Sean Elizabeth Hong

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EXPERIENCE

Western Digital Corporation — Milpitas, CA

Senior Systems Design Verification Engineer — Apr 2024 - Present

- Evaluated consumer and data center Solid State Drive (SSD) power and performance metrics within the Device Validation team
- Developed validation framework for new data placement methods resulting in 20% increase in SSD random write performance
- Optimized test cases in custom Linux framework by removing redundancies in test coverage
- Successfully managed over 200 test cases for a new product throughout its validation cycle

Junior Systems Design Verification Engineer — Jan 2021 - Mar 2024

- Resolved SSD unresponsiveness at high temperatures by optimizing Python scripts, resulting in their integration in future projects
- Integrated NI Data Acquisition (DAQ) API to an automated testing system and set up requisite hardware and software components
- Verified SSD power consumption compliance in laptops by automating MobileMark benchmark tool

Jack Baskin School of Engineering, UC Santa Cruz — Santa Cruz, CA

Undergraduate Student Researcher — Apr 2019 - Aug 2020

- Conducted analysis of the temperature behavior of silicon thin films by utilizing MATLAB to solve the two-dimensional heat equation, taking into account both time and position dependencies
- Demonstrated the ability to predict the total temperature increase during exposure to multiple laser pulses on silicon surfaces

SKILLS

Programming Languages: Python, C, C++
Instruments: DC Power Analyzers, Multimeters, NI Data Acquisition (DAQ), Thermal Chambers
Engineering: Non-Volatile Memory Express (NVMe), PCI Express (PCIe), FIO, IOMeter, Linux, Git

PROJECT

Autonomous IR Sensor Robot — Sept 2019 - Dec 2019

- Constructed an autonomous robot that navigated a light-colored field, detected an IR beacon, and dispensed ping pong balls into a designated zone, achieving a 99% success rate
- Developed robot control system using analog filters, C language, and sensors, converting analog signals to digital for movement control

EDUCATION

University of California, Santa Cruz — Sept 2016 - Dec 2020

Bachelor of Science, Electrical Engineering with Honors in the Major