Alexander Aghili

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Education

Bachelor of Arts (B.A), Computer Science & Mathematics **Expected Graduation: June 2026**
University of California, Santa Cruz – Santa Cruz, CA.

GPA: 3.96

Courses: Data Structures and Algorithms, Computer Architecture, Advanced Java, Vector Calculus
Activities: Slugbotics, Competitive Programming, Google Student Developer Club, Student Entrepreneurship Club

Skills: Java, Python, C/C++, SQL, AWS, Git, Apache Tomcat, Linux, Redis, Flutter, REST, Agile, CMake

Experience

Appreciate Inc – Remote Jun 2023 – Jul 2023
Software Engineering Intern

- Worked closely with CTO and VP of Engineering to develop and optimize an API endpoint from monolithic graphql architecture to new computing paradigm providing functionality to a core business product.
- Designed and created a robust and highly optimized database schema. Ensured seamless data storage, query performance, data integrity, and overall system efficiency.
- Employed industry-standard tools and practices, including GitHub Actions for efficient CI/CD pipeline management and Jira for comprehensive feature tracking and project management.

Pinpoint AVL LLC – Santa Cruz, CA. Sep 2022 – Apr 2023
Vice President Of Engineering, Software

- Spearheaded the development and deployment of an innovative Automatic Vehicle Location Tracking (AVL) prototype for local buses by harnessing the power of GPS, LTE, and Microcontrollers, enhancing operational efficiency and service quality.
- Resolved complex hardware and software challenges, leveraging advanced diagnostic tools such as Valgrind and oscilloscopes, resulting in the seamless operation of AVL systems and minimizing downtime.

Projects

LIDAR Distance Network – Github Jul 2021

- Created real-time distance data streaming from a cutting-edge time-of-flight LIDAR sensor to multiple remote clients via a wireless network using C++.
- Worked with datasheet and I2C protocol to connect LIDAR sensor to Raspberry Pi.

Schmidt-Samoa Cryptography – Github Mar 2023

- Built Schmidt-Samoa public/private key cryptography application that can encrypt and decrypt a message securely, providing end-to-end encryption.
- Utilized the GNU Multi-Precision Library (GMP) to handle integers exceeding 64 bits of precision.

Public Poll Social Media Application – Website May 2021 – Sep 2021

- Independently conceived, designed, and developed a comprehensive iOS and Android polling application, utilizing the Flutter framework, Apache Tomcat, MySQL, and Redis.
- Leveraged the power of cloud computing and storage by seamlessly integrating Amazon S3 and Digital Ocean Droplets into the application's infrastructure. This integration enhanced data accessibility and system reliability.

Certificates

Certified Cloud Practitioner - AWS Oct 2022
Demonstrated an understanding of cloud concepts, cloud technologies, AWS billing and cost analysis, and security.

Private Pilot Certificate - FAA May 2022
Proficiency and detailed understanding of aerodynamics, aircraft systems, National Airspace System regulations, and more.

Interests: Skiing, Hiking, Surfing, Camping, Aviation