Ruyuan Wan

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RESEARCH AREAS

Ruyuan's research explores Human-Computer Interaction (HCI), Natural Language Processing (NLP), and Social Computing, focusing on communication dynamics in human-human and human-AI interactions, such as annotation disagreement in subjective data, logic fallacy detection in misinformation narratives, and user adaptation behaviors in digital social platforms.

EDUCATION

2024 - 2028 Exp. **Pennsylvania State University**, University Park, PA
Ph.D. Student in Informatics
Advisor: Ting-Hao 'Kenneth' Huang

2022 - 2024 **University of Notre Dame**, Notre Dame, IN
M.S. Computer Science and Engineering
Advisor: Karla Badillo-Urquiola

2016 - 2022 **University of Minnesota**, Minneapolis, MN
M.A. in Linguistics & M.S. in Data Science
Advisor: Lana Yarosh, Dongyeop Kang
B.A. in Statistics

AWARDS & HONORS

2025-2027	NSF Research Trainee–Linguistic Diversity Across the Lifespan: Transforming Training to Advance Human-Technology Interaction
2025	Pennsylvania State University IST Rising Star Award ($500)
2025	CHI 2025 Best Paper Honorable Mention Award [C.4]
2024-2025	ACM CHI Special Recognition for Outstanding Reviews
2024	EMNLP Outstanding Reviewer
2024	Pennsylvania State University Jordan Rednor Award ($3000)
2024	Notre Dame-IBM Tech Ethics Hackathon – Second Place ($2000)
2024	University of Notre Dame Department Service Award
2023 - 2024	University of Notre Dame Lucy Graduate Scholar ($3000)
2023	University of Notre Dame CSE Best Design Poster Honorable Mention Award
2023	AAAI 2023 Student Scholarship ($1000)
2021	University of Minnesota Fellowship from the Institution of Linguistics ($2000)
2020	CSCW 2020 Outstanding Poster Recognition Award [P.1]
2016 – 2018	University of Minnesota Culture Corps Award ($500)
2018	University of Minnesota Linh's Undergrad Internship Award ($2000)
2016	University of Minnesota Dean's List Award

PEER-REVIEWED CONFERENCE PAPERS

C.5 **Ruyuan Wan**, Lingbo Tong, Tiffany Knearem, Toby Jia-Jun Li, Ting-Hao 'Kenneth' Huang, Qunfang Wu. "Hashtag Re-Appropriation for Audience Control on Recommendation-Driven Social Media Xiaohongshu (rednote)." *In Proceedings of the CHI Conference on Human Factors in Computing Systems, pp. 1-35 (CHI 2025).*
Best Paper Honorable Mention Award.

C.4 Min-Hsuan Yeh, **Ruyuan Wan**, Ting-Hao 'Kenneth' Huang. "CoCoLoFa: A Dataset of News Comments with Common Logical Fallacies Written by LLM-Assisted Crowds." *In Proceedings of Conference on Empirical Methods in Natural Language Processing (EMNLP 2024).*

C.3 Zainab Agha, Jinkyung Park, **Ruyuan Wan**, Naima Samreen Ali, Yiwei Wang, Dominic Difranzo, Karla Badillo-Urquiola, Pamela J. Wisniewski. "Tricky vs. Transparent: Towards an Ecologically Valid and Safe Approach for Evaluating Online Safety Nudges for Teens." *In Proceedings of the CHI Conference on Human Factors in Computing Systems, pp. 1-20 (CHI 2024).*

C.2 Oghenemaro Anuyah, **Ruyuan Wan**, Cornelius Adejoro, Tom Yeh, Ronald Metoyer, Karla Badillo-Urquiola. "Cultural Considerations in AI Systems for the Global South: A Systematic Review." *In Proceedings of the 4th African Human Computer Interaction Conference, pp. 125-134 (AfriCHI 2023).*

C.1 **Ruyuan Wan**, Jaehyung Kim, Dongyeop Kang. "Everyone's Voice Matters: Quantifying Annotation Disagreement Using Demographic Information." *In Proceedings of the AAAI Conference on Artificial Intelligence, vol. 37, no. 12, pp. 14523-14530 (AAAI 2023).*

PEER-REVIEWED POSTERS, WORKSHOP PAPERS

P.5 **Ruyuan Wan**, Simret Gebreegziabher, Toby Jia-Jun Li, Karla Badillo-Urquiola. "CoCo Matrix: Taxonomy of Cognitive Contributions in Co-writing with Intelligent Agents." *In Proceedings of the 16th Conference on Creativity & Cognition (C&C 2024).*

P.4 **Ruyuan Wan**, Jie Gao. "Leveraging the Strengths of Qualitative Analysis to Improve Data Annotation." *CHI 2024 Workshop on Large Language Models as Research Tools*

P.3 London Lowmanstone, **Ruyuan Wan**, Risako Owan, Jaehyung Kim, Dongyeop Kang. "Annotation Imputation to Individualize Predictions: Initial Studies on Distribution Dynamics and Model Predictions." *In Proceedings of the Second Workshop on Perspectivist Approaches to NLP, ECAI 2023*

P.2 **Ruyuan Wan**, Naome Etori, Karla Badillo-Urquiola, Dongyeop Kang. "User or Labor: An Interaction Framework for Human-Machine Relationships in NLP." *In Proceedings of the Fourth Workshop on Data Science with Human-in-the-Loop (Language Advances), EMNLP 2022*

P.1 **Ruyuan Wan**, Zachary Levonian, and Svetlana Yarosh. "How much is a "like" worth? Engagement and Retention in an Online Health Community." *In Companion Publication of the 2020 Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2020).*
Outstanding Poster Recognition Award.

