Ray-Yuan (Ray) Chung

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Interests: Agentic AI, Human–AI Collaboration, Responsible AI, Health & Social Technologies

EDUCATION

University of Washington — Seattle, WA
Ph.D. in Health Informatics, Concentration: Human-centered AI — 2023–Present
Committee: Dr. Ari Pollack, Prof. Wanda Pratt, Prof. Xuhai "Orson" Xu

University of Michigan — Ann Arbor, MI
M.P.H. in Behavioral Science, Concentration: Nutrition — 2018–2020
Honors: Global Scholars Award (Full Scholarship)

National Chung-Hsing University — Taichung, Taiwan
B.S. , Concentration: Pre-Med — 2013–2017

PUBLICATIONS

Full Papers

- **Ray-Yuan Chung**, Muying Li, Millie Wu, Ari Pollack, Wanda Pratt, Lena Mamykina, Xuhai "Orson' Xu. ExTENDS: Empowering Domain Experts to Build Personalized AI Proxies for Asynchronous Patient Care. *CHI 2027. Conditionally Accepted*.
- **Ray-Yuan Chung**, Athena Ortega, Xuhai "Orson' Xu, Wanda Pratt, Ari Pollack. "It Helped Me Understand, But. . . ": Examining Trust Calibration in Health AI Among Lay Health Consumers and Patients. *FAccT 2027. Under Review*.
- **Ray-Yuan Chung**, Jaime Snyder, Zixuan Xu, Daeun Yoo, Athena C. Ortega, Wanda Pratt, Aaron Wightman, Ryan Hutson, Cozumel Pruette, Ari Pollack. *From Misalignment to Shared Understanding: Designing for Multi-Party Collaborative Decision-Making in Pediatric Chronic Care. CSCW 2027. Under Review*.
- Millie Wu, Irene Nam, Aurora Guan, **Ray-Yuan Chung**, Ke Wang, Xuhai "Orson' Xu. "Live Your Day, Twice": A Multi-Modal Agentic Mental Rehearsal Framework for Closing the Intention–Action Gap. *IMWUT 2027. Under Review*.
- Feng Chen, Luna Li, **Ray-Yuan Chung**, Wenyu Zeng, Yein Jeon, Oleg Zaslavsky. Bridging the Cognitive Gap: Co-Designing and Evaluating a Voice-Enabled Community Chatbot for Older Adults. *AMIA 2026*.
- Feng Chen, Manas Satish Bedmutha, **Ray-Yuan Chung**, Janice Sabin, Wanda Pratt, Brian R Wood, Nadir Weibel, Andrea L Hartzler, Trevor Cohen. Toward Automated Detection of Biased Social Signals from the Content of Clinical Conversations. *AMIA 2024*.
- Carroll A Reider, **Ray-Yuan Chung**, Prasad P Devarshi, Ryan W Grant, Susan Hazels Mitmesser. Inadequacy of immune health nutrients: intakes in US adults, the 2005–2016 NHANES. *Nutrients 2020*.

Workshop Papers

- **Ray-Yuan Chung**, Xuhai "Orson' Xu, Ari Pollack. Rethinking Health Agents: From Siloed AI to Collaborative Decision Mediators. *Workshop on Human–Agent Collaboration, CHI 2026*.
- **Ray-Yuan Chung**, Jaime Snyder, Zixuan Xu, Daeun Yoo, Athena C. Ortega, Wanda Pratt, Aaron Wightman, Ryan Hutson, Cozumel Pruette, Ari Pollack. *Design Considerations for Collaborative Decision-making Technologies in Pediatric Chronic Care. Extended Abstract, CHI 2026*.
- Luna Li, **Ray-Yuan Chung**, Feng Chen, Wenyu Zeng, Yein Jeon, Oleg Zaslavsky. Learning from Elders: Making an LLM-powered Chatbot for Retirement Communities more Accessible through

User-centered Design. *CALD-AI Workshop, ASIS&T 2025*.

