

Ziang Xiao

Johns Hopkins University
Departments of Computer Science
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EMPLOYMENT

Johns Hopkins University

Assistant Professor, Computer Science

Jan 2024

Microsoft Research, Montréal

Postdoctoral Researcher, Fairness, Accountability, Transparency & Ethics in AI

Sept 2022 - Jan 2024

Johns Hopkins University

Assistant Research Professor, Computer Science

July 2022 - Jan 2024

EDUCATION

University of Illinois Urbana-Champaign

2023

Ph.D. in Computer Science

Dissertation: *Seeing Us through Machines: Designing and Building Conversational AI to Understand Humans*

Committee: Hari Sundaram (Advisor), Karrie Karahalios (Advisor), Michelle X. Zhou, Heng Ji, and Brent W. Roberts

University of Illinois Urbana-Champaign

2016

B.S. with Highest Distinction in Psychology and High Distinction in Statistics & Computer Science

Dissertation Advisor: Dov Cohen

PUBLICATIONS

*: Equal authorship; †: Student collaborator;

Papers:

1. Sordoni, A., Yuan, X., Côté, M. A., Pereira, M., Trischler, A., **Xiao, Z.**, Hosseini, A., Niedtner, F, and Le Roux, N. (2023). Joint Prompt Training of Stacked LLMs using Variational Inference. *In Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS)*.
2. **Xiao, Z.** *, Zhang, S. *, Lai, V., and Liao, Q. V. (2023). Evaluating Evaluation Metrics: A Framework for Analyzing NLG Evaluation Metrics using Measurement Theory. *In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP) pp. 10967-10982*.
3. Wang, R., Todd, G., Yuan, E., **Xiao, Z.**, Côté, M. A., and Jansen, P. (2023). ByteSized32: A Corpus and Challenge Task for Generating Task-Specific World Models Expressed as Text Games. *In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP) pp. 13455-13471*.
4. Liao, Q. V., and **Xiao, Z.** (2023). Rethinking Model Evaluation as Narrowing the Socio-Technical Gap. *AI & HCI Workshop at the 40th International Conference on Machine Learning (ICML)* [Honorable Mention]

5. **Xiao, Z.** (2023). Seeing us through machines: designing and building conversational AI to understand humans (Doctoral dissertation, University of Illinois at Urbana-Champaign).
6. **Xiao, Z.**, Li, T. W., Karahalios, K., and Sundaram, H. (2023). Inform the Uninformed: Improving Online Informed Consent Reading with an AI-Powered Chatbot. *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-17).
7. **Xiao, Z.**, Liao, Q. V., Zhou, M., Grandison, T., and Li, Y. (2023). Powering an AI Chatbot with Expert Sourcing to Support Credible Health Information Access. *In Proceedings of the 28th International Conference on Intelligent User Interfaces (IUI)* (pp. 2-18)
8. Ge, Y. *, **Xiao, Z.** *, Diesner, J., Ji, H., Karahalios, K., and Sundaram, H. (2022). What should I ask: A knowledge-driven approach for follow-up question generation in conversational surveys. *In Proceedings of the 37th Pacific Asia Conference on Language, Information and Computation (PACLIC 37)*
9. **Xiao, Z.**, Mennicken, S., Huber, B., Shonkoff, A., and Thom, J. (2021). Let Me Ask You This: How Can a Voice Assistant Elicit Explicit User Feedback?. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1-24.
10. Vaccaro, K., **Xiao, Z.**, Hamilton, K., and Karahalios, K. (2021). Contestability for content moderation. *Proceedings of the ACM on human-computer interaction*, 5(CSCW2), 1-28.
11. Li, T. W., **Xiao, Z.**, Goldstein, M. H., Philpott, M. L., and Woodard, B. (2021). Evaluating an Intelligent Sketching Feedback Tool for Scalable Spatial Visualization Skill Training. *In 2021 ASEE Virtual Annual Conference Content Access*.
12. Woodard, B. S., Li, T. W., **Xiao, Z.**, Goldstein, M. H., and Philpott, M. L. (2021). Work in Progress: Spatial Visualization Assessment and Training in the Grainger College of Engineering at the University of Illinois. *In 2021 ASEE Illinois-Indiana Regional Conference*.
13. Goldstein, M. H., Froiland, J. M., **Xiao, Z.**, Woodard, B. S., Li, T., and Philpott, M. L. (2021). Application of online visual-spatial training to increase visual-spatial ability and growth mindset of engineering students. *Int. J. Eng. Educ*, 37, 1674-1682.
14. Wauck, H., Woodard, B. S., **Xiao, Z.**, Li, T. W., and Bailey, B. P. (2020). A Data-Driven, Player-Centric Approach to Evaluating Spatial Skill Training Games. *In Proceedings of the Annual Symposium on Computer-Human Interaction in Play (CHI Play)* (pp. 349-361). [Honorable Mention]
15. **Xiao, Z.**, Zhou, M. X., Liao, Q. V., Mark, G., Chi, C., Chen, W., and Yang, H. (2020). Tell me about yourself: Using an AI-powered chatbot to conduct conversational surveys with open-ended questions. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 27(3), 1-37.
16. **Xiao, Z.**, Zhou, M. X., Chen, W., Yang, H., and Chi, C. (2020). If I hear you correctly: Building and evaluating interview chatbots with active listening skills. *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-14).
17. **Xiao, Z.**, Ho, P. S., Wang, X., Karahalios, K., and Sundaram, H. (2019). Should we use an abstract comic form to persuade? Experiments with online charitable donation. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1-28.
18. **Xiao, Z.**, Zhou, M. X., and Fu, W. T. (2019). Who should be my teammates: Using a conversational agent to understand individuals and help teaming. *In Proceedings of the 24th International Conference on Intelligent User Interfaces (IUI)* (pp. 437-447).
19. Gao, M. *, **Xiao, Z.** *, Karahalios, K., and Fu, W. T. (2018). To Label or not to Label: The Effect of Stance and Credibility Labels on Readers' Selection and Perception of News Articles. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW), 1-16.
20. Chiu, P. T., Wauck, H., **Xiao, Z.**, Yao, Y., and Fu, W. T. (2018). Supporting spatial skill learning with gesture-based embodied design. *In 23rd International Conference on Intelligent User Interfaces (IUI)* (pp. 67-71).

