

Meng Chen

Curriculum Vitae

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18290 Dunn Rd APT 3106, South Bend, IN 46637

RESEARCH INTERESTS

Human-Computer Interaction (HCI), Human-AI Collaboration, Cognitive Science, Creativity Tool

EDUCATION

2020 - 2024 **University of Notre Dame** Notre Dame, IN
B.S. in Computer Science and Philosophy
Department of Computer Science and Engineering, College of Engineering
GPA: 3.99/4.00
Research Advisor: Toby Jia-Jun Li

PUBLICATIONS

* Indicates equal contribution

- [C.1] **A Bottom-Up End-User Intelligent Assistant Approach to Empower Gig Workers against AI Inequality**
Toby Jia-Jun Li, Yuwen Lu, Jaylexia Clark, **Meng Chen**, Victor Cox, Meng Jiang, Yang Yang, Tamara Kay, Danielle Wood, and Jay Brockman
Proceedings of the 1st Symposium on Human-Computer Interaction for Work (CHI WORK 2022)
- [W.1] **An Empirical Study of Developer Behaviors for Validating and Repairing AI-Generated Code**
Ningzhi Tang*, **Meng Chen***, Zheng Ning, Aakash Bansal, Yu Huang, Collin McMillan, and Toby Jia-Jun Li
13th Annual Workshop at the Intersection of PL and HCI (PLATEAU 2023)

RESEARCH EXPERIENCES

- 2023 **Research Intern** La Jolla, CA
Creativity Lab, UC San Diego
Advisor: Prof. Haijun Xia
- Proposed new interaction framework for human-AI collaboration in creative tasks that build on the premise that LLMs which allow users to explore a space of possible responses, rather than giving a single data point in response to user input.
 - Developed Luminate, a novel interactive system that demonstrates this idea by facilitating the process of exploring the LLM outputs and enabling spatial exploration.
 - Led the user study demonstrating that enabling dimensional exploration of LLM output space enhances the chance of attaining a desired response.
 - Submitted first-authored paper to CHI2024
- 2021- present **Undergraduate Research Assistant** Notre Dame, IN
SaNDwich Lab, University of Notre Dame
Advisor: Prof. Toby Jia-Jun Li
- Bridging inequality in Digitally Mediated Gig Work
- Developed an Android data collector app (CREPE) that utilizes graph query to extract data from research participant's phones

- Analyzed data collected from gig workers to discover inequality in Digitally Mediated Gig Work
Characterizing and Modeling Programmer Behavior Through Eye Tracking
- Leveraging Tobii eye tracker to characterize and study programmer behavior in software engineering tasks
- Design models that predict or mimic the eye movement sequences to support programmers in validating and repairing Copilot-generated codes.

2022

Visiting Research Fellow

Neural and Data Science Lab, Feinstein Institute for Medical Research

Manhasset, NY

Advisor: Prof. Theodoros Zanos

Maternal Heart Rate Variability as a Predictor of Intrapartum Fever

- Identified 4 HRV metrics (i.e., RMSSD, SDNN, and LF) 2-3h prior to fever as early predictors for maternal intrapartum fever and built a logistic regression model to predict necessity of therapeutic intervention (AUC = 0.748)
- Presented in Feinstein Institute for Medical Research Summer Poster Session

Assessment of Physiological Sign Related to Stress using Wearable Device

- Analyzed data collected from Fitbit bands and found 7 granger-causality relationships between heart rate, HRV, and sleep quantity and quality
- Built Structural Equation Modeling to model the causal relations stress level based on heart rate, HRV, and sleep

SCHOLARSHIPS, FELLOWSHIPS & GRANTS

2023	DaVinci Multidisciplinary Grant (\$4,500), Institute for Scholarship in Liberal Arts
2023	Undergraduate Research Funding (\$3,500), Meruelo Family Center for Career Development
2022	Precision Medicine Fellowship (\$5,600), Berthiaume Institute for Precision Health
2020	Stamps (Full tuition-and-fee) Scholarship, Stamps Family Charitable Foundation
2020	Greater China Scholarship, University of Notre Dame

HONORS & AWARDS

2023	Best Insight Award (\$1,000), American Statistical Association (ASA) Data Fest
2022	Best Visualization Award (\$1,000), ASA Data Fest
2022	Junior Inductee, Tau Beta Pi National Engineering Honor Society
2021	Best Presentation Award (\$2,000), Marmon Engineering Innovate-O-Thon
2019	Gold Award, International Genetically Engineered Machine Competition (iGEM)
All Semesters	Dean's Honor List

SERVICE

Reviewer '23 CHI(LBW)

TEACHING

TA	FA23	CSE 30151	Theory of Computing		
Course Tutor	SP23	CSE 20312	Data Structures	CSE 20289	Systems Programming
		CSE 20110	Discrete Math	CSE 20311	Fundamentals of Computing

OUTREACH & LEADERSHIPS

2023 – 2024	VP for Event Planning	Notre Dame Data Science Club
2023 – 2024	President	Philosophy Club of Notre Dame
2023	Scholar Expo Organizing Committee	Stamps Scholar Biannual National Convention
2022 – 2023	Director of Resources	University of Notre Dame International Student Advisory Board
2019 – 2021	Executive Board	7 th & 8 th Conference of Chinese iGEMer Community

SKILLS

Programming C | C++ | Java | Python | HTML/CSS/JavaScript | SQL | MATLAB | R | Unix Shell

UX Skills Qualitative Research | Quantitative Research | Experiment Design

Tools Android Studio | PyTorch | React & node.js | Figma | Adobe AI

Artistic Skills Photography | Procreate | Sketching | Watercolor

Languages English | Chinese