

Ruanqianqian (Lisa) Huang

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EDUCATION	University of California, San Diego , La Jolla, CA, USA	Aug. 2020 - Jun. 2026 (exp.)
	Ph.D. in Computer Science (Advisor: Sorin Lerner)	
	M.S. in Computer Science	
	Wellesley College , Wellesley, MA, USA	Aug. 2016 - May 2020
	B.A. (summa cum laude) in Computer Science (Honors) and Cognitive & Linguistic Sciences	
WORK EXPERIENCE	University of California, San Diego	La Jolla, CA
	Graduate Student Researcher (<i>Supervisor: Prof. Sorin Lerner</i>)	Aug. 2020 - Present
	<ul style="list-style-type: none">• Designing and evaluating interface advances for computational notebooks.• Designing and evaluating AI assistants for programming education.• Designed and evaluated programming tools for GUI dev, human-AI interaction, and education.• Investigated computational notebook usage among scientists via field observations.• Investigated debugging in various programming paradigms via contextual inquiries.	
	Apple Inc.	Pittsburgh, PA
	HCI Research Intern, AI/ML (<i>Supervisor: Dr. Mary Beth Kery</i>)	Apr. 2023 - Sep. 2023
	<ul style="list-style-type: none">• Investigated how novices approach machine learning via field observations and interviews.• Developed novel interaction techniques for machine learning.	
	Microsoft Research	Redmond, WA
	Research Intern, RiSE (<i>Supervisor: Dr. Nikolaj Bjørner</i>)	Jun. 2022 - Sep. 2022
	<ul style="list-style-type: none">• Created design guidelines for logic modeling education tools via participatory design.• Developed Z3Guide, a 100% client-side web environment for the Z3 theorem prover.• Organized an online Z3 learning workshop using Z3Guide (N=112).	
	Apple Inc.	Cupertino, CA
	Data Analysis Intern, Cloud Infrastructure (<i>Supervisor: Benjamin Wu</i>)	May 2019 - Aug. 2019
	<ul style="list-style-type: none">• Forecast future fleet changes to optimize hardware resource allocation with 88.38% accuracy.• Automated a recurring manual report for Finance by improving the API for search queries.	
SKILLS	Research Methods • Interview • Survey • Contextual Inquiry • Field Study • Grounded Theory • Software Usability Testing • Statistical Analysis • Thematic Analysis • Software Instrumentation	
	Programming Languages & Tools • TypeScript • JavaScript • HTML/CSS • Python • Node.js • React • \LaTeX • Java • R • Haskell • Scala • C • GitHub & Git • CI/CD	
	Design & Arts • Figma • Sketch • Adobe Premiere Pro • Adobe Photoshop	
	Domain Knowledge • Parsing • Compiler Design • Program Analysis • Domain-Specific Languages • Time Series Forecasting	
SELECTED PUBLICATIONS	<ul style="list-style-type: none">• Ruanqianqian (Lisa) Huang, Savitha Ravi, Michael He, Boyu Tian, Sorin Lerner, and Michael Coblenz. How Scientists Use Jupyter Notebooks: Goals, Quality Attributes, and Opportunities. To appear in <i>Proceedings of the IEEE/ACM 47th International Conference on Software Engineering (ICSE '25)</i>, Ottawa, Canada, 2025.• Brian Hempel, Ruanqianqian (Lisa) Huang, Devamardeep Hayatpur, Sorin Lerner, and Haijun Xia. Multi-Modal Plot Authoring. Under review. 2024.• Ruanqianqian (Lisa) Huang, Philip J. Guo, and Sorin Lerner. Unfold: Enabling Live Programming for Debugging GUI Applications. In <i>IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)</i>. 2024.	

- **Ruanqianqian (Lisa) Huang**[†], Kasra Ferdowsi[†], Michael B. James, Nadia Polikarpova, and Sorin Lerner. Validating AI-Generated Code with Live Programming. In *CHI Conference on Human Factors in Computing Systems*. 2024. ([†]Equal contribution)
- **Ruanqianqian (Lisa) Huang**, Kasra Ferdowsi, Ana Selvaraj, Adalbert Gerald Soosai Raj, and Sorin Lerner. Investigating the Impact of Using a Live Programming Environment in a CS1 Course. In *ACM Technical Symposium on Computer Science Education (SIGCSE TS)*. 2022.
- **Ruanqianqian Huang** and Franklyn Turbak. A Design for Bidirectional Conversion between Blocks and Text for App Inventor. In *IEEE Blocks and Beyond Workshop (B&B)*. 2019.

TEACHING

University of California, San Diego

- **Instructor**, Data Structures and Object-Oriented Design (N=45) Summer 2024
- **Instructor**, Intro to CS Research (N=53) Fall 2023
- **Teaching Assistant**, Intro to Programming in Python (N=495) Fall 2024
- **Teaching Assistant**, LLMs, Programming, and HCI (N=34) Spring 2024
- **Teaching Assistant**, Intro to Programming in Python (N=601) Fall 2022
- **Teaching Assistant**, Graduate Programming Languages (N=205) Fall 2021

Wellesley College

- **Teaching Assistant**, Principles of Programming Languages Fall 2019
- **Teaching Assistant**, Data Structures Spring & Fall 2018

SELECTED AWARDS

- CSE Award for Excellence in Teaching (awarded to 1 PhD student), UCSD 2024
- 2024 Summer Graduate Teaching Scholars, UCSD 2023
- Trustee Scholar (1 of 4 out of 600 graduates), Wellesley College 2020
- Academic Achievement Award (awarded to 1 graduating CS major), Wellesley College 2020

SELECTED PROFESSIONAL SERVICE

- Invited Speaker: PLMW@SPLASH (2024)
- Program Committee: LIVE Workshop (2024), SIGCSE TS (2024, 2025)
- Artifact Evaluation Committee: <Programming> (2024)
- Reviewer: UIST (2023), TOCE (2023), CHI (2022-)
- Research Mentor: Ilana Shapiro (*Symbolic Music Analysis*), Kaleigh Beachler (*AI for Education*), Michael He, Boyu Tian (*Jupyter Notebook Use in Scientific Computing*), Justin Yao Du, Mandeep Syal, and Thanh-Nha Tran (*Live Programming for Unit Testing*)
- Co-President, UCSD Graduate Women in Computing (2023-2024)

REFERENCES

Sorin Lerner (Thesis Advisor)
 Professor and Department Chair
 University of California San Diego
 Email: lerner@cs.ucsd.edu

Michael Coblenz
 Assistant Professor
 University of California San Diego
 Email: mcoblenz@ucsd.edu

Philip J. Guo
 Associate Professor
 University of California San Diego
 Email: pg@ucsd.edu

Christine Alvarado
 Teaching Professor and Associate Dean
 University of California San Diego
 Email: cjalvarado@ucsd.edu