

RESEARCH INTERESTS

Human-AI interaction, explainable AI, human-centered AI, computational social science.

EDUCATION

Purdue University

Ph.D. in Computer Science, GPA: 3.93/4.00

West Lafayette, IN, USA

Aug 2019 – present

Peking University

B.S. in Psychology, GPA: 3.51/4.00

Beijing, China

Sep 2016 – Jun 2019

Peking University

B.S. in Intelligence Science and Technology, GPA: 3.65/4.00

Beijing, China

Sep 2015 – Jun 2019

– Thesis: “Analysis of MOOC Forum Data towards AI Support”

PUBLICATIONS

1. **Xinru Wang**, Ming Yin. Are Explanations Helpful? A Comparative Study of the Effects of Explanations in AI-Assisted Decision-Making. *IUI 2021*.
2. **Xinru Wang**, Ming Yin. Effects of Explanations in AI-Assisted Decision Making: Principles and Comparisons. *ACM Transactions on Interactive Intelligent Systems (TiiS)*, 2022
3. **Xinru Wang**, Zhuoran Lu, Ming Yin. Will You Accept the AI Recommendation? Predicting Human Behavior in AI-Assisted Decision Making. *WWW 2022*.
4. **Xinru Wang**, Ming Yin. Watch Out For Updates: Understanding the Effects of Model Explanation Updates in AI-Assisted Decision Making. *CHI 2023*.
5. Shuai Ma, Ying Lei, **Xinru Wang**, Chengbo Zheng, Chuhan Shi, Ming Yin, Xiaojuan Ma. Who Should I Trust: AI or Myself? Leveraging Human and AI Correctness Likelihood to Promote Appropriate Trust in AI-Assisted Decision-Making. *CHI 2023*.
6. **Xinru Wang**, Chen Liang, Ming Yin. The Effect of AI Decision Aids on Human Decision Fairness: A Case Study of Bidding on Airbnb. *Under review, title modified for anonymity*.

RESEARCH EXPERIENCE

Purdue University | Department of Computer Science

Research Assistant

West Lafayette, IN, USA

Jun 2020 – present

- Advisor: Ming Yin, Assistant Professor
- Conducted a randomized human-subject experiment to evaluate whether four types of model-agnostic explainable AI methods satisfy three desirable properties of ideal AI explanations on two types of decision-making tasks where people perceive themselves as having different levels of prior knowledge in.
- Proposed a space of three-component models (i.e. inference + utility + selection) that resemble human behavior in the setting of AI-assisted decision making.
- Conducted a human-subject experiment to study how changes in the AI explanations impact people’s perceptions and usage of the model. Analyzed underlying mechanisms using structural equation modeling.

- Title: Modeling Bi-directional Trust in Semi-autonomous Vehicles for Improved System Performance
- Advisor: Lionel Robert, Associate Professor
- Extracted reaction time and eye-gaze monitoring data from a raw dataset.
- Analyzed data to investigate the correlation between trust behavior, trust, and secondary task performance of subjects. Implemented classic classification and regression methods on the dataset for trust modeling.

WORK EXPERIENCE

Kendall Square Capital | Technology Department

Machine Learning Intern

Beijing, China

Jan 2019 – Apr 2019

DiDi | Department of Smart Transportation

Machine Learning Intern

Beijing, China

Sep 2018 – Jan 2019

TEACHING

- **Teaching Assistant** at Purdue University Fall 2019, Spring 2020, Fall 2022
 - Python Programming (CS38001)*
 - Artificial Intelligence (CS471)*
 - Introduction to Data Science (CS242)*

SCHOLARSHIPS AND AWARDS

- Academic Excellence Award, Peking University (top 15%) 2015 – 2016
- May 4th Scholarship, Peking University 2015 – 2016
- Academic Excellence Award, Peking University (top 10%) 2017 – 2018
- Fei-Xun Scholarship, Peking University 2017 – 2018

LEADERSHIP AND SERVICE

- **Program Committee**
 - CHI workshop on human-centered XAI: 2022*
- **Conference Reviewer**
 - ACM Conference on Human Factors in Computing Systems (CHI): 2023*
- **Journal Reviewer**
 - ACM Transactions on Interactive Intelligent Systems (TiiS)*
- **Invited Attendee**
 - MIDAS Future Leaders Summit, University of Michigan, 2022*
- **Student Volunteer**
 - ACM SIGIR Conference: 2018*

SKILLS

- **Programming Languages:** Python, R, HTML/CSS/JavaScript, SQL, MATLAB, C/C++, Java
- **Toolkits:** Pandas, Numpy, sklearn, Meteor

LANGUAGES

- **English:** GRE 162+170+3.5, TOEFL 111
- **Chinese:** Native speaker
- **French:** Fresh learner