

Alison Soong

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EDUCATION

Massachusetts Institute of Technology

Aug 2023 – May 2027

- GPA: 5.0/5.0; Bachelor of Science in Electrical Engineering and Computer Science
- Classes: Computer Systems Engineering (TA), Intro to Algorithms (LA), *Computer Networks, *Distributed Systems, *TinyML and Efficient Deep Learning Computing, *Computational Photography, Mobile/Sensor Computing (*Grad)
- Activities: MIT Assistive Technology, MIT SERC Scholar, Research (UROP), Technique (Photography), HackMIT, MedLinks

SKILLS

Proficient: C++, Python, Go, TypeScript, Version Control (git/hg), Agile; **Familiar:** Java, Swift, C, HTML/CSS, JS (React)

Interests: Puzzle Hunts (MIT Mystery Hunt 25/26), Accessibility/Inclusion, Photography, Climbing, Soccer

WORK EXPERIENCE & RESEARCH

SWE Intern, Ads Serving Infrastructure | Google

Jun 2026 – Sep 2026

- Streamlined core ad-serving pipelines (30M+ QPS) by building adapters to bridge disparate legacy execution frameworks and next-gen distributed network solutions; decoupled business logic from framework to reduce layering complexity
- Enabled streaming capabilities to unblock latency reduction efforts across critical request paths; executed global experiments to validate performance/resource neutrality

Research Scholar, Synergy Cohort | MIT Social and Ethical Responsibilities of Computing

Sep 2025 – May 2026

- Built PARROT, a human subjects research study platform investigating how AI assistance reshapes real-time human collaboration; recruited and ran 20+ participants across three experimental conditions
- Conducted literature review on collective intelligence and human-AI synergy, informing study design through discussions with the SERC Synergy focus group; presented poster at the MIT SERC Symposium

SWE Intern, AI/Network Infrastructure (ML, Systems, and Cloud AI) | Google

May 2025 – Aug 2025

- Developed a scalable C++ configuration generator to automate deployments of a distributed nanosecond-precise clock-synchronization across a Pbps-scale datacenter, improving operational efficiency/consistency
- Achieved nanosecond-level precise clock synchronization with Firefly on legacy NIC hardware in test environments, laying the groundwork for planet-scale deployment in Google Cloud and latency-critical workloads such as distributed ML training; involved adapting Firefly for hardware constraints and addressing software/kernel requirements

STEP Intern, Core Data Infrastructure | Google

Jun 2024 – Sep 2024

- Designed replication/data movement features for business-critical logs system (processing 10+ PB of data per day); utilized C++, Spanner; provided automated launch of data migration through CLI tooling and a front-end portal; presented to host team; tested via unit and e2e tests (GUnit); deployed to production, impacting major Cloud customers

PROJECTS & LEADERSHIP

President (prev. Team Lead) | MIT Assistive Technology Club (Website)

Jan 2024 – Dec 2026

- Led build team (50+ students) collaborating with disabled codesigners; leading projects, advising system design, creating educational workshops, liaising with sponsors and faculty advisors, and organizing poster/demo showcases

µCloud: 6.1850 (Society & Systems) Final Group Project (Report)

Sep 2025 – Dec 2025

- Implemented a peer-to-peer caching system prototype to mitigate flash crowd effects by leveraging nearby devices as a temporary micro-cloud and overlaying existing web servers without requiring server modification

BLINC: 6.5820 (Graduate Computer Networks) Final Group Project (Report)

Sep 2025 – Dec 2025

- Created a fault-tolerant neural compression system for wireless real-time video streaming, maintaining visual fidelity despite bit corruption during transmission

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); led technical judging sessions; designed 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

Tau Beta Pi, Cum Laude Society, National Merit Scholar, 2x NCWIT National Honorable Mention, 2x AIME Qualifier