PROFESSIONAL EXPERIENCE

Aug 2025 - Jul 2026 **Visiting Researcher**, Cornell University. Ithaca, NY, US
Working with my advisor Prof. Ting-Hao 'Kenneth' Huang in the Department of Information Science during his sabbatical from Penn State University.

May 2025 – Aug 2025 **HCI Research Scientist Intern**, IBM Thomas J. Watson Research Center. Yorktown, NY, US
Conducted interviews and systematic literature reviews to study how AI practitioners create, develop and evaluate red teaming datasets.

Oct 2021 – Jan 2022 **NLP Research Intern**, Samsung Research America Inc. Mountain View, CA, US
Reviewed academic papers, reproduced baseline models, and developed a state-of-the-art coreference resolution model for long dialogues.

July 2021 – Sept 2021 **Data Science Intern**, Tencent. Shenzhen, China
Processed data using SQL and Spark, applied XGBoost for churn rate prediction, and developed a BERT-based recommendation system integrating users' sequential behavior and social networks.

June 2020 – Aug 2020 **Data Science Intern**, Ecolab. Eagan, MN, US
Built an end-to-end ML pipeline with Microsoft Azure and developed LSTM models for inventory usage forecasting, improving prediction accuracy by 10%.

July 2019 – Aug 2019 **Data Science Intern**, Michael J Fox Foundation for Parkinson's Research. Manhattan, NY, US
Conducted statistical analysis and survival analysis in R to uncover patterns among study participants and provided recommendations for improving study participation.

TEACHING EXPERIENCE

2024 SP, 2023 SP	**CSE 40175 Ethical and Professional Issues**, University of Notre Dame
2023 FA	**CSE 10101 Elements of Computing**, University of Notre Dame
2022 FA	**CSE 20110 Discrete Mathematics**, University of Notre Dame
2021 SP	**MSBA 6420 Predictive Analytics**, University of Minnesota
2020 SP	**CSCI 5521 Introduction to Machine Learning**, University of Minnesota
2021 SP, 2020 FA, 2019 SP, 2019 FA, 2018 FA	**CSCI 2011 Discrete Mathematics**, University of Minnesota
2018 SP	**STAT 3011 Introduction to Statistical Analysis**, University of Minnesota

SERVICE

Associate Chair	CHI 2025 Late Breaking Work, CSCW 2024 Paper Track, CSCW 2023 Poster Track
Committee Member	The 12th Mid-Atlantic Student Colloquium on Speech, Language and Learning ND CSE DEI Committee, 2023 – 2024 The Seventh Workshop on Online Abuse and Harms at ACL 2023 The Second Workshop on Intelligent and Interactive Writing Assistants at CHI 2023
Workshop Organizer	ACL 2025 4th Workshop on NLP for Positive Impact NeurIPS 2024 Workshop on Pluralistic Alignment CSCW 2023 Workshop on Community-driven AI
Session Chair	Alt-FAccT 2025 Paper Session CHI 2025 Session on Social Media, Online Community, Sensemaking CHI 2024 Session on Politics of Datasets
Reviewer	ACL ARR 2024, AAAI 2024, C&C 2024 – 2025, CSCW 2023 – 2025, CHI 2022 – 2025, DIS 2023 – 2024, FAccT 2023 – 2025, ICLR 2024, IJCAI 2024, ICML 2024 – 2025, LREC-COLING 2024, NeurIPS 2023
Student Volunteer	CHI 2023 – 2024, CSCW 2023, FAccT 2023, AAAI 2023, EMNLP 2022, ACL 2022
Research Mentor	Caelan Templeton, Darwin Estrella Vicente – ND CSE Undergrad Summer Enrichment Program 2024 Naol Taye – ACL Year-Round Mentorship Program
Social Chair	Graduate Society of Women Engineers (SWE) 2023 – 2024

INVITED TALKS

T.1 **User Agency and Creative Adaptation on Algorithm-Driven Platforms**
Invited talk at Microsoft AI Development Acceleration Program
Host: Somya Sharma Chatterjee
August 22, 2025

MEDIA COVERAGE

M.1 **Image Synthesis Has an SEO Problem**
Metaphysic Blog, Martin Anderson, January 24, 2023

M.2 **M.S. student receives Outstanding Poster recognition at CSCW 2020**
UMN CSE News, Crystal King, November 3, 2020

GRANTS

2025	UPAC Travel Fund ($500)
2024 – 2025	IST Travel Award ($2000)
December 2024	NeurIPS Travel Grant Sponsored by OpenAI ($1100)
November 2023	WiNLP Workshop at EMNLP Travel Grant ($500)
June 2023	ACM Travel Grant for FAccT 2023 ($450)
February 2023	Nanovic Institute For European Studies Graduate Grant ($2000)
2023 – 2024	CSE Career Development Grant ($750)
2023 – 2024	Writing Accountability Group Grant ($480)
2022 – 2024	Notebaert Professional Development Fund ($1500)
2022 – 2024	Graduate Student Government Conference Presentation Grant ($680)
2019	Research Stipend from the Weisman Art Museum ($200)

SKILLS

Programming Languages: Python, R, SQL, JavaScript, HTML, and others

NLP, Machine Learning, and Statistics: GPT, Hugging Face, TensorFlow, PyTorch, Spacy, Gensim, NLTK, BERT-based models, transformer models, classification, clustering, regression, hypothesis testing, Bayesian analysis, data visualization, and more

Qualitative Analysis: Thematic analysis, grounded theory, interviews, formative study, persona analysis, participatory design, and more

Interface Design, Prototyping, & Development: Figma, Photoshop, Sketch, storyboarding, React, and more