

Irene Hou

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Cognitive Science Department

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<https://houirene.github.io>

Research Interests

Human-Computer Interaction, Human-Centered AI, participatory AI, computing pedagogy

Education

2024 - Present <i>La Jolla, CA</i>	University of California, San Diego Ph.D. in Cognitive Science, Human-Computer Interaction Advisor: Philip Guo
2018 - 2022 <i>La Jolla, CA</i>	University of California, San Diego B.S. in Cognitive Science (Design/Interaction Spec.), Computer Science minor <i>cum laude</i>

Publications

CHI 2026 (in submission)	[7] Irene Hou , Alex Qin, Lauren Cheng, and Philip Guo. Beyond the Desk: Barriers and Future Opportunities for AI to Assist Scientists in Embodied Physical Tasks. <i>In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.</i>
CHI 2026 (in submission)	[6] Irene Hou , Zeyu Xiong, Philip Guo, and April Wang. “Bespoke Bots”: Diverse Instructor Needs for Customizing Generative AI Classroom Chatbots. <i>In ACM CHI Conference on Human Factors in Computing Systems, ACM CHI '26, 2026.</i>
CI 2025	[5] Irene Hou ,* Jeongeon Park,* Risa Sundu,* and Steven Dow. Value-Centered Framing Supports Inclusive Idea Convergence in Participatory Civic Design. <i>In ACM Collective Intelligence, ACM CI '25, 2025. (*denotes co-first author)</i>
ITiCSE 2025	[4] Irene Hou , Kate Hamilton, Owen Man, Srishty Muthusekaran, Jeffin Johnykutty, Leili Zadeh, and Stephen MacNeil. “All Roads Lead to ChatGPT”: How Generative AI is Eroding Social Interactions and Student Learning Communities. <i>In Innovation and Technology in Computer Science Education, ACM ITiCSE '25, 2025.</i>
ACE 2025	[3] Sebastian Gutierrez, Irene Hou , Jihye Lee, Kenneth Angelikas, Owen Man, Sophia Mettelle, James Prather, Paul Denny, and Stephen MacNeil. Seeing the Forest and the Trees: Solving Visual Graph and Tree Based Data Structure Problems using Large Multimodal Models. <i>In Australasian Computing Education Conference, ACM ACE '25, 2025.</i>
ACE 2024	[2] Irene Hou , Sophia Mettelle, Owen Man, Zhuo Li, Cynthia Zastudil, and Stephen MacNeil. The Effects of Generative AI on Introductory Students’ Help Seeking Preferences. <i>In Australasian Computing Education Conference, ACM ACE '24, 2024.</i>

ACE 2024 [1] **Irene Hou**, Owen Man, Sophia Mettelle, Sebastian Gutierrez, Kenneth Angelikas, and Stephen MacNeil. More Robots are Coming: Large Multimodal Models (ChatGPT) can Solve Visually Diverse Images of Parsons Problems. *In Australasian Computing Education Conference, ACM ACE '24, 2024.*

Posters, Extended Abstracts, Workshop Papers

SIGCSE 2025 [p.1] **Irene Hou**, Hannah V. Nguyen, Owen Man, and Stephen MacNeil. The Evolving Usage of Generative AI by Computing Students. *In Technical Symposium on Computing Science Education, ACM SIGCSE '25, 2025. Poster.*

Research Experience

Summer 2025
Zurich, CH **PEACH Lab, ETH Zürich** · Visiting Researcher
Advisor: April Wang

- Investigated how university instructors adapt generative AI classroom chatbots to their own pedagogical contexts

2024 – Present
La Jolla, CA **Design Lab, UC San Diego** · Graduate Researcher
Advisor: Philip Guo

- Investigated how wet lab scientists adopt AI tools in their embodied workflows

2024 – Present
La Jolla, CA **ProtoLab, UC San Diego** · Graduate Researcher
Advisor: Steven Dow

- Investigated ideation processes using generative AI and multimodal techniques within a community-driven recreation area design initiative

2023 – 2025
Philadelphia, PA **Temple HCI Lab, Temple University** · Research Lead
Advisor: Stephen MacNeil

- Supervised 5 teams of undergraduates to publish on the impact of generative AI tools on computing pedagogy and education

2021 – 2022
La Jolla, CA **ProtoLab, UC San Diego** · Undergraduate Researcher

- Designed for the CoBoards project, a digital whiteboard system that enhances collaboration and provides computational support

