Alison Soong

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EDUCATION

Massachusetts Institute of Technology   *Aug 2023 - May 2027*

- GPA: 5.0/5.0; Candidate for Bachelor of Science in **Electrical Engineering and Computer Science**
- Relevant Classes: Analysis of Algorithms, Discrete Math, DSA, Fund. of Programming, C and Assembly, Data Science, ML
- Activities: UROP, Assistive Technology, Technique (Photography), HackMIT, MedLinks, Intro to Algorithms Lab Assistant

Crystal Springs Uplands High School   *Aug 2019 - Jun 2023*

- GPA: 4.0 (unweighted), 4.21 (weighted); SAT 1600; Distinguished Scholar Award (2023); The Cum Laude Society (2022)
- Varsity Girls Soccer, Skyline Division All-League 1st Team Award; Girls Who Code President; CS Club President

SKILLS

Proficient: C++, Python, Version Control (git/GitHub); Familiar: Java, Swift, C, HTML/CSS, JS (React)

WORK EXPERIENCE & RESEARCH

MIT Undergraduate Researcher, Autonomy and Embedded Robotics, Accelerated (AERA) Group   *Aug 2024 - Present*

- Engineering and optimizing MLAT-R in C++ based on the LIDS AERA group's 2024 ICRA paper; demonstrating via rigorous testing and hardware integration; contributing to upcoming IEEE Transactions on Robotics journal submission

Google STEP Intern   *Jun - Sep 2024*

- Designed and developed replication/data movement features for business-critical logs system using C++ (processing 10+ PB of data per day); utilized Spanner, transactions, and queues; designed automated launch of data migration through a front-end portal and CLI tooling; presented to host team
- Extensively tested via unit and e2e tests using GUnit; deployed and put the final project into production, impacting major Cloud customers such as Spanner and BigQuery

Computer Science Intern, Design that Matters   *Jan - Feb 2024*

- Reduced tech debt by programming impact analysis tools (Python), securing nonprofit's records (AWS, Rclone, CLI tooling), and researching/designing effective medical device GUI; wrote project proposals/documents; presented results to donors

PROJECTS & LEADERSHIP

Project Manager/Executive Board, Assistive Technology Club   *2024 - Present*

- Led and guided 8+ teams (pairing each with a codesigner with disabilities) to engineer accessibility tools; established and enforced the semester-length design cycle, provided technical/organizational/presentation feedback, and led showcases

***Periodic(ally)**, Visualizing Menstrual Equity*   *2023 - Present*

- Developed a mobile app and initiative (Xcode/Swift) to shed light on menstrual equity, period poverty, and period product accessibility; integrated NFC technology with MapKit; ongoing passion project

Software Member, MIT Motorsports (Formula SAE)   *2023 - 2024*

- Developed firmware for custom sensor nodes system (C++) and designed a telemetry system (Python) for an all-electric car

Software/Controls Robotics Captain, FRC 1868 Space Cookies   *2019 - 2023*

- Led software team of 15+ girls; created/taught new-member controls workshops; coded competition robots (C++, GitHub, GitHub Projects); interviewed in all technical judging sessions; designed/led Girl Scouts outreach robots and workshops
- FIRST Robotics Dean's List Finalist (2022); Software Director (2020 - 2022); 2x Qualified for FIRST World Championships (2022, 2023); top 1% of teams for auto EPA (2023); Innovation in Control Award (2023)

ADDITIONAL INFORMATION

Awards: NCWIT 2x National Honorable Mention (2022, 2023); National Merit Scholar; 2x AIME Qualifier; USACO Silver
Interests: Accessibility/Inclusion, Health Advocacy, Photography, Soccer, Girl Scouts, STEM Education, UI/UX, Graphic Design