

Harrison Huang

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EDUCATION

Rice University, Houston, TX Cumulative GPA: 4.0/4.0
Master of Science in Computer Science May 2025
Bachelor of Science in Computer Science, Minor in Mathematics Aug 2020 – Dec 2023
Relevant Coursework: Deep Learning for Vision and Language, Natural Language Processing, Machine Learning, Data Structures and Algorithms, Object-Oriented Programming, Database Systems, Distributed Systems, Operating Systems, Linear Algebra, Probability and Statistics
Organizations: Association for Computing Machinery (ACM) Member, Computer Science Graduate Student Association, Academic Mentor Society

HONORS & AWARDS

2025 NSF GRFP Honorable Mention Apr 2025
2nd Place, IEEE Computer Society North America Student Challenge Competition Dec 2024
AIES 2024 Student Travel Award Oct 2024
Rice Engineering Alumni (REA) Graduate Student Travel Grant Oct 2024
Rice University MS Fellowship Award Jan 2024
President's Honor Roll Dec 2023
Segal AmeriCorps Education Award Aug 2021

PUBLICATIONS

PPS: Personalized Policy Summarization for Explaining Sequential Behavior of Autonomous Agents. Harrison Huang*; Peizhu Qian*; and Vaibhav Unhelkar 2024. *In Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)*.

CONFERENCE PRESENTATIONS

In-Space Physical AI Workshop Nov 2024
AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) Oct 2024
Texas Regional Robotics Symposium (TEROS) Apr 2023

PROFESSIONAL EXPERIENCE

Human-Centered AI and Robotics Lab Researcher Apr 2022 – Present
Rice University *Houston, TX*

- Designed teaching algorithms to identify and address gaps in students' knowledge during the learning process, contributing to recent advancements in algorithmic decision-making and policy summarization
- Engineered simulations to measure the performance of teaching algorithms on students with diverse backgrounds; validated a 50% improvement in learning rates by algorithmically tailoring lessons to individual needs
- Assessed the effectiveness of artificial intelligence algorithms by building and deploying full-stack data-driven websites on Microsoft Azure, employing React front-ends and Flask back-ends
- Significantly improved runtime and space complexity of tree search algorithms by at least tenfold
- Extended the utility of teaching algorithms in real-world scenarios, yielding a 10% increase in learning effectiveness

Graduate Student Handbook Revision Lead Aug 2023 – Present
Rice University Computer Science Graduate Student Association *Houston, TX*

- Spearheaded a full rewrite of the graduate student handbook, enhancing information about the master's program
- Organized monthly social events to allow students to connect with their peers and increase departmental cohesion

Artificial Intelligence Engineer Intern Jun 2024 – Aug 2024
Delta Air Lines *Atlanta, GA*

- Developed an anti-human trafficking chatbot using Amazon Bedrock that allows users to efficiently report potential cases of human trafficking via a front-end built in React. The chatbot generates targeted questions to assess the situation and determine whether any human trafficking flags have been identified

- Performed extensive prompt engineering to design chatbots, ensuring that all generated questions and responses are accurate and unbiased
- Evaluated the impact of using the DPO training algorithm for LLM development, demonstrating runtime improvement while considering limited GPU availability
- Led the development of an Angular-based interactive website to showcase 25+ innovative projects, coordinating closely with team managers to ensure its quality for showcasing to shareholders
- Debugged and optimized website performance on a touchscreen display board to guarantee a smooth experience for continuous user interaction

Jones College Webmaster

Mar 2022 – Dec 2023

Rice University

Houston, TX

- Redesigned the Jones College website as part of a team of five webmasters to enhance user experience by implementing and organizing code for new widgets and improved website functionality
- Implemented monthly updates on both the front-end and back-end to ensure information is up to date

TEACHING EXPERIENCE

Head Teaching Assistant

Jan 2024 – May 2024

Rice University

Houston, TX

- Created course materials and exam solutions to ensure content alignment across four course sections
- Led flipped classroom sessions, guiding students through daily problem sets to reinforce course concepts
- Organized and led grading parties for all exams in a course of 180+ students, coordinating logistics for 40 TAs

Concurrent Program Design Teaching Assistant

Aug 2023 – Dec 2023

Rice University

Houston, TX

- Designed and tested solutions to programming tutorials to ensure correctness and adherence to course objectives
- Evaluated solutions for new programming assignments to assist in the launch of a new program design course

Parallel Programming Teaching Assistant

Jan 2023 – May 2023

Rice University

Houston, TX

- Introduced students to the fundamentals of parallel programming by hosting weekly office hours to clarify misconceptions regarding parallel programming constructs

Financial Accounting Teaching Assistant

Jan 2023 – May 2023

Rice University

Houston, TX

- Provided alternate perspectives on accounting computations to help students gain a more intuitive understanding of financial accounting

Data Structures & Algorithms Teaching Assistant

Aug 2022 – Dec 2022

Rice University

Houston, TX

- Leveraged extensive knowledge of data structures and algorithms to host weekly office hours and bridge gaps between theoretical computer science and programming

Algorithmic Thinking and Discrete Mathematics Teaching Assistant

Jan 2022 – May 2022

Rice University

Houston, TX

Differential Equations in Science and Engineering Grader

Jan 2022 – May 2022

Rice University

Houston, TX

Computational Thinking Teaching Assistant

Aug 2021 – Dec 2021

Rice University

Houston, TX

SERVICE

Computer Science Club Graduate Student Panelist

Sep 2024

Rice University

Houston, TX

Head Academic Mentor

Mar 2022 – Dec 2023

Rice University

Houston, TX

- Maintained program quality by conducting 75+ interviews annually to recruit new academic mentors, ensuring re-commitment of current mentors, and overseeing their training sessions
- Orchestrated biweekly events to promote on-campus program visibility and engagement

Teaching Fellow

May 2021 – Aug 2021

Breakthrough Houston

Houston, TX

- Planned and taught pre-algebra and piano to middle school students to foster an early love of learning
- Collaborated with teachers and other teaching fellows to ensure teaching materials were effective and engaging