IRENE YE YUAN

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EDUCATION

Aug. 2017 – May 2022 (Expected)
Ph.D. Candidate in Computer Science (HCI), Department of Computer Science and Engineering
University of Minnesota, Minneapolis, MN
Advisor: Lana Yarosh

Sept. 2014 – Aug. 2015
Master of Human Computer Interaction + Design
University of Washington, Seattle, WA

Sept. 2010 – May 2014
B.A. in Computer Science, Mathematics and Physics
St. Olaf College, Northfield, MN

RESEARCH INTERESTS

Human-Computer Interaction, Human-centered AI, Computer-Supported Cooperative Work, Conversational Agents, Data Visualization

PROFESSIONAL EXPERIENCE

Aug. 2017 – Present
Graduate Researcher, GroupLens Lab, University of Minnesota, Minneapolis, MN
Utilize both qualitative (e.g., *interview, participatory design*) and quantitative (e.g., *survey, experiment, log analysis*) to understand how people use current technologies and opportunities for technologies to better support their activities; Design, develop and evaluate new technologies; Communicate study findings in both written reports and oral presentations. Some previous research projects included:

- *Scraped* Reddit discussion data to understand how people leveraged technologies to play board games remotely during the pandemic; Drafted *screener* and recruited participants for *in-depth interviews* to understand their technological practice and the effect on their social experience during the remote game play.
- Employed a *user-centered design* approach to develop an interactive visualization tool for helping designers and non-expert stakeholders understand trade-offs in machine learning models; Evaluated the tool via *online experiment* and *expert interview* to understand the outcome [C.5].
- Conducted a *contextual inquiry* study with different stakeholders to understand the current practices of a community mentorship program, and translated research findings into design directives for new system design and development [C.2];
- Planned and ran a year-long *participatory design* workshop with middle school students to study their online video creation and sharing behaviors; *co-designed* video technologies to better support their roles as content creators [C.3];

Nov. 2016 – Jul. 2017
User Experience Specialist III, LexisNexis, Shanghai, China
Lead designer for cross-platform legal products from user research, ideation, design, testing to release; Collaborated closely with product and engineering teams from different locations throughout the product cycle and facilitated the communications between teams.

Jul. 2016 – Sept. 2016 **Freelance Web Designer & Developer**, Seattle, WA
Collaborated with visual designer to redesign clients' websites experiences, with a focus on information architecture and UX design; Implemented the website re-design, complete the websites setup and maintain the websites; Conducted *usability testing* on the design.

Sept. 2015 – June 2016 **Interaction Designer**, IA Collaborative, Chicago, IL
Collaborated with design researchers and visual designers to create omni-channel solutions and designed user experiences based on user needs and business requirements; Helped interaction design team utilize new prototyping tools by creating tutorials and teaching the team development knowledge.

May 2013 – May 2014 **Undergraduate Researcher**, MSCS Department, St. Olaf College, Northfield, MN
Implemented bundle adjustment algorithm for error minimization in 3D reconstruction process; Conducted series of interviews, heuristic evaluations on web apps developed for professors and students on campus and implemented the design changes based on evaluation results.

PUBLICATIONS

Refereed Journal Articles

[J.1] **Yuan, Y.**, Thompson, S., Watson, K., Chase, A., Senthilkumar, A., Brush, A.J.B. Yarosh, S., 2019. "Speech interface reformulations and voice assistant personification preferences of children and parents." *International Journal of Child-Computer Interaction*. https://doi.org/10.1016/j.ijcci.2019.04.005.

Refereed Conference Full Papers

[C.5] Yu, B., **Yuan, Y.**, Terveen, L., Wu, Z., Forlizzi, J., and Zhu, H. 2020. "Keeping Designers in the Loop: Communicating Inherent Algorithmic Trade-offs Across Multiple Objectives". In *Proceedings of the 2020 ACM Designing Interactive Systems Conference* (DIS '20). ACM, 1245–1257. https://doi.org/10.1145/3357236.3395528.

