Daniel Okazaki

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Software Engineer with a background developing reliable software programs and systems that align with customer needs. Experienced strategizing ideas and collaborating with other engineers during the design process. Consistently catches coding errors with great time management and communication skills.

WORK EXPERIENCE

Senior Firmware Engineer   **July 2020 - June 2021**
Western Digital   **San Jose, CA**
Co-lead of developer and customer logging infrastructure in C for entire development process using AIO with an emphasis on redundancy and reliability. Increased redundancy and reliability 3x from original infrastructure.
- Co-designed and implemented logging infrastructure and companion applications in C to parse and retrieve binary logs from disk in x86, ARM, and emulation environments.
- Ported a custom network daemon and hardware abstraction layer in Golang that exposed platform specific system functionality to a higher level REST API.
- Setup and initialized x86 and ARM hardware blade server prototypes.

Platforms Firmware Engineer Intern   **June 2019 - July 2020**
Western Digital   **San Jose, CA**
Ported production logging infrastructure to SPDK based application, greatly increasing debuggability of target firmware.
- Setup and prepared SMR drive emulation environment in QEMU for test infrastructure.
- Designed and implemented startup, initialization, and factory reset Bash scripts in x86, ARM, and emulation environments.

TECHNICAL SKILLS

Languages: C, C++, Python, SQL, Golang, Java, Bash
Operating Systems: Windows, Mac, Linux
Tools/Framework: AWS(Lambda, DynamoDB, and API Gateway), Docker, Jenkins, Git, Jira
Familiar: Javascript, HTML, CSS, ARM/Intel Assembly, RISC-V, Yocto
General: Compilers, Architecture, Algorithms, Data Structures, Object Oriented Programming, Artificial Intelligence, Database Systems

EDUCATION

Master of Science (M.S), Computer Science and Engineering
Santa Clara University, Santa Clara, CA

Bachelor of Science (B.S), Computer Science and Engineering
Santa Clara University, Santa Clara, CA

PROJECTS

NBA Topshot Market Application   **April 2021**
Created a multi threaded application in Golang and Cadence to retrieve transaction events on the Flow public Blockchain to fill a local mySQL database. New market listings that are sufficiently below current market rates are sent to a Discord HTTP webhook for real time notifications.
- **Technology/Tools:** Golang, Cadence, Flow API, MySQL

Mechanical Keyboard Project   **January 2020 - Current**
Working with a partner to design and manufacture a custom aluminum 75% RGB mechanical keyboard compatible with Cherry MX switch variants. Creating a PCB schematic and footprint in Eagle for production manufacturing and developing on open source QMK Firmware.
- **Technology/Tools:** C, Eagle, QMK Firmware

Blockchain Research   **April 2019 - June 2020**
Worked with a partner to create a flexible parameterizable Blockchain framework in Python in order to analyze new chain verification schemas and compare with proof of work and proof of stake. Developed our own TCP communication scheme to establish communication between nodes and automatically update the chain. The base version of this framework is based loosely on the Bitcoin white paper as a baseline benchmark for future iterations.
- **Technology/Tools:** Python, Postman

NavSense   **September 2018 - October 2019**
Worked with a team to create a mobile assistive device for the visually impaired using machine learning for our Santa Clara University capstone project. Built using a Raspberry Pi 3B+ and Google Coral Accelerator.
- **Awards:** Computer Engineering Technical Excellence Award, Senior Design Presentation Award
- **Technology/Tools:** Python, cv2, EdgeTPU API, Intel Movidius Neural Compute SDK
- **IEEE Link :** https://ieeexplore.ieee.org/document/9033125

Santa Clara University 2017 Hack for Humanity Finalist   **March 2017**
Worked together in a group to create a website that displayed the current bills and legislature passing through the California Government.
- **Technology/Tools:** HTML, CSS, Javascript, Web API