2021
La Jolla, CA **Comparative Cognition Lab, UC San Diego** · Undergraduate Research Assistant

- Designed interface for intelligent video-analysis behavioral encoding tool

Research Mentorship

Students (undergraduates) I have directly supervised in research and/or mentored

Alexander Yu, UC San Diego
Sophia Mettelle, Temple University [1, 2]
Kenneth Angelikas, Temple University [2, 3]
Sebastian Gutierrez, Temple University [2, 3]
Leili Massoum Zadeh, Temple University [4]
Hannah Vy Nguyen, Temple University [p.1]
Brandson Trinh, De Anza Community College → Data Science @ UC San Diego

Ben Nguyen, Temple University
Srishty Muthusekaran, Temple University [4]
Kate Hamilton, Temple University [4]
Jeffin Johnykutty, Temple University [4]
Alex Qin, UC San Diego [7]
Lauren Cheng, UC San Diego [7]
Olivia Lam, Palomar Community College
Owen Man, De Anza Community College → CS MS @ CSU San Marcos [1, 2, 3, 4, p.1]
Ayah Ibrahim, UC San Diego
Zhuo Li, Temple University [1]

Additional Work Experience

2021 – 2023 <i>San Jose, CA</i>	FluentPet · UX Lead <ul style="list-style-type: none"> • Led a team of designers and developers in the end-to-end design, build, and launch of FluentPet Connect, a connected-hardware app and product • Achieved 72% daily active users and 78.7% weekly active users, with over 58,000 weekly interactions in the first active month
2020 <i>San Diego, CA</i>	SONY · Curriculum Designer <ul style="list-style-type: none"> • Designed and taught curriculum for SONY's KOOV, an educational technology platform and kit that combines programming, robotics, and design
2017 <i>San Diego, CA</i>	Booknection Creative Writing Summer Camp · Founder <ul style="list-style-type: none"> • Founded a creative science-fiction writing camp for teen writers • Designed original curriculum, pitched to local academies, secured funding, marketed, and directed classes
2013 – 2018 <i>San Diego, CA</i>	Snowspirit: The Virgo Key · Author <ul style="list-style-type: none"> • Wrote and published an award-winning science-fiction/fantasy novel • Storyboarded, fundraised, designed PR campaigns, and organized launch events with 2,000+ attendees

Awards and Honors

Apr 2025	National Science Foundation Graduate Research Fellowship (NSF GRFP) Awarded to 1,000 of 15,000+ applicants in 2025 (6%); typically 2,300 awarded (15%)
Jan 2023	CES 2023 Innovation Honoree , Smart Home category UX Lead · FluentPet Connect
Apr 2021	CitrusHack '21 Best UI/UX Hack (500 hackers) Product Lead · Nudge (app)
Jan 2016	Letter of Recognition , California Legislative Assembly Honored for student authorship and literary excellence
Jan 2015	Bronze Medalist , National eLit Illuminary Awards Author · <i>Snowspirit: The Virgo Key</i>
Jun 2014	State Award of Excellence , National PTA Reflections Recipient · <i>Category: Literature</i>

Invited Talks

June 2025	Responsible Tech Institute Student Network , University of Oxford Talk: How GenAI is Eroding Social Interactions and Student Learning Communities
April 2025	Canyon Crest Academy , San Diego Seminar: Introduction to HCI and Exploring HCI Careers
May 2024	Raspberry Pi Foundation , United Kingdom (remote) Seminar: Generative AI is changing undergraduate education; and undergraduate research too!

Service

Academic Service

Reviewer	CHI '25, CHI '24, CHI '26, SIGCSE '26
Student Volunteer	SIGCSE '25

Outreach

Jan 2025 - May 2025	Graduate Women in Computing @UC San Diego , Outreach Co-Chair
Feb 2025	GradWIC Inaugural Undergraduate Research Night , Host
May 2025 - Present	Graduate Women in Computing @UC San Diego , Vice President

Teaching

Teaching Assistant

Spring 2025 <i>La Jolla, CA</i>	UC San Diego , Department of Cognitive Science COGS 124 HCI Technical Systems Research
Winter 2025 <i>La Jolla, CA</i>	UC San Diego , Department of Cognitive Science COGS 127 Data-Driven UX/Product Design
Winter 2022 <i>La Jolla, CA</i>	UC San Diego , Department of Cognitive Science COGS 13 Field Methods: Studying Cognition in the Wild
Winter 2021 <i>La Jolla, CA</i>	UC San Diego , Department of Cognitive Science COGS 127 Data-Driven UX/Product Design

Instructor

2019 – 2022 <i>San Diego, CA</i>	Grace Academy Courses taught: Introduction to Robotics, Introduction to Python, Introduction to Physics, Block-Based Programming, Computational Thinking
2018 – 2020 <i>San Diego, CA</i>	Starton Tech EDU Courses taught: Introduction to Python, Computational Thinking, Block-Based Programming, KOOV Robotics
2017 – 2019 <i>San Diego, CA</i>	All-Star Academy Courses taught: Creative Writing, Introduction to Programming