[C.4] Kawas, S., **Yuan, Y.**, DeWitt, A., Jin, Q., Kirchner, S., Bilger, A., Grantham, E., Kientz, J.A., Tartaro, A., & Yarosh, S. 2020. "Another decade of IDC research: examining and reflecting on values and ethics". In *Proceedings of the Interaction Design and Children Conference* (IDC '20). ACM, 205–215. https://doi.org/10.1145/3392063.3394436.

[C.3] McRoberts, S., **Yuan, Y.**, Watson, K., & Yarosh, S. "Behind the Scenes: Design, Collaboration, and Video Creation with Youth." In *Proceedings of the 18th ACM Conference on Interaction Design and Children* (IDC '19). ACM, 173-184, https://doi.org/10.1145/3311927.3323134.

[C.2] **Yuan, Y.**, and Yarosh, S. 2019. "Beyond Tutoring: Opportunities for Intergenerational Mentorship at a Community Level." In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (CHI '19). ACM, 449:1–449:14, https://doi.org/10.1145/3290605.3300679. **Honorable Mention Award**

[C.1] Yarosh, S., Thompson, S., Watson, K., Chase, A., Senthilkumar, A., **Yuan, Y.**, Brush, A.J.B. 2018. "Children Asking Questions: Speech Interface Reformulations and Personification Preferences." In *Proceedings of the 17th ACM Conference on Interaction Design and Children* (IDC '18). ACM, 300-312, https://doi.org/10.1145/3202185.3202207. **Best Paper Award**

Non-Refereed Papers & Posters

[P.3] Jin, Q., Liu, Y., **Yuan, Y.**, Yarosh, S., & Suma Rosenberg, E. 2020. "VWorld: an Immersive VR System for Learning Programming." In Proceedings of the Interaction Design and Children (IDC '20). ACM. https://doi.org/10.1145/3397617.3397843.

[P.2] Bonde, L., Brumfield, A., **Yuan, Y.**, 2014. "Error Minimization in 3-Dimensional Model Reconstruction Using Sparse Bundle Adjustment and the Levenberg-Marquardt Algorithm on Stereo Camera Pairs." Midwest Instruction and Computing Symposium 2014

[P.1] Knapp, K., Jacobson, P., **Yuan, Y.**, 2014. "The Coefficient of Power Series of esin(x)." Undergraduate Student Poster Session at 2014 Joint Mathematics Meetings

PROFESSIONAL SKILLS

Programming Languages

C/C++, C#, HTML&CSS, Java, JavaScript, Matlab, Python, R, SQL

Platforms and Tools

Research & Analysis: Jupyter notebook, MySQL, Pandas, Qualtrics, RStudio, SPSS, Excel, Tableau, Genism
Design: Adobe Creative Suite (Photoshop, Illustrator, Premiere, etc.), Axure, Figma, Framer, Sketch
Prototyping: Android Studio, Arduino, D3.js, Processing / p5.js, React, Unity

Research & Design

User Research: A/B Testing, Benchmarking, Contextual Inquiry, Experiment Design, Focus Group, Interview, Observation, Participatory Design, Survey, Usability Testing
Design: Prototyping (Low-High Fidelity), Persona, Storyboarding, Wireframing

TEACHING EXPERIENCE

Jan. 2018 – May 2018 **Teaching Assistant**, Department of Computer Science and Engineering, University of Minnesota
Algorithm & Data Structure

Sept. 2012 – Dec. 2013 **Teaching Assistant,** MSCS Department and Physics Department, St. Olaf College
Principles of Physics I Lab, Principles of Physics II Lab, Theory of Computation

Sept. 2012 – May 2013 **Academic Assistant,** Academic Support Center, St. Olaf College
Physics and Mathematics

PROFESSIONAL & COMMUNITY SERVICE

2018 - Current **ACM CHI, CSCW, IDC Conference Reviewer**
Jun. 2020 **Student Volunteer**, ACM IDC 2020
Nov. 2017 – May 2018 **Graduate Mentor**, WISE Undergraduate-Graduate Mentor Program
Apr. 2015 **Student Volunteer**, ACM CHI 2015