RUOXI (ANNA) SHANG

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Education

UNIVERSITY OF WASHINGTON

Ph.D. Student in Human-centered Design and Engineering
Sep 2020 – Present

M.S. in Human-centered Design and Engineering
Jun 2023

UNIVERSITY OF CALIFORNIA, BERKELEY

B.A. in Applied Mathematics, Statistics (Concentration: Data Science)
May 2020

Research Interests

Human-AI Interaction, Human-centered Explainability, Trust, Generative AI, Data science and Programming Support, Data Visualization, Feedback & Research Assistance

Research & Work Experience

UNIVERSITY OF WASHINGTON

Research Assistant
Sep 2020 – Present
Advisors: Gary Hsieh, Chirag Shah

- Led research on human-AI interaction across multiple projects, investigating user trust and engagement with AI systems, evaluating language models' capabilities in data science tasks, and studying AI-enhanced feedback systems in educational and academic contexts.

MIRCOSOFT RESEARCH

Research Intern in the VIDA team
Advisors: Steven Drucker, Bongshin Lee, Dave Brown
Jun 2023 – Sep 2023

- Led foundational research on LLM-assisted data analysis, drawing from teaching and decision-making frameworks while prototyping AI systems to help novices operationalize their data-driven decision-making processes.
- Conducted a user study to assess data analysts' understanding and verification of analyses output generated by state-of-the-art LLMs.

TRUERA

User Research Intern
Mentors: Mantas Lilis, Joshua Noble, Justin Lawyer
Jul 2022 – Sep 2022

- Designed and conducted an interview study to understand how professional data scientists in the field approach performance debugging of Machine Learning (ML) classification and regression models.
- Collaborated with designers and ML engineers to build guided workflows that streamline the diagnostic process for ML models.

Publications

In Submission

Shang, R., Zhong, R., Pang, R. Y., McDonald, D. W., Shah, C., & Hsieh, G. Synthetic Diversity: How Researchers Perceive and Engage with LLM-Generated Diverse Research Feedback. In submission to CHI 2025.
Shang, R., Mallari, K., Au Yeong, W. B., Yasuhara, K., Tang, A., & Hsieh, G.. Rethinking Teaching Evaluation Reports: Designing AI-transformed Student Feedback for Instructor Engagement. In revision for CSCW 2025.

Peer-reviewed publications

Ken Gu, **Ruoxi Shang**, Ruien Jiang, Keying Kuang, Richard-John Lin, Donghe Lyu, Yue Mao, Youran Pan, Teng Wu, Jiaqian Yu, Yikun Zhang, Tianmai M. Zhang, Lanyi Zhu, Mike A Merrill, Jeffrey Heer, Tim Althoff. BLADE: Benchmarking Language Model Agents for Data-Driven Science. In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP 2024).
Ruoxi Shang, Gary Hsieh, Chirag Shah. Trusting your AI Agent Emotionally and Cognitively: Development and Validation of a Semantic Differential Scale for AI Trust. In Proceedings of the 2024 AAAI/ACM Conference on AI, Ethics, and Society (AIES 2024).

Ken Gu, **Ruoxi Shang**, Tim Althoff, Chenglong Wang, Steven M. Drucker. How Do Analysts Understand and Verify AI-Assisted Data Analyses? In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24).
Donghoon Shin, Soomin Kim, **Ruoxi Shang**, Joonhwan Lee, and Gary Hsieh. IntroBot: Exploring the Use of Chatbot-assisted Familiarization in Online Collaborative Groups. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23).
Ruoxi Shang, Kevin Feng, Chirag Shah. Understanding Lay Users' Needs of Counterfactual Explanations for Everyday Recommendations. 2022. ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT 2022).
De Clercq, Djavan, **Ruoxi Shang** et al. Machine learning powered software for accurate prediction of biogas production: A case study on industrial-scale Chinese production data. Journal of Cleaner Production, 218 (2019): 390-399.
De Clercq, Djavan, Zongguo Wen, Fan Fei, Luis Caicedo, Kai Yuan, and **Ruoxi Shang**. Interpretable machine learning for predicting biomethane production in industrial-scale anaerobic co-digestion. Science of The Total Environment (2019): 134574.
Heng Zhou, Zhijun Fang, Yongbin Gao, Bo Huang, Cengsi Zhong, **Ruoxi Shang**. Feature fusion network based on attention mechanism for 3D semantic segmentation of point clouds. Pattern Recognition Letters 133 (2020): 327-333.

Short Papers & Posters

Tianying Chen, **Ruoxi Shang**, Steven Moore, Laura Dabbish. Leveraging Generative AI and Human Collaboration in Peer-Feedback. 2023. Generative AI and HCI workshop in the ACM Conference on Human Factors in Computing Systems (CHI 2023).

Ather Sharif, Ploypilin Pruekcharoen, Thrisha Ramesh, **Ruoxi Shang**, Spencer Williams, Gary Hsieh. "What's going on in Accessibility Research?" Frequencies and Trends of Disability Categories and Research Domains in Publications at ASSETS. 2022. In The 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22). Association for Computing Machinery, New York, NY, USA.

Ruoxi Shang, Zile Xiao, Jenna Frens, and Cecilia Aragon. Giving and Receiving: Reciprocal Review Exchange in Online Fanfiction Communities. 2021. *Companion Publication of the 2021 Conference on Computer Supported Cooperative Work and Social Computing* (pp. 171-174).

Niamh Froelich, Arthur Liu, **Ruoxi Shang**, Zile Xiao, Travis Neils, Jenna Frens, and Cecilia Aragon. Reciprocity in Reviewing on Fanfiction.net. 2021. *International Conference on Human-Computer Interaction*. Springer, Cham, 2021.

Ruoxi Shang, A. Zoglauer, Rapid gamma-ray burst localization aboard the e-Astrogam satellite using a 3D convolutional neural network. Poster presented at Bay Area Machine Learning Symposium 2019, Oct 16, San Francisco, CA.

Academic Services

2024 Reviewer, ACM CHI, ACM CSCW, ACM DIS

2023 Reviewer, AIEDLLM1 (Empowering Education with LLMs)

Media Coverage

One year later, ChatGPT is still alive and kicking. TechCrunch. Kyle Wiggers. Nov 30, 2023.
What Color Is Cybersecurity? Forbes News. Sean Lawson. Nov 14, 2019.

Awards

AIES Student Travel Award sponsored by NSF (2024)
ACM Travel Grant for FAccT 2022 (2022)
HCDE Doctoral Student Research Grant, University of Washington (2022)
Edward Frank Kraft Scholarship, University of California, Berkeley (2017)

Teaching & Mentoring Experience

Co-instructor & Project Mentor for HCDE 518 User-Centered Design Class Project Teams Fall 2022 and 2023, HCDE 410 Human-Data Interaction Spring 2023
TA and Project Mentor for HCDE Undergraduate Capstone Project teams Winter & Spring 2022
TA for HCDE 411 Data Visualization Fall 2021
TA for HCDE MS Capstone Project Class Spring 2021

Skills

Programming & Data Science: Python, R, JavaScript, TypeScript, JupyterLab Extensions, React, HTML, CSS, Java, SQL, Data Visualization, Machine Learning, Deep Learning, NLP
Quantitative Methods: Experimental Design, Survey Design, Statistical Analysis
Qualitative Methods: Interview, Survey, Thematic Analysis, Grounded Theory, Usability Testing
Design: Figma, Wireframing, Prototyping, User Journey Mapping