21. **Xiao, Z.**, Wauck, H., Peng, Z., Ren, H., Zhang, L., Zuo, S., Yao, Y., and Fu, W. T. (2018, March). Cubicle: An adaptive educational gaming platform for training spatial visualization skills. *In 23rd International Conference on Intelligent User Interfaces (IUI)* (pp. 91-101).
22. Wauck, H., **Xiao, Z.**, Chiu, P. T., and Fu, W. T. (2017). Untangling the relationship between spatial skills, game features, and gender in a video game. *In Proceedings of the 22nd International Conference on Intelligent User Interfaces (IUI)* (pp. 125-136).
23. **Xiao, Z.**, Yao, Y., Yen, C. H., Dey, S., Wauck, H., Leake, J. M., Woodard, B., Wolters, A., and Fu, W. T. (2017). A Scalable Online Platform for Evaluating and Training Visuospatial Skills of Engineering Students. *In 2017 ASEE Annual Conference & Exposition*.
24. **Xiao, Z.** (2016). Does Grammatically Gendered Language Have an Impact on Investors' behaviors? Companies with Grammatically Masculine Names Show More Stock Momentum Than Those with Grammatically Feminine Names. *Bachelors dissertation, University of Illinois Urbana-Champaign*.

Posters and Demos:

1. **Xiao, Z.**, Yuan, X., Liao, Q. V., Abdelghani, R., and Oudeyer, P. Y. (2023). Supporting Qualitative Analysis with Large Language Models: Combining Codebook with GPT-3 for Deductive Coding. *In Companion Proceedings of the 28th International Conference on Intelligent User Interfaces (IUI)* (pp. 75-78).
2. Zhou, M. X., Chen, W., **Xiao, Z.**, Yang, H., Chi, T., and Williams, R. (2019). Getting virtually personal: chatbots who actively listen to you and infer your personality. *In Proceedings of the 24th International Conference on Intelligent User Interfaces: Companion (IUI)* (pp. 123-124).
3. Xiao, Z., Zuo, S., Zhao, J., Fu, W. T., Goldstein, M. H., Philpott, M. L., M., Laystorm-Woodard, J., Pool, M., Wolters, A., and Woodard, B. S. (2019). Understanding interrelated growth mind-set and academic participation & performance. *In 2019 ASEE Annual Conference & Exposition*.
4. **Xiao, Z.**, Yao, Y., and Fu, W. T. (2018). An Intelligent Educational Platform for Training Spatial Visualization Skills. *In Proceedings of the 23rd International Conference on Intelligent User Interfaces Companion (IUI)* (pp. 1-2).
5. **Xiao, Z.**, and Bub, K. 2016. Longitudinal Associations between Self-Regulation and Mental Health across Early Childhood to Adolescence. *16th Biennial Meeting of Society for Research on Adolescence (SRA 16)*

INVITED TALKS

1. **Xiao, Z.** (2023) Seeing Us through Machines: Designing and Building AI to Understand Humans. *McGill AI Learnathon*
2. **Xiao, Z.** (2021) Petri: An open-source infrastructure for longitudinal behavioral research in the field. *Center for Social and Behavioral Science: Human Subjects Research Workshop. University of Illinois Urbana-Champaign*.
3. **Xiao, Z.** (2019) Building Real-World Chatbot Interviewers: Lessons from a Wizard-of-Oz Field Study. *Workshop on User-Aware Conversational Agents, Los Angeles, CA, USA*
4. **Xiao, Z.** (2017) A Scalable Online Platform for Evaluating and Training Visuospatial Skills of Engineering Students. *Educational Psychology Brown Bag. University of Illinois Urbana-Champaign*.

SERVICE

Organizing Committee:

- IUI 2023 [Publicity Chair]
- Humen-centric Generative AI @TiiS [Guest Editor]
- Human-Centered Evaluation and Auditing of Language Models @CHI 2024 [Co-Organizer]
- 3rd NLP+HCI Workshop @NACCL 2024 [Co-Organizer]
- Human-Centered Evaluation of Language Technologies @ EMNLP 2024 [Co-Instructor]

Associate Chair:

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|---------------------------------|--------------|
| • CHI 2024 Understanding People | • IUI 2023 |
| • CHI 2021 Late Breaking Works | • WWW 2023 |
| • CSCW 2021 Poster | • FAccT 2023 |
| • CSCW 2022 | |

Reviewer:

- | | |
|---|---|
| • CHI 2020-23 [Outstanding Reviews 22-24] | • ACM Transactions on Interactive Intelligent Systems (TiiS) |
| • UIST 2022 [Outstanding Reviews 2022] | |
| • CSCW 2019-22 | • International Journal of Human-Computer Interaction (IJHCI) |
| • IUI 2017-23 | |
| • CHI PLAY 2018-21 | • Cognitive Systems |
| • ECSCW 2021 | |

Student Volunteer:

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| • CHI 2017 | • CSCW 2020 |
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AWARDS & HONORS

- Microsoft Global Hackathon Award Winner - Responsible AI (2023)
- Teacher Ranked as Excellent (2022)
- Graduate College Conference Participation Awards (2021)
- Harry Triandis Award (2016)
- James E. Spoor Scholarship (2016)