

Charles Chiang

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Research Interests

Human-Computer Interaction (HCI), Human-AI Collaboration, Human-AI Teams, Computer-Mediated Communication (CMC)

Education

University of Notre Dame, Ph.D., Computer Science and Engineering Aug 2022 – May 2027 (expected)
Advisor: Dr. Diego Gómez-Zarà, RINGZ Lab

Northwestern University, B.S., Computer Science Sept 2019 – June 2022
Undergraduate Research: Dr. Noshir Contractor, SONIC Lab

Research Experience

LLM-as-a-Judge for LLM Evaluation May 2024 – Present

- Creating a system to help developers generate criteria to evaluate LLM outputs through the use of LLM-as-a-Judge
- Ran a formative study on LLM experts' criteria generation process
- Presented preliminary study results and prototype system at IBM Research (Yorktown Heights, NY)

Virtual Human-AI Teaming May 2024 – Present

- Part of an effort to create a model of Human-AI Team (HAT) interactions using digital twins for large-scale experimentation (DARPA EMHAT)
- Creating a dynamic LLM-powered world engine to facilitate interactions between digital twins and AI bots in diverse task-oriented environments
- Developing an interface to support deeper walkthrough analysis of generated scenarios

AI-Generated Feedback May 2024 – Present

- Investigating the effectiveness of AI-generated feedback for teams (Slack Workforce Lab)
- Working with an undergraduate student, developing coding skills

FacilitatorBot: A Chatbot Designed to Introduce Strangers Aug 2023 – Present

- Created a prototype Discord bot to facilitate introductory conversations between strangers
- Mentored an undergraduate student in research and coding skills to create and present a poster [reference]

The Evolution of Emojis for Sharing Emotions Aug 2022 – Present

- Investigating the future of emoji and emotion communication systems
- Proposed a system to augment emojis with photos for increased context to positively influence users' self-presentation and well-being (CHI 2023 workshop paper [3])
- Performed a systematic literature review on the landscape of emoji and emotion communication systems (in submission [1])

Publications

[1] **The Evolution of Emojis for Sharing Emotions: A Systematic Review** Sept 2024
Charles Chiang, Diego Gómez-Zarà
In submission, arXiv:2409.17322

[2] **Augmenting Team Diversity and Performance by Enabling Agency and Fairness Criteria in Recommendation Algorithms** Sept 2024
Diego Gómez-Zarà, Victoria Kam, Charles Chiang, Leslie DeChurch, Noshir Contractor

In submission, arXiv:2410.00346

[3] **Photo-Emojis for Human Connections**

April 2023

Charles Chiang, Diego Gómez-Zarà

CHI 2023 Workshop “Integrating Individual and Social Contexts into Self-Reflection Technologies”

Honors and Awards

Remick Fellowship, University of Notre Dame

Aug 2022 - Present

Best Poster, Faculty Choice - FacilitatorBot: A Chatbot Designed to Introduce Strangers, University of Notre Dame

March 2024

Graduate School Professional Development Awards (GSPDA), University of Notre Dame

April 2023

Conference Presentation Grant, University of Notre Dame

April 2023

Service

Graduate Student Board, University of Notre Dame

Aug 2024 - Present

Guest Lecturer, Upward Bound

July 2024

Guided a group of high school students through a computer science project of their choosing

Work Experience

Graduate Teaching Assistant, University of Notre Dame

Aug 2022 - May 2023

CSE 34151 Theory of Computing, CSE 40424 Human-Computer Interaction

Undergraduate Research Assistant, Northwestern University

Dec 2020 - June 2022

SONIC Lab, under Dr. Noshir Contractor