

Irene Hou

University of California, San Diego (UCSD)
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<https://houirene.github.io>

RESEARCH INTERESTS Human-Computer Interaction, Human-Centered AI, participatory AI, computing pedagogy, computing for non-experts

EDUCATION **University of California, San Diego** 2024 – Present
Ph.D. in Cognitive Science, Human-Computer Interaction
Design Lab — Advisor: Philip Guo

University of California, San Diego 2018 – 2022
B.S. in Cognitive Science w/ Design and Interaction Spec.,
Minor in Computer Science — *cum laude*

RESEARCH **Temple HCI Lab, Temple University** 2023 – 2024
Research Lead (Advisor: Stephen MacNeil) *Philadelphia, PA*

- Supervised 3 teams and 10 undergraduates to publish on topics of generative AI and computing education
- Designed and conducted studies on effects of generative AI on computing student help-seeking
- Designed and conducted studies on image capabilities of multi-modal LLMs with programming problems

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

- Designed for CoBoards, a digital whiteboard system that extracts design data/offers computational support
- Designed study and prototype to examine implicit/explicit pacing of team progress during virtual design workshops

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

- Designed interface w/ Figma/PyQT5 for ML Behavioral Encoding Expanded Viewer
- Tested behavioral encoding web-app/created bug reports that improved user flow and accessibility

PUBLICATIONS [1] **Irene Hou**, Sophia Mettelle, Owen Man, Zhuo Li, Cynthia Zastudil, and Stephen MacNeil. 2024. *The Effects of Generative AI on Computing Students' Help-Seeking Preferences*. 26th Australasian Computing Education Conference (ACE '24). Association for Computing Machinery, New York, NY, USA, 39–48. [Google Scholar citations: 24]

[2] **Irene Hou**, Owen Man, Sophia Mettelle, Sebastian Gutierrez, Kenneth Angelikas, and Stephen MacNeil. 2024. *More Robots are Coming: Large Multimodal Models (ChatGPT) can Solve Visually Diverse Images of Parsons Problems*. 26th Australasian Computing Education Conference (ACE '24). Association for Computing Machinery, New York, NY, USA, 29–38. **[Google Scholar citations: 15]**

[3] Sebastian Gutierrez, **Irene Hou**, Kenneth Angelikas, Owen Man, and Stephen MacNeil. *Large Multimodal Model Performance on Diverse Graph and Tree Structure Tasks*. ACM Transactions on Computing Education 2025 (TOCE '25). (*Manuscript in preparation*)

[4] **Irene Hou**, Hannah V. Nguyen, Owen Man, and Stephen MacNeil. 2025. *The Evolving Usage of GenAI by Computing Students*. ACM Technical Symposium on Computer Science Education (SIGCSE '25). (*Poster, in submission*)

TALKS	Raspberry Pi Foundation — United Kingdom (remote) Seminar: Generative AI is changing undergraduate education; and undergraduate research too!	May 2024
	Australasian Computing Education '24 — Sydney, AU Conference talk: The Effects of Generative AI on Computing Students' Help-Seeking Preferences	Feb 2024
	Australasian Computing Education '24 — Sydney, AU Conference talk: More Robots are Coming: Large Multimodal Models (ChatGPT) can Solve Visually Diverse Images of Parsons Problems	Feb 2024
AWARDS	CES 2023 Innovation Honoree , Smart Home category UX Lead · FluentPet Connect	Jan 2023
	CitrusHack '21 Best UI/UX Hack (500 hackers) Product Lead · Nudge (app)	Apr 2021
	Bronze Medalist in National eLit Illuminary Awards Author · <i>Snowspirit: The Virgo Key</i>	Jan 2015
WORK EXPERIENCE	FluentPet UX Lead <ul style="list-style-type: none"> • Managed team of designers and oversaw end-to-end design from final build and launch of connected hardware device FluentPet Connect • Developed and launched automated user feedback system, cutting annual costs by \$18,000 • Launched Connect with 72% active daily app users and 78.7% active weekly users, with 58,000 weekly interactions 	2022 – 2023 <i>San Jose, CA</i>
	FluentPet UX Design Intern <ul style="list-style-type: none"> • Led design of AWS IoT device onboarding with Bluetooth and Wi-Fi integration • Designed and published leading curriculum on teaching animal communication via buttons 	2021 – 2022 <i>La Jolla, CA</i>

SONY

Curriculum Designer

2020

San Diego, CA

- Designed for connected hardware coding robotics program and courses, used to train 25+ incoming teachers and delivered to 300+ students

Snowspirit: The Virgo Key

Author

2013 – 2018

San Diego, CA

- End-to-end release: storyboarded, wrote manuscripts, fundraised, designed web interface, coordinated press release, headed guest speaker events with 2,000 attendees, and organized signing events and distribution

Booknection Creative Writing Summer Camp

Founder

2017

San Diego, CA

- Founded creative/science-fiction writing camp by pitching to local academies, designing original curriculum, allocating initial funding, marketing, and directing classes

TEACHING

UC San Diego, Cognitive Science

Instructional Assistant

2021 – 2022

La Jolla, CA

- Data-Driven UX/Product Design (Winter 2022)
 - IA-led course, designed lectures and discussions
 - 100% student recommendation rate
- Field Methods: Studying Cognition in the Wild (Spring 2021)
 - 100% student recommendation rate

Grace Academy, Starton EDU, All-Star Academy Courses designed/taught (curriculum, assessments, etc.)

2017 – 2021

San Diego, CA

- Computational Thinking (2021, 2020)
- Robotics with SONY KOOV (2020)
- Programming with Python (2020, 2019)
- Robotics with Makeblock Codey Rocky (2020, 2019)
- Introduction to Physics (2020, 2019)
- Programming with mBlock (2018, 2019)
- Introduction to Robotics with mBlock (2018, 2019)
- Introduction to Scratch (2018, 2019)
- Creative Writing (2017, 2018)

MENTORSHIP

Students I have supervised/mentored

Undergraduates

- **Alexander Yu**, UC San Diego
- **Sophia Mettelle**, Temple University - [1, 2]
- **Owen Man**, De Anza Community College, CS MS @CSU San Marcos - [1, 2, 3, 4]
- **Kenneth Angelikas**, Temple University - [2, 3]
- **Sebastian Gutierrez**, Temple University - [2, 3]
- **Leili Massoum Zadeh**, Temple University
- **Hannah Vy Nguyen**, Temple University [4]
- **Brandson Trinh**, De Anza Community College, Data Science @UC San Diego
- **Ben Nguyen**, Temple University
- **Srishty Muthusekaran**, Temple University

Graduates

- **Zhuo Li**, Temple University - [1]