Yuanchen (Sophie) Bai

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I design, build, and evaluate Agentic AI for real-world workflows, supporting both technical and non-technical stakeholders in effectively engaging with them. My current research extends this work from unembodied to embodied contexts, primarily situated in healthcare settings. I study healthcare as a high-stakes, highly constrained domain to examine sociotechnical insights with implications for broader Agentic AI research and practice.

EDUCATION

Cornell University New York, NY
PhD Student in Information Science 08/2024–Present
Advisor: Angelique Taylor
Committee: Wendy Ju, Tapomayukh Bhattacharjee

Carnegie Mellon University (CMU) Pittsburgh, PA
Master of Information Systems Management 2022–2023
Advisors: Sherry Tongshuang Wu, Motahhare Eslami, Haiyi Zhu

Shanghai Jiao Tong University Shanghai, China
Bachelor of Science in Electrical and Computer Engineering 2018–2022
Advisors: Guangtao Zhai, Pradeep Kumar Ray

PUBLICATIONS

(* denotes equal contribution)

[1] **Yuanchen Bai**, Ruixiang Han, Niti Parikh, Wendy Ju, Angelique Taylor. Towards Considerate Embodied AI: Co-Designing Situated Multi-Site Healthcare Robots from Abstract Concepts to High-Fidelity Prototypes. *ACM CHI Conference on Human Factors in Computing Systems (CHI 2026)*

[2] **Yuanchen Bai**, Zijian Ding, Shaoyue Wen, Xiang Chang, Angelique Taylor. From MAS to MARS: Coordination Failures and Reasoning Trade-offs in Hierarchical Multi-Agent Robotic Systems within a Healthcare Scenario. *Under Review*

[3] Ann-Kareen Gedeus, Nadine Wagener, Yingxuan Li, **Yuanchen Bai**, Joshua Felver, JoAnn Difede, So-Yeon Yoon, Angelique Taylor. Talk to Me Kindly: Designing AI Companions to Foster Positive Self-Talk in Young Adults. *Under Review*

[4] Hanfang Lyu, **Yuanchen Bai**, Xin LIANG, Ujaan Das, Chuhan Shi, Leiliang Gong, Yingchi LI, Mingfei Sun, Ming Ge, Xiaojuan Ma. FARPLS: A Feature-Augmented Robot Trajectory Preference Labeling System to Assist Human Labelers' Preference Elicitation. *ACM Conference on Intelligent User Interfaces (IUI 2024)*

[5] Seyun Kim, **Yuanchen Bai**, Motahhare Eslami, Haiyi Zhu. A Systematic Literature Review on Equity and Technology in HCI and Fairness: Navigating the Complexities and Nuances of Equity Research. *28th ACM SIGCHI Conference on Computer-Supported Cooperative Work & Social Computing (CSCW 2025)*

[6] Xiaoyu Ren*, **Yuanchen Bai***, Huiyu Duan*, Lei Fan, Erkang Fei, Geer Wu, Pradeep Ray, Menghan Hu, Guangtao Zhai. ChatASD: LLM-based AI Therapist for Autism Spectrum Disorder (ASD). *International Forum of Digital Multimedia Communication (IFTC 2023)*

[7] **Yuanchen Bai***, Raoyi Huang*, Vijay Viswanathan, Tzu-Sheng Kuo, Tongshuang Wu. Measuring Adversarial Datasets. *IJCNLP-AACL 2023 The ART of Safety Workshop*

RESEARCH EXPERIENCE

YAI New York, NY
Research Intern 05/2025 – Present
- Built an analytical platform integrating behavioral data, context, and expert reasoning to support Behavioral Intervention Specialists in evaluating plans for individuals with Intellectual and Developmental Disabilities.

CMU Human-Computer Interaction Institute Pittsburgh, PA
Research Assistant 12/2022 – 04/2024
- Examined equity in HCI and fairness communities [5]; analyzed and characterized adversarial datasets for model evaluation [7].

SYSTEMS & DESIGN EXPERIENCE

Bayer Healthcare LLC   Pittsburgh, PA
Software Engineering   08/2023 – 12/2023
- Developed a cross-platform mobile app (myRadiology360) using Flutter, integrating patient-focused educational resources, professional learning features, and personalized CMS solutions informed by market research.

SELECTED HONORS AND AWARDS

Frederic and Susan Rubinstein PiTech Innovation Fund	2025
Siegel PiTech PhD Impact Fellowship	2025
Cornell Fellowship	2024–2025
Outstanding Graduate of Shanghai Jiao Tong University	2022

TALKS AND EVENTS

Weill Cornell Medicine Simulation Center BASE Camp: Robot and augmented reality field deployments, New York, NY	11/2025
IEEE ICRA 2025: Arts in Robotics, Atlanta, GA	05/2025
2025 Queens Borough President Office Career & Tech Expo: Robot and augmented reality in healthcare, New York, NY	01/2025
Cornell Tech - "Innovation Meets Impact: Building Things That Matter in the AI Era": CRAFT@large exhibition, New York, NY	12/2024
Weill Cornell Medicine Simulation Center BASE Camp: Robot and augmented reality field deployments, New York, NY	11/2024

ACADEMIC SERVICE

Reviewer: CHI 2026, AAAI 2026, HRI 2026, CHI 2025, ICRA 2025, ROMAN 2025

Teaching: Practical Applications in Machine Learning (Spring 2026, Cornell), Human Robot Interaction (Fall 2025, Cornell), Object Oriented Programming in JAVA (Fall 2023, CMU), Economic Analysis (Fall 2023, CMU)