1, pp. 305-311. 2023. (**SIGCSE TS 2023**)
- P5 Haut, Kurtis, Adira Blumenthal, Sarah Atterbury, **Xiaofei Zhou**, Wasifur Rahman, Emanuela Natali, Rafayet Ali, Ehsan Hoque. "Assistive Video Filters for People with Parkinson's Disease to Remove Tremors and Adjust Voice." In 2022 10th International Conference on Affective Computing and Intelligent Interaction (ACII) (pp. 1-8). IEEE. (**ACII 2022**)
 *Best Paper Award Nominee*
- P4 **Zhou, Xiaofei**, Jingwan Tang, Beilei Guo, Hanjia Lyu, and Zhen Bai. "Challenges and Design Opportunities in Data Analysis for ML-Empowered Scientific Inquiry-Insights from a Teacher Professional Development Study." In Proceedings of the 16th International Conference of the Learning Sciences-ICLS 2022, pp. 847-854. International Society of the Learning Sciences, 2022. (**ISLS 2022**)
- P3 Lee, Irene, Helen Zhang, Kate Moore, **Xiaofei Zhou**, Beatriz Perret, Yihong Cheng, Ruiying Zheng, and Grace Pu. "AI Book Club: An Innovative Professional Development Model for AI Education." In Proceedings of the 53rd ACM Technical Symposium on Computer Science Education, pp. 202-208. 2022. (**SIGCSE 2022**)
- P2 **Zhou, Xiaofei**, Jingwan Tang, Michael Daley, Saad Ahmad, and Zhen Bai. "'Now, I Want to Teach it for Real!': Introducing Machine Learning as a Scientific Discovery Tool for K-12 Teachers." International Conference on Artificial Intelligence in Education. 2021. (**AIED 2021**)
 *Best Paper Award Nominee* &  *Best Student Paper Award Nominee*
- P1 Wan, Xiaoyu, **Xiaofei Zhou**, Zaiqiao Ye, Chase K. Mortensen, and Zhen Bai. "SmileyCluster: supporting accessible machine learning in K-12 scientific discovery." In Proceedings of the Interaction Design and Children Conference, pp. 23-35. 2020. (**IDC 2020**)

Workshop, Symposia, Poster, Short Paper, and Extended Abstract (Lightly Peer-Reviewed)

- A7 **Zhou, Xiaofei**, Jingwan Tang, Hanjia Lyu, Xinyi Liu, Zhenhao Zhang, Lichen Qin, Fiona Au, Advait Sarkar, Zhen Bai. "Creating an Authoring Tool for K-12 Teachers to Design ML-Supported Scientific Inquiry Learning." In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems. (**CHI LBW 2024**)

- A6 **Zhou, Xiaofei**, Pei Xiong, Qinqin Xiao, Zhen Bai. "OptiDot: An Optical Interface for Children to Explore Dot Product and AI Recommendation." In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems. (**CHI LBW 2024**)
- A5 **Zhou, Xiaofei**, Jingwan Tang, Qinqin Xiao, Yushan Zhou, Zhen Bai. "Supporting Multidimensional Data Analysis for High-School Students in the Era of Machine Learning." In Proceedings of the 18th International Conference of the Learning Sciences-ICLS 2024. International Society of the Learning Sciences, 2024. (**ISLS 2024**)
- A4 **Zhou, Xiaofei**, Xiaoyu Wan, Jingwan Tang, and Zhen Bai. "Exploratory Process Analysis of Teacher Learning of AI Integration through Collaborative Design." (**EDM Workshop 2021**)
- A3 **Zhou, Xiaofei**, Kaixin Li, Abdul Moid Munawar, and Zhen Bai. "Scaffolding Design to Bridge the Gaps between Machine Learning and Scientific Discovery for K-12 STEM Education." In Proceedings of the 2021 ACM Interaction Design and Children Conference: Extended Abstracts. 2021. (**IDC WIP 2021**)
- A2 **Zhou, Xiaofei**, Abdul Moid Munawar, Daniel Munoz Huerta, and Zhen Bai. "An Advanced Face Glyph Design for Accessible Multivariate Cluster Analysis." (**CHI HDI Workshop 2021**)
- A1 **Zhou, Xiaofei**, Jingwan Tang, Sufian Mushtaq, Xiaoyu Wan, Zhen Bai. "Empowering Teachers to Integrate Machine Learning into K-12 Scientific Discovery." International Workshop on Education In Artificial Intelligence K-12. (**EduAI'2020 Workshop Paper**)

Media Coverage

News10NBC, High school students learn the power and ethics of AI at University of Rochester summer camp (2024)

