Sean Elizabeth Hong

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EXPERIENCE

Sandisk Technologies (Formerly Western Digital Corporation) Milpitas, CA

Senior SSD Validation Engineer Apr 2024 - Present

- Evaluated consumer and data center Solid State Drive (SSD) power and performance metrics within the Device Validation team
- Analyzed SSD thermal throttling profiles by controlling chamber temperature and tracking device health metrics
- Developed validation plan for SSD data placement, improving random write performance by 20%
- Optimized test cases in custom Linux framework by removing redundancies in test coverage

Junior SSD Validation Engineer Jan 2021 - Mar 2024

- Automated NAND and device temperature monitoring by implementing PicoLogger sensors
- 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 with laptops by automating various applications and MobileMark benchmark tool workflows

SKILLS

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

PROJECTS

Universal Asynchronous Receiver-Transmitter (UART) Data Transfer Apr 2020 - Jun 2020

- Implemented byte transfer via UART by designing a data transmission module on the Cypress PSoC5
- Enabled interrupt-driven data transfer by configuring Interrupt Service Routines (ISRs) to monitor UART status flags and manage data buffers

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