Alexander Lin

linkedin.com/in/alexanderlin-com|github.com/alexanderlin-com | alexanderlin.com | US Citizen

OBJECTIVE

Motivated and detail-oriented Computer Science student with hands-on experience in software testing, automation, and embedded systems. Currently contributing to a multidisciplinary project focused on cutting-edge aerospace technology. Passionate about solving complex technical challenges and optimizing mission-critical systems. Eager to leverage my technical expertise and problem-solving skills in innovative environments.

EDUCATION

California State Polytechnic University — **Pomona, California**
Bachelor of Science – Computer Science — Expected Graduation December 2025

EXPERIENCE

California Institute of Technology (IMSS) — **Pasadena, California**
Software Engineering Intern — June 2024 – August 2024

- Designed, implemented, and maintained **Cypress automation scripts** for **load testing** the class registration system, ensuring system reliability under high traffic.
- Troubleshot and debugged **failing test cases** with developers, improving **cross-browser compatibility and test accuracy** across multiple platforms.
- Created a **SharePoint training page** with **step-by-step guides and video tutorials**, onboarding colleagues to **Cypress testing** and streamlining adoption across the team.

California Institute of Technology (IMSS) — **Pasadena, California**
Software Engineering Intern — June 2025 – Present

- Developing an internal automation tool in Python to streamline faculty access control workflows using SharePoint and Microsoft Graph API
- Built a working MVP for parsing UID and name data from Timesheet lists to replace manual IT provisioning with automated Oracle-ready formatting

Timesheet Data Extractor (In Development)
Caltech IMSS – Summer 2025

- Developed a working MVP in Python that reads faculty UID/name data from SharePoint lists via Microsoft Graph API and formats it for Oracle access control workflows
- Designed for minimal-dependency architecture to streamline authentication and minimize moving parts, using only Graph API endpoints for secure data retrieval
- Currently expanding the tool for integration with Oracle Database systems to automate account provisioning and access control

PROJECT EXPERIENCE

NASA CubeSTEP Flight Software
Software Team / NASA M-STAR Student Researcher — August 2023 - Present

- Developing flight software for a CubeSat using NASA's F' (F Prime) framework in C++, ensuring reliable onboard operations.
- Collaborating with NASA/JPL engineers to integrate software with mission-critical subsystems, optimizing performance for spaceflight conditions.
- Implementing real-time telemetry data handling and debugging tools to improve spacecraft system diagnostics and operational efficiency.

iOS Audiobook Player
Personal Project | GitHub Repository

- Developed a Swift-based audiobook player MVP with support for .mp3, .wav, and .m4b files using iCloud file access and custom UI controls

- Implemented functional pause/play, skip/rewind, and scrub bar with playback tracking
- Project discontinued after identifying limitations with Swift's eBook integration and shifting focus to backend systems

TECHNICAL SKILLS

Languages: Pyton, Java, JavaScript, C++, Swift, SQL
Technologies & Tools: Git & GitHub, Xcode, Visual Studio Code, Cypress, SharePoint (Admin), Microsoft Graph API, Microsoft Azure
Coursework: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Formal Languages