Daniel Okazaki

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WORK EXPERIENCE

Senior Firmware Engineer — **July 2020 - Current**
Western Digital — **San Jose, CA**

- Co-lead of developer and customer logging infrastructure for whole development process using AIO with an emphasis on redundancy, reliability, and performance
- 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
- Trained team members on log retrieval for debugging, installing and updating product application, and test infrastructure usage
- Modified setup and build scripts in Yocto build process
- Worked with a cross-product team to develop custom network daemon and hardware abstraction layer in Golang to expose system functionality to a higher level REST API
- Worked with a cross-product team to develop and test install, code load, update, and rollback scripts
- Setup and initialized x86 and ARM blade server prototypes

Platforms Firmware Engineer Intern — **June 2019 - July 2020**
Western Digital — **San Jose, CA**

- Setup and prepared SMR drive emulation environment in QEMU for test infrastructure
- Ported production logging infrastructure to SPDK based application
- Implemented RPC commands to interface with SPDK application
- Designed and implemented startup, initialization, and factory reset Bash scripts in x86, ARM, and emulation environments

EDUCATION

Master of Science (M.S), Computer Science and Engineering
Santa Clara University, Santa Clara, CA
June 2020

Bachelor of Science (B.S), Computer Science and Engineering
Santa Clara University, Santa Clara, CA
June 2019

TECHNICAL SKILLS

Languages: C, C++, Python, SQL, Java, Golang, 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
General: Compilers, Architecture, Algorithms, Data Structures, Object Oriented Programming, Artificial Intelligence, Database Systems

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.

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.

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 in comparison to proof of work and proof of stake. Helped mentor graduate students to use the framework to design a hierarchical Blockchain.

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