# Nicole Lee

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## EDUCATION

**University of California, Berkeley** — Berkeley, CA

*Bachelor of Arts in Computer Science* — *August 2021 - May 2024*

- (Expected Graduation: May 2024)
- Relevant Coursework: Data Structures, Efficient Algorithms and Intractable Problems, Machine Structures, Information Devices and Systems I & II, Signals and Systems, Computer Security, Prototyping and Fabrication, Hands-On PCB Engineering (HOPE)

## EXPERIENCE

**UC Berkeley IEEE Student Branch** — August 2023 - Present

*Micromouse Instructor*

- Developed and delivered a curriculum to teach 100+ students without prior experience about PCB soldering, encoders, IR sensors, odometry, PID control, and maze-solving algorithms to build an autonomous vehicle

**UC Berkeley Undergraduate Research & Scholarships (OURS)**

*Undergraduate Research Apprentice* — September 2022 - Present

- Collected and assessed data on 3D printing orientation from public CAD libraries
- Formulated machine learning algorithms to optimize prediction abilities.

*SURF Rose Hills Fellow* — May 2023 - August 2023

- Designed and pursued an independent research project in UC Berkeley's Precision Manufacturing Center under the supervision of Professor Sara McMains in the Department of Mechanical Engineering
- Analyzed over 300 parts sourced from campus and online makerspaces and explored multiple linear regression models to identify aspects of a part's orientation that determine the print outcome
- Expressed results and findings in summative papers and a conference-style final presentation.

**Google** — July 2021 - August 2021

*CSSI Online Participant*

- Participated in a 4-week intensive computer science summer program for high-achieving students
- Completed an introductory project-based JavaScript and Firebase curriculum taught by Google engineers
- Configured 15 individual coding projects and a final project using DOM methods, Firebase APIs, and Bulma framework
- Attended product design, resume development, and software engineering interview workshops
- Delivered a collaborative final project presentation, including a live demonstration to Google employees and community leaders

**Girls Who Code** — June 2019 - August 2019

*Summer Immersion Program Participant* — *Glendale, CA*

- Gained hands-on technical experience for 7 weeks at Disney Studio Technology
- Built websites, programmed Arduino robots, and developed simple video games using Python and HTML

**FTC #15091 Aztec.exe** — August 2018 - Present

*Founder. Team Captain*

- Founded the only First Tech Challenge robotics team within a 15-mile radius of the city of Monterey Park
- Worked across disciplines to initiate, plan, support, and execute the work of 15 unique members to ensure a smooth season
- 4 consecutive-year winner of the Control Award for the most innovative software and sensor solution for robot intelligence

## PROJECTS

**CSSI Overflow** — August 2021

*Google Computer Science Summer Institute Final Project*

- A discussion forum where users can create posts, add keywords, search for and view posts written by others, and leave comments and upvotes on any post. Manages user state using a Firebase database and styled using Bulma.

**Gitlet** — April 2021

*CS61B Data Structures Project (Java)*

- Implemented a version-control system using **sha-1** and a parallel representation of classes as **serialized** files to ensure **persistence**.

**Crystal-Growing Box** — November 2021

*Hands-On PCB Engineering (HOPE) Project*

- A temperature-controlled environment to prevent premature precipitation during the crystal growing process. Featured Peltier units for thermal stabilization, fans, and motors to stir the solution and keep the temperature homogeneous.

**Mendo** — August 2019

*Girls Who Code Summer Immersion Program Final Project*

- A Raspberry Pi and Arduino-powered robot that accepts voice input and responds by speaking, lighting up, or moving its arms. Programmed in Python using the Google Speech-to-Text API and Thonny IDE.

## AWARDS

- 2017 Zero Robotics International ISS Finalist (4th place team)
- 2019-2020 FIRST Dean's List Award Finalist

## SKILLS

- Computer: Python, Java, Github, HTML, Javascript