Xinru Wang

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Research Interests

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

Education

Purdue University — West Lafayette, IN, USA
Ph.D. in Computer Science, GPA: 3.93/4.00 — Aug 2019 – present

Peking University — Beijing, China
B.S. in Psychology, GPA: 3.51/4.00 — Sep 2016 – Jun 2019

Peking University — Beijing, China
B.S. in Intelligence Science and Technology, GPA: 3.65/4.00 — 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 Effects of AI Biases and Explanations on Human Decision Fairness: A Case Study of Bidding in Rental Housing Markets. *IJCAI 2023*.

Research Experience

Purdue University | Department of Computer Science — West Lafayette, IN, USA
Research Assistant — 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.

University of Michigan | School of Information Ann Arbor, MI, USA
Summer Research Intern Jul 2018 – Sep 2018

- Title: Modeling Bi-directional Trust in Semi-autonomous Vehicles for Improved System Performance
- Advisor: Lionel Robert, Associate Professor

Work Experience

Megagon Labs | Human-In-The-Loop Team Mountain View, CA
Research Intern May 2023 – Aug 2023

Kendall Square Capital | Technology Department Beijing, China
Machine Learning Intern Jan 2019 – Apr 2019

DiDi | Department of Smart Transportation Beijing, China
Machine Learning Intern Sep 2018 – Jan 2019

Teaching

- **Teaching Assistant** at Purdue University Fall 2019, Spring 2020, Fall 2022, Spring 2023
  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
- Graduate Teaching Award, Purdue University Department of Computer Science Spring 2023

Leadership and Service

- **Program Committee**
  CHI HCXAI workshop 2022 & 2023, FAccT 2023
- **Reviewer**
  TiiS, CHI 2023, CHI 2023 Late-Breaking Work
- **Invited Attendee**
  MIDAS Future Leaders Summit, University of Michigan, 2022
- **Student Volunteer**
  SIGIR 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