Calvin Pham

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Education

University of California, Berkeley 2022
Bachelor of Arts in Computer Science

Relevant Coursework: Algorithms, Artificial Intelligence, Computer Graphics, Computer Programs, Computer Security, Data Structures, Database Systems, Machine Structures, Operating Systems

Work Experience

Server Test Engineer II, Quanta Computer – Fremont, CA Jan 2024 – Present

- Led multi-month stress-test initiatives across multiple server platforms, designing long-duration workloads to surface reliability, performance, and stability issues.
- Partnered with Microsoft and cross-functional Hardware, Firmware, and Automation teams to refine stress-test scripts, reproduce failures, drive root-cause analysis, and validate fixes.
- Executed weekly validation of 400+ servers across L10–L11 production stages, using automated test procedures, ensuring full hardware functionality and performance readiness for shipment.
- Deployed PXE infrastructure supporting multiple GPU racks and 100+ concurrent server bring-ups, eliminating bottlenecks and doubling production throughput in 4 months.
- Coordinated global alignment of hardware and firmware CRDs, ensuring compliant test plans and on-schedule component validation.
- Deployed and monitored 30+ iperf servers and implemented multi-VLAN NIC-testing environments across 10G/25G/100G networks, cutting network validation time by 50%.
- Utilized ipmitool, BMC interfaces, and custom Bash/Python scripts for remote server control, FRU and SEL log collection, and hardware diagnostics.
- Troubleshot and resolved server HW/FW issues by optimizing test environments, performing BIOS and FPGA/CP firmware reflashes, and verifying fixes through regression testing.

Software Engineer, Pioneers in Engineering Club – Berkeley, CA Sept 2019 – March 2020

- Optimized C/C++ APIs for an RC robot control system, reducing communication latency by 500% and improving system responsiveness by 40% under high-load operating conditions.
- Designed and implemented new firmware modules enabling real-time sensor processing and autonomous movement, significantly improving stability, precision, and overall robot performance.

Projects

Cryptographic File Sharing System | Golang

- Developed a secure file-sharing system supporting 90+ concurrent users, using optimized data structures to achieve high-throughput transfers of thousands of files at up to 50 MB/s.
- Secured user data by implementing various security tools and techniques, including public/private key encryption, and executed 300+ security tests reducing system vulnerabilities by 95%.

Pintos Operating System | C

- Overhauled Pintos into a fully functional OS, improving execution efficiency by 200% and stability by 150% through enhancements to file systems, process management, and multi-threading.
- Integrated key features, including a concurrency-enabled LRU buffer cache for an inode-based file system, user program multi-threading, and process spawning/waiting, reducing task latency by 80%

Technical Skills

Languages: C, C++, CSS, HTML, Java, JavaScript, Python

Tools: Git, GDB, Mockito, JUnit, NumPy, MongoDB, Docker, SSH, Amazon Web Services