

EDUCATION

Purdue University <i>Ph.D. in Human AI-interaction, Department of Computer Science 3.96/4.0</i>	West Lafayette, IN Jan. 2020 – Present
Purdue University <i>M.S. in Computer Science 3.93/4.0 (Incomplete, transferred to Ph.D.)</i>	West Lafayette, IN Jan. 2019 – Dec. 2019
Purdue University <i>B.S. in Software Engineering Track, Department of Computer Science 3.92/4.0</i>	West Lafayette, IN Aug. 2015 – Dec. 2018

SKILLS

Research Skills: Human-AI Interaction, Crowdsourcing and Human Computation, Fairness in Artificial Intelligence, Applied Artificial Intelligence, Data Label Aggregation
Programming Languages: Python, C, JavaScript, Java, HTML/CSS, R
Machine Learning Tools: scikit-learn, Pandas, NumPy
Tools & Platforms: Meteor.js, Git, MongoDB, Amazon Mechanical Turk, Android SDK
Soft Skills: Leadership, Teamwork, Time Management, Problem-Solving, Adaptability, Communication

PUBLICATIONS

Merik Altug Gemalmaz, Ming Yin. “An Investigation of Decision Subjects’ Interaction with and Perceived Fairness of Daily Updated AI Managers” (*Work In Progress*)
Merik Altug Gemalmaz, Ming Yin. “Understanding Decision Subjects’ Engagement with and Perceived Fairness of AI Models When Opportunities of Qualification Improvement Exist” (*Under Review*)
Merik Altug Gemalmaz, Ming Yin. “Understanding Decision Subjects’ Fairness Perceptions and Retention in Repeated Interactions with AI-Based Decision Systems.” *Proceedings of the 5th AAI/ACM Conference on AI, Ethics, and Society (AIES)*, Oxford, UK, August 2022. DOI: 10.1145/3514094.3534201
Merik Altug Gemalmaz, Ming Yin. “Accounting for Confirmation Bias in Crowdsourced Label Aggregation.” *Proceedings of the 30th International Joint Conference on Artificial Intelligence (IJCAI)*, Online, August 2021. DOI: 10.24963/ijcai.2021/238

RESEARCH EXPERIENCE

Exploring Fairness in Algorithmic Management <i>Purdue University</i>	Current
<ul style="list-style-type: none"> Investigating gig workers’ behavior toward the fairness of AI models in managerial roles when establishments use Algorithmic Management to assign jobs to workers. 	
Studying AI Fairness on Borrowers’ Credit Improvement <i>Purdue University</i>	Sep. 2022 – Dec. 2023
<ul style="list-style-type: none"> Conducted human-subject experiments to evaluate how AI fairness in credit approval impacts borrowers’ engagement and credit improvement behavior. Simulated borrower behavior using a Markov Decision Process to estimate AI model parameters; conducted experiments and performed regression analysis on collected real-world data to analyze borrower behavior. 	
Investigating AI Fairness on Borrowers’ Engagement <i>Purdue University</i>	Mar. 2021 – Sep. 2022
<ul style="list-style-type: none"> Performed human-subject experiments to examine how borrowers’ repeated interactions with an AI-based credit approval system influenced their perceptions of fairness and retention decisions with the AI model. 	
Data Bias Mitigation Algorithm <i>Purdue University</i>	Mar. 2020 – Mar. 2021
<ul style="list-style-type: none"> Developed an algorithm to mitigate cognitive biases in crowdsourced data annotations for AI models, achieving over 10% reduction in bias compared to existing baselines. Leveraged probabilistic graphical models to model annotator bias and used the Expectation-Maximization algorithm to infer ground-truth annotations. 	

WORK EXPERIENCE

Graduate Teaching Assistant, Purdue University Data Mining	Current Fall 2021, Fall 2024
Systems Programming	Spring 2019, Spring 2020, Fall 2020, Spring 2021
Computer Architecture	Fall 2019, Summer 2020, Summer 2021
Research Assistant, Purdue University	Jan. 2022 – May. 2024
Undergraduate Teaching Assistant, Purdue University	Jan. 2018 – Dec. 2018
Systems Programming	Spring 2018, Fall 2018
Operating Systems	Summer 2018

PROJECTS

Multiple Online Experiments on Amazon Mechanical Turk

Spring 2020 – Present

Purdue University

- Developed and deployed web applications for human-subject experiments using JavaScript and the **Meteor** framework.
- Managed back-end databases with **MongoDB** and hosted applications on Purdue's servers.
- Implemented responsive front-end interfaces using HTML and CSS.

SELECT COURSES

Graduate Courses: Data Mining (A), Algorithm Design, Analysis, And Implementation (A+), Statistical Machine Learning (A-), Simulation And Modeling Of Computer Systems (A), Operating Systems (A)

Undergraduate Courses: Software Engr Senior Project (A), Software Engineering I (A), Object-Oriented Programming (A), Programming In C (A+), Foundations Of Computer Science (A-)

HONORS AND AWARDS

Recipient of the Graduate Teaching Award, Purdue University	2022
Recipient of the Raymond Boyce Graduate Teaching Award, Purdue University	2020
Graduated with Distinction in the Software Engineering Track, Purdue University	2018
Dean's List and Semester Honors (8 Semesters), Purdue University	Fall 2015 – Fall 2018