

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

AWARDS & HONORS

2025-2027	NSF Research Traineeship Fellow—Linguistic Diversity Across the Lifespan : Transforming Training to Advance Human-Technology Interaction (#2125865)
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.6 Adriana Alvarado Garcia*, **Ruyuan Wan***, Ozioma Collins Oguine, Karla Badillo-Urquiola. "Red Teaming LLMs as Socio-Technical Practice: From Exploration and Data Creation to Evaluation." *Under review at CHI 2026*.
- Q C.5 **Ruyuan Wan***, Lingbo Tong*, Tiffany Kneareem, Toby Jia-Jun Li, Ting-Hao 'Kenneth' Huang, Qunfang Wu. "Hashtag Re-Appropriation for Audience Control on Recommendation-Driven Social Media Xiaohongshu (red-note)." 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**, Haonan Wang, Ting-Hao ‘Kenneth’ Huang, Jie Gao. “From Noise to Nuance: Enriching Subjective Data Interpretation through Qualitative Analysis.” *In Proceedings of the Fourth Workshop on Bridging HCI and NLP (EMNLP 2025)*.
- P.4 **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.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)*
- Q. 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 22 interviews with AI practitioners and a systematic literature review 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

Research Mentor	Caelan Templeton, Darwin Estrella Vicente – ND CSE Undergrad Summer Enrichment Program 2024 Naol Taye – ACL Year-Round Mentorship Program
Workshop Organizer	ACL 2025 4th Workshop on NLP for Positive Impact NeurIPS 2024 Workshop on Pluralistic Alignment CSCW 2023 Workshop on Community-driven AI
Associate Chair	CHI 2025 Late Breaking Work, CSCW 2024 Paper Track, CSCW 2023 Poster Track
Session Chair	Alt-FAccT 2025 Paper Session CHI 2025 Session on Social Media, Online Community, Sensemaking CHI 2024 Session on Politics of Datasets
Social Chair	Graduate Society of Women Engineers (SWE) 2023 – 2024
Reviewer	ACL ARR 2024 – 2025, AAAI 2024, C&C 2024 – 2025, CSCW 2023 – 2025, CHI 2022 – 2026, DIS 2023 – 2024, FAccT 2023 – 2025, ICLR 2024, IJCAI 2024, ICML 2024 – 2025, LREC-COLING 2024, NeurIPS 2023
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
Student Volunteer	CHI 2023 – 2024, CSCW 2023, FAccT 2023, AAAI 2023, EMNLP 2022, ACL 2022

INVITED TALKS

T.2 **Creative Communication under Constraints: Constructing Pluralistic Meanings in AI-Mediated Spaces**
Invited talk at the University of Chicago HCI/NLP Seminars
Host: Jingchao Fang
November 04, 2025

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 **Φ IST researchers well-represented at international AI conference**
PSU News, Mary Fetzer, December 19, 2025
- M.2 **Φ Image Synthesis Has an SEO Problem**
Metaphysic Blog, Martin Anderson, January 24, 2023
- M.3 **Φ M.S. student receives Outstanding Poster recognition at CSCW 2020**
UMN CSE News, Crystal King, November 3, 2020

GRANTS

2025	Center for Language Science Pilot Funding (\$1000)
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