

Zhicheng Huang

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🌐 <https://huangworld.github.io/>

Education

University of California, San Diego, *Ph.D.*, La Jolla, CA, *GPA: 3.95/4.0* 2025–Present
Cognitive Science

Brown University, *Sc.M.*, Providence, RI, *GPA: 4.0/4.0* 2023–2025
Computer Science

University of Michigan - Ann Arbor, *B.S.*, Ann Arbor, MI, *GPA: 3.9/4.0* 2019–2023
Double Major in Computer Science and Cognitive Science (Decision and Cognition track)

Publications

* indicates equal contribution.

CONFERENCE PAPERS

1. Cling: Supporting Cross-Page Coordination with Human-Directed, In-Situ, and Small-Step Automation [PDF](#)
[Zhicheng Huang](#), Yining Cao, and Haijun Xia.
Under review
2. Fractal: Fault-Tolerant Shell-Script Distribution [PDF](#)
[Zhicheng Huang](#)*, Ramiz Dundar*, Yizheng Xie, Konstantinos Kallas, and Nikos Vasilakis.
NSDI 2026 – USENIX Symposium on Networked Systems Design and Implementation
3. IRCHIVER: An Information-Centric Personal Web Archive for Revisiting Past Online Sensemaking Tasks [PDF](#)
[Zhicheng Huang](#) and Jeff Huang.
CHIIR 2025 – ACM SIGIR Conference on Human Information Interaction and Retrieval
4. MIWA: Mixed-Initiative Web Automation for Better User Control and Confidence [PDF](#)
Weihao Chen, Xiaoyu Liu, Jiacheng Zhang, Ian Long Lam, [Zhicheng Huang](#), Rui Dong, Xinyu Wang, and Tianyi Zhang.
UIST 2023 – ACM Symposium on User Interface Software and Technology
5. WebRobot: web robotic process automation using interactive programming-by-demonstration [PDF](#)
Rui Dong, [Zhicheng Huang](#), Ian Long Lam, Yan Chen, and Xinyu Wang.
PLDI 2022 – ACM SIGPLAN Conference on Programming Language Design and Implementation

WORKSHOP PAPERS

6. Maintenance of Personal Generative User Interfaces [PDF](#)
[Zhicheng Huang](#) and Haijun Xia.
CHI 2026 Workshop – Generative UI (GenUI meets HCI)
7. Gradual Generation of User Interfaces as a Design Method for Malleable Software [PDF](#)
Bryan Min, Peiling Jiang, [Zhicheng Huang](#), and Haijun Xia.
arXiv 2026 – Preprint arXiv:2601.17975

Work Experience

Tesla, *Software Engineer Intern*, Palo Alto, CA 2023

- Built a pipeline using Python (Django) and PostgreSQL to visualize the impact of each code commit on the quality of 2 million routes with both heatmap views and individual route analysis, achieving a 4× speedup in validation.
- Optimized the A* path search algorithm's local edge expansion in C++ by leveraging tile hierarchy and early stopping, reducing CPU usage for offline routing by 50%.
- Developed a configurable route ranker in **Go** to prioritize routes meeting user preferences, such as fewer turns with slightly longer ETA.

Yerbba, *Software Engineering Intern*, Ann Arbor, MI

2022–2023

- Designed feature-based explanations for decision-tree algorithms to clarify treatment options for developers, achieving a 4× speedup in internal reviews.
- Leveraged **MongoDB** Atlas Search to cut user data query latency by 10× through JavaScript (Meteor) APIs.

Teaching Experience

COGS 109: Modeling and Data Analysis, *Teaching Assistant*, UC San Diego

Fall 2026

- Lead discussion sections and hold office hours; grade homework and exams.
- Mentor group projects conducting original dataset analyses, selecting and interpreting statistical models, and progressing through three checkpoints toward presentations and individual oral examinations.

COGS 126: Thinking with Computers, *Teaching Assistant*, UC San Diego

Spring 2026

- Led sections and graded exams and projects.
- Helped senior undergraduates scope open-ended project ideas and meet project-specific milestones.

COGS 120: Interaction Design, *Teaching Assistant*, UC San Diego

Winter 2026

- Held office hours and answered Piazza questions.
- Redesigned and graded projects from the previous course iteration.

CSCI 1380: Distributed Systems, *Teaching Assistant*, Brown University

Spring 2025

- Held office hours and answered Piazza questions; helped write and grade exams.
- Guided project groups through hands-on debugging and graded final projects.

EECS 481: Software Engineering, *Instructional Aide*, University of Michigan, two semesters

2022–2023

- Led discussion sections and office hours for a large upper-level computer science elective.
- Answered Piazza questions and helped write exam questions.

Honors and Awards

UCSD Cognitive Science Department Travel Fund, \$1,500

2026

ACM SIGIR Student Travel Grant, \$1,200

2025

Academic Year Instructional Aide Award, 2023

Recognized as one of the three undergraduate Instructional Aides from 740 support staff for their academic year contributions.

James B. Angell Scholar, 2021

Students who achieve an “A” record (all grades of A+, A, or A-) for two or more consecutive terms are recognized as James B. Angell Scholars.

University Honors, 2019, 2020, 2021, 2022

The University Honors designation is awarded to students who earned a 3.5 grade point average or higher during a term.

William J. Branstrom Freshman Prize, 2020

First-year students in their first term who rank in the upper five percent of their class within their school or college are awarded the William J. Branstrom Freshman Prize.

Service

Reviewer

CHI 2027, UIST 2026, C&C 2026

Mentoring

Louis Geer, Brown University

Mentored research on using gaze location as a behavioral signal to augment browser history.