Long-Yo (Leo) Lee

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Education

University of Illinois Urbana-Champaign *Aug 2023 – expected May 2027*
BS in Mathematics and Computer Science, Minor in Physics GPA: 3.9/4.0

- **Dean's List:** Fall 2023, Spring 2024, Fall 2024, Spring 2025
- **Coursework:** System Programming, Artificial Intelligence, Algorithms, Intro to Combinatorics

Skills

- **Programming Languages:** C/C++/C#, Java/Kotlin, Python, TeX/LaTeX, R
- **Libraries:** pandas, matplotlib, NumPy, pennylane, torch
- **Framework/Tools:** git/GitHub, VS Code, Android Studio, RStudio, Overleaf, Unity, ChatGPT
- **Spoken Languages:** Mandarin Chinese, English

Experience

Undergraduate Presenter Aug 2025
MAA MathFest, Mathematical Association of America *Sacramento, CA*

- Communicated technical ideas clearly through an accepted undergraduate poster session
- Engaged with researchers through workshops, strengthening applied problem-solving and technical communication skills

Student Researcher | *Localizing entanglement in high-dimensional states* Jan 2025 – Oct 2025
Illinois Mathematics Lab, University of Illinois Urbana-Champaign *Urbana, IL*

- Applied computational methods to analyze complex quantum systems and form conjectures, emphasizing scalable and efficient numerical experimentation
- Implemented simulations and data analysis pipelines using NumPy and PennyLane
- Translated mathematical theory into computational experiments to validate conjectures
- Presented results to a technical audience during the Illinois Mathematics Lab Poster Session
- Contributed to a research manuscript submitted to Quantum Information Processing

Course Assistant | *CS 173: Discrete Structures* Jan 2025 – present
Siebel School of Computing and Data Science, UIUC *Urbana, IL*

- Supported a 400-student course by grading proof-based assignments and providing actionable, structured feedback
- Held weekly office hours to help students reason rigorously about algorithms, logic, and correctness
- Strengthened communication skills by explaining abstract concepts effectively

VR Game Development Intern Aug 2024 – Dec 2024
Applied Technologies for Learning in the Arts & Sciences (ATLAS), UIUC *Urbana, IL*

- Designed and developed VR minigame RageRoom using Unity and C#, focusing on user interaction and performance
- Integrated VR frameworks and packages to build immersive, responsive gameplay experiences
- Collaborated in an agile team environment, presenting progress in weekly client meetings
- Delivered a polished demo showcased at the ATLAS final presentation

Tutor | *CS124: Introduction to Computer Science I* Jan 2024 – May 2025
Siebel School of Computing and Data Science, UIUC *Urbana, IL*

- Debugged student code and explained design decisions for exams, homework, and machine projects
- Improved instructional materials by designing new practice problems and clarifying edge cases
- Mentored and supervised assistant tutors, strengthening leadership and technical review skills

Awards

- **American Regions Mathematics League**: Fourth Place Award (Int'l Division), awarded 2022
- **American Invitational Mathematics Examination**: Scored 10/15 (2022), top 5%