- **Ray-Yuan Chung**, Feng Chen, Yein Jeon, Oleg Zaslavsky. Improve Technology and EHealth Literacy in a Retirement Community via the Use of LLM-Powered Chatbot. *Innovation in Aging 2024*.

PROFESSIONAL & RESEARCH EXPERIENCE

Columbia University, Department of Computer Science Seattle, WA
Visiting Researcher Jun 2026–Present
Host: Prof. Xuhai "Orson" Xu

- **Personal AI agents for multi-user collaboration:** Built a multi-agent system (React, LangChain, MongoDB) that enables clinicians to author and evaluate personalized AI agents for asynchronous patient care.

University of Washington Seattle, WA
Graduate Student Researcher Sep 2023–Present

- **Trust calibration in AI systems:** Developed a dual-model AI assistant (React, LLMs) and conducted controlled experiments (A/B testing) to assess how interface and model behavior influence user trust calibration and decision-making.
- **Conversational agent for older adults:** Built a conversational AI agent (LLMs, Streamlit) for a retirement community and improved its usability, accessibility, and trust through user evaluation.
- **Collaborative decision support for pediatric care:** Led participatory design with youth patients and clinicians to define requirements for, and prototype a collaborative decision-support system.
- **Clinical NLP for bias detection:** Contributed to speech-recognition pipeline of biased social signals from 782 recorded primary-care visits.

Unita Health AI Santa Clara, CA
Research Engineer, AI Agents Sep 2024–Sep 2025

- Led the end-to-end development of a **RAG-powered conversational health agent**, including dataset curation and evaluation with **200+ users** and an **LLM-as-a-Judge framework**.

Dexcom San Diego, CA
User Experience Research Intern Jun 2024–Sep 2024
Mentor: Dr. Shomir Chaudhuri

- Conducted behavioral theory-driven mixed-methods research **(N=250 surveys & interviews)** to define feature requirements for a wearable glucose biosensor, directly shaping the product roadmap.

Impossible Foods Redwood City, CA
Research Scientist May 2022–Aug 2023
Mentor: Dr. Sue Klapholz

- Analyzed **100K+** nutrient data points in Python and SQL to generate data-driven product insights.
- Insights drove the development of **7 product SKUs** and informed long-term business strategy.

Eating Recovery Center Bellevue, WA
Clinical Dietitian Jun 2021–Apr 2022

- Interpreted behavioral, psychological, and medical data with multidisciplinary mental-health teams to guide care for patients with eating and mental-health disorders.

Pharmavite Research West Hills, CA
Data Science Research Intern Jun 2019–Aug 2019
Mentor: Dr. Ryan Grant

- Analyzed NHANES-national health and behavioral survey data to inform data-driven public health strategy and product development decisions.

HONORS AND AWARDS

- Ira Kalet and Fred Wolf Endowment Award, University of Washington (2025)
- Top Scholars Award, University of Washington (2023)
- Global Scholars Award, NSF International (2018–2020)
- Maxine Moore Scholarship, University of Michigan (2019)

SERVICES

- Reviewer, ACM CHI (2026)
- Reviewer, ACM IH (Interactive Health) (2026)
- Reviewer, ACM Transactions on Computing for Healthcare (2025)

SKILLS

Technical: Python, R, JavaScript (React, Node.js), LangChain, Figma, Tableau, Qualtrics
AI/ML: LLMs, NLP, RAG, Context Engineering, Fine-tuning, Agentic AI, Multi-Agent Systems, Multimodal Learning, Reinforcement Learning
UX/HCI Research: Mixed-Methods Research, Diary Studies, Interviews, Surveys, Wizard-of-Oz, Usability Testing, Participatory Design, User Journey Mapping, Statistical Analysis
Behavioral Science: Behavior Change Design, Health Behavior Theory, Experimental Design

PROFESSIONAL LICENSURES

Registered Dietitian, United States 2021–Present
Specializations: Mental Health, Behavioral Science and Sports Nutrition