Alicia M. Chun

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Portfolio: https://aliciamchun.github.io/

EDUCATION

The University of Chicago   Chicago, IL
B.S. Major in Computer Science, w/ Specialization in Computer Systems; Minor in Physics   Expected June 2025
Cumulative GPA: 3.73/4.0; President's Scholar, University Scholar Award
Relevant Coursework: Engineering Printed Circuit Boards; Mobile Computing; Computer Networks; Algorithms; Computer
     Architecture; Electronics

WORK EXPERIENCE

NASA L'SPACE Program, Mission Concept Academy   Remote
Participant - Team Role: Project Manager   Sept. 2024 – Jan. 2025
- Virtual NASA workforce preparation academy that teaches space mission concept formulation.
- Wrote a **183-page Preliminary Design Review** proposal for the NASA mission life cycle, for a robotic space mission.
- Managed a team of 15 and organized the team's operations and procedures, such as: scheduling weekly meetings, leading task distribution and progress checks, maintaining consistency across deliverables.

National Space Society, SpacEdge   Chicago, IL
Metcalf Intern   Sept. 2024 – Jan. 2025
- Led the planning for new website development.
- Research and develop courses for topics such as microgravity and planetary defense.

The University of Chicago, Department of Physics   Chicago, IL
Learning Assistant   Sept. 2024 – Now
- Facilitate small labs with ~20 students for the introductory physics and engineering courses.
- Specific courses: Mechanics (Autumn 2023); Electricity and Magnetism (Winter 2024); Waves, Optics, and Heat (Spring 2024); Creative Machines and Innovative Instrumentation (Winter 2025)

Human Computer Integration Lab, Computer Science Department, UChicago   Chicago, IL
Research Associate   Jan. 2024 – Sept. 2025
- Designed and 3D printed wearable devices to use with electric muscle stimulation.
- Programmed microcontrollers (Seeeduino, Arduino Nano, ATmega64) in **C/C++** to control hardware for research.
- Designed and assembled **printed circuit boards** (PCBs) designed to generate electrical impulses used for muscle stimulation using **KiCad**.

Institute for Astronomy, University of Hawai'i at Mānoa   Honolulu, HI
Astrophysics REU Fellow   Jan. 2024 – Sept. 2025
- Conducted statistical analyses of 10,000+ characteristics of M-giant stars using data from TESS and Kepler in **Python3**.
- Cross-compared oscillation periods obtained from space-based telescopes to ground-based transient surveys.
- Found the frequency of maximum oscillation power of 10,000+ M-giants using ASAS-SN survey.
- Talk: Chun, A., Saunders, N., Huber, D. (2023) Testing the Asteroseismic Detection Limits of Ground-Based Transient Survey using Kepler and TESS[1]

Subaru Telescope, National Astronomical Observatory of Japan   Hilo, HI
Research Intern   Jul. 2022 – Sept. 2022
- Characterized the AO3000, a new continuous surface deformable mirror that had 4,096 actuators.
- Created an automated data collection system controlling 1) movement of the deformable mirror, 2) data collection of laser interferometer, 3) data processing and saving in **Python3**, and 4) presented to parent company, ALPAO.
- Publication: Lozi, L., Ahn, K., et al. including Chun, A., (2024). AO3k at Subaru: First on-sky results of the facility extreme-AO. arXiv:2407.19188

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[1] https://www.youtube.com/watch?v=hNwKU7kQk0Q

UNIVERSITY PROJECTS

Mobile Theremin   Mar. 2024
- <u>Demo</u>: Awarded 2nd place project in class[2]
- Created a mobile theremin Apple application by using the True Depth sensor to control volume and the gyroscope rotation on the apple watch to control pitch using Swift.

RhythEMS — Wearable 'Loop Pedal'   Mar. 2024
- Worked with a partner, Elena Hertel, to design and build a wearable device that incorporates EMS and a loop pedal.
- Developed the circuitry for the device, created the final protoboard, and wrote the code to control the EMS output.
- <u>Demo</u>: The user records a rhythm with a drumstick, and the device plays this rhythm on a loop using EMS.[3]

LEADERSHIP EXPERIENCE

Le Vorris and Vox Circus   Chicago, IL
President, Acrobatics Instructor   March 2022 – Present
- Direct, perform, and write three circus shows, each with 20+ performers, every year for three years for 300+ people.
- Reserve spaces, budgeting finances, bridge communication between faculty, performers, and tech staff.

Association for Computing Machinery, UChicago   Chicago, IL
Event Coordinator   Jan. 2023 – Present
- Book weekly rooms and schedule events with the board.

ADDITIONAL

Technical Skills: Git, Arduino IDE, AutoCAD, KiCad, Siemens NX, Sklearn (ML/AI)
Programming Skills: Java, C/C++, Python3, Swift, HTML/CSS
Languages: Fluent in French, English; Intermediate Proficiency in Spanish; Beginner German
Misc: Tennis, Piano, Saxophone, Aerial Silks, Lyra, Partner Acrobatics

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[2] https://youtube.com/shorts/adIGvrU0zSU?si=Q-R5AU7U-Xabkdec
[3] https://www.youtube.com/watch?v=A-OjZe4ul9s