

# Yuxuan Chen

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## EDUCATION

### Master of Science, Computer Science

University of Illinois at Urbana-Champaign

Advisor: Mariana Silva

Aug 2024 – Expected May 2026

Cumulative GPA: 3.95/4

### Bachelor of Science, Mathematics & Computer Science

University of Illinois at Urbana-Champaign

Magna Cum Laude, Bronze Tablet Award

Aug 2020 – May 2024

Cumulative GPA: 3.98/4

## PUBLICATIONS

- 2026 **Yuxuan Chen**, Chenyan Zhao, Kangyu Feng, Junyu Zhang, Vedan Malhotra, Mariana Silva. *Exploring LLMs for Generating Erroneous Examples in CS1* (Poster). To appear in Proceedings of the 57th ACM Technical Symposium on Computer Science Education (SIGCSE TS 2026).
- 2025 **Yuxuan Chen**, Chenyan Zhao, Kangyu Feng, Mattox A. Beckman, and Mariana Silva. *A Complete Redesign of CS1 for Engineering Students*. In Proceedings of the 2025 American Society for Engineering Education Annual Conference and Exposition (ASEE 2025).
- 2025 Chenyan Zhao, **Yuxuan Chen**, Kangyu Feng, Geoffrey L Herman, Matthew West, and Mariana Silva. *Implementing a Tool for Structured Roles in Hybrid Collaborative Learning Environments*. In Proceedings of the 2025 American Society for Engineering Education Annual Conference and Exposition (ASEE 2025).
- 2025 Mohammed Hassan, **Yuxuan Chen**, Paul Denny, and Craig Zilles. *On Teaching Novices Computational Thinking by Utilizing Large Language Models Within Assessments*. In Proceedings of the 56th ACM Technical Symposium on Computer Science Education (SIGCSE TS 2025).
- 2024 Craig Zilles, Chenyan Zhao, **Yuxuan Chen**, Evan Michael Matthews, and Matthew West. *A Case for Bayesian Grading*. In Proceedings of the 2024 on ACM Virtual Global Computing Education Conference (SIGCSE Virtual 2024).

## RESEARCH EXPERIENCE

Graduate Research Assistant | Siebel School of Computing and Data Science, UIUC

Aug 2024 – Present

- Redesigned the curriculum for a large-scale CS1 course (~1,000 students/year), integrating programming fundamentals with real-world engineering applications.
- Conducted thematic analysis of novice learners' interactions with an LLM-based chatbot to explore how LLMs support the development of computational thinking.
- Developing and evaluating a framework to automatically generate erroneous code examples using LLMs across CS1 topics.
- Benchmarking LLM performance on authentic assignments across multiple engineering courses to identify strengths and weaknesses across problem types (ASEE 2026 paper under review).

## Undergraduate Research Assistant | *Department of Mathematics, UIUC*

May 2021 – May 2022

- Constructed knot diagrams using SnapPy to support current theorem of the computational complexity of Khovanov Homology.
- Calculated differentials of chain complexes of knots in finite field  $\mathbb{Z}/2$  using Python and Pari/GP.
- Generated generalized Choi matrices for Depolarizing/Werner-Holevo Channels using Python.

## TEACHING EXPERIENCE

### Course Assistant | *UIUC CS 357 Numerical Methods I, Champaign, IL*

Jan 2022 – May 2024

- Assisted over 2,000 students across 5 semesters (~400 per semester) in learning scientific computing and numerical methods including floating points, Taylor series, optimization, and PCA using Python.
- Maintained the official course website by updating lecture notes and course logistics using Ruby Jekyll.
- Answered conceptual/coding questions in lecture sessions, group activities, and office hours.
- Received the **Outstanding Course Assistant Award** for Fall 2023 for excellence in teaching and student support.

### Course Assistant | *UIUC CS 519 Scientific Visualization, Champaign, IL*

May 2023 – Aug 2023

### Course Assistant | *UIUC CS 124 Intro to Computer Science, Champaign, IL*

Jan 2021 – Dec 2021

## ENTREPRENEURSHIP & LEADERSHIP

### Co-founder | *AristAI, Inc., Champaign, IL*

Oct 2023 – Present

- Leading a team developing AI-powered solutions to enhance student learning and improve content accessibility.
- Awarded \$10,000 prize in the 2024 Cozad New Venture Challenge.

### Vice President | *Chinese Engineering Student Association*

Jul 2022 – Jul 2023

## INTERNSHIP

### Software Engineer Intern | *PrairieLearn, Inc., Champaign, IL*

May 2025 – Aug 2025

- Developed randomized, auto-graded Calculus I questions in PrairieLearn.

### Frontend Developer Intern | *EnterpriseWorks, UIRP, Champaign, IL*

May 2022 – Dec 2022

- Built custom websites for Cache Energy, Ensaras Inc., Editekk LLC, and GarboCarbo.

## ACADEMIC SERVICE

### Program Committee Member

- SIGCSE TS 2026
- SIGCSE TS 2025

### Session Moderator

- ASEE 2025

## SELECTED HONORS & AWARDS

- UIUC University Honors - Bronze Tablet Award (**Top 3%**), 2024
- UIUC Outstanding Course Assistant Award, 2023
- UIUC Mrs. E. J. Hoover Mathematical Scholar, 2023
- UIUC Edmund J. James Scholar, 2022-2024

## SKILLS

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Programming: Python, Java, C++, C, R

Web Development: HTML, CSS, JavaScript, TypeScript, React

Databases: SQL, MongoDB, Neo4j

Tools: Git, LaTeX

Languages: Chinese (Native), English (Fluent, TOEFL 118)