<https://www.whec.com/top-news/high-school-students-learn-the-power-and-ethics-of-ai-at-university-of-rochester-summer-camp/>

Honors and Awards

A three-year AR/VR Industry Fellowship (\$102, 000) , AR/VR NRT program @UR	2022
Summer 2021 travel grant , UR	2021
NSF I-Corps , GoTracker for Project-Based Learning@CMU	2019
Merit Scholarship (\$9000) , CMU	2018
Special Award of 36th Challenge Cup , THU	2018
Science and Technology Innovation Award , Department of Industrial Engineering, THU	2018

Teaching Experience

Teaching Volunteer <i>Freedom Scholars Learning Center, Rochester NY</i>	Summer 2023, 2024
Instructor: Introduction to Educational Technology in HCI (Link to slides) <i>University of Rochester</i>	April 2024
Volunteer Teaching Assistant <i>University Preparatory Charter School for Young Men, Rochester NY</i>	Mar 2022- May 2024
MIT Everyday AI Summer Camps <i>Teaching Assistant, Instructor</i>	June-July 2021

Teaching Assistant	2020-2021
<i>University of Rochester</i>	
- CSC161 Introduction to Programming	Spring 2021, Spring 2020
- CSC211 Introduction to HCI	Fall 2020
Tsinghua University and Local K-12 Schools in Beijing	May 2016-Jul 2018
<i>Volunteer Instructor</i>	
- Recorded 4 audiobooks for blind children in a special education school.	
- Taught Creative Writing for the First Grade students in the Haidian District School of Migrant Laborers 'Children.	
- Participated in a pen pal program for children in isolated areas.	

Professional Experiences

The University of Michigan Research Intern	May-Aug 2021
OWLII Product & UX Designer	Mar-July 2018
- Conducted user research, designed interaction, and prototyped with Sketch and Photoshop for Xiatiao Camera, an intelligent video editing application.	
- Designed and conducted user testing.	
- Iterated design for the 2nd version.	

Academic and Community Service

Committee Members	2024-Present
<i>CHI LBW 2024</i>	
Reviewer	2020-Present
<i>IJHCS (2024), IDC 2024, CHI 2024, AIED 2022, ISLS 2022, CSCW 2022 Jan, CHI 2022, CSCW Poster 2021, ISMAR 2021, IDC 2021, AIED 2020</i>	
ASSETS 2019 Graphic Design Chair	Oct 2018-2019
- Designed ASSETS 2019 conference logo, website, and social media logo.	
Department of Industrial Engineering, Tsinghua University	Sept 2015-Dec 2016
<i>Chief editor of the department newspaper</i>	

Research Mentoring

Yi Zhang	May 2024-Present
<i>Master student in Computer Science, UCI</i>	
Nicholas DeJesse	Dec 2023-Present
<i>Undergrad student in Computer Science, UR</i>	
Emily Jeong	Feb 2024-Present
<i>Undergrad student in Computer Science, UR</i>	
Ellen Li	Dec 2023-Present
<i>Undergrad student in Digital Media Design and Psychology, UR</i>	
Kyle Chang	Dec 2023-Present
<i>Undergrad student in Computer Science and Statistics, UR</i>	
Yufei Jiang	Dec 2023-Present
<i>Undergrad student in Statistics and Biology, UR</i>	

Lexi Wu <i>Undergrad student in Digital Media Studies and Computer Science, UR</i>	Dec 2023-Present
Kyle Jhong <i>Undergrad student at Computer Science and Cognitive Science, UR</i>	Dec 2023-Present
Andy Yu <i>Master student at Computer Science, UR</i>	Sept 2023-Present
Minh Nguyen <i>Undergrad student in Computer Science, UR</i>	June 2023-2023
Lichen Qin <i>Master student at Computer Science, UR</i>	Sept 2022-2023
Annie Qiu <i>Undergraduate student at Computer Science, UR</i>	April - Dec 2022
Fiona Au <i>Undergraduate student in Digital Media Studies, Computer Science, UR</i>	Feb 2021-2023
Kaixin Li <i>Undergraduate student at Digital Media Studies, Brain & Cognitive Sciences, UR</i>	Aug 2020-Jan 2022
Abdul Moid Munawar <i>Undergraduate student at the Department of Computer Science, UR</i>	Mar 2020-June 2022
Saad Ahmad <i>Undergraduate student at the Department of Computer Science, UR</i>	Jan 2020-May 2021
Sufian Mushtaq <i>Undergraduate student at the Department of Computer Science, UR</i>	Jan 2020-Sept 2020