Tony Kam

EECS Student @ UC Berkeley - Graduating Spring 2023
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I am a 4th year student at UC Berkeley studying electrical engineering & computer science. I have prior work experience in software validation at Tesla, high tech manufacturing at Intel, and edtech in UC Berkeley courses. I am passionate about building software & hardware products that improve people's lives. I communicate technical ideals with clarity – demonstrated in teaching CS at UC Berkeley.

Languages: Fluent in Python, Shell/bash script, C, Java, html/css, RISC-V assembly, verilog;
Development Tools: Git version control, Docker, Atlassian Stash & Jira, Github, Splunk, Jenkins;
Miscellaneous: Hardware acceleration, machine learning, web applications, automation pipelines, LinusOS, microcontroller, Internet of Things, integrated circuit design, voltage/power analysis.

WORK EXPERIENCE

Tesla, Inc. – Vehicle Software Infotainment System / *September 2021 – Now*
Software QA Engineer Intern | Automation Pipelines, Jenkins, Splunk, Docker, Stash & Jira, Git
- Scaled out system software testing automation by extending infrastructure to support validation needs of new features and product variations. Built internal tooling to provide clarity and reliability for nightly test suites utilized to catch regression across releases. Implemented improvements that increased stability of testing infrastructure by 10.94%. Reported and triaged ~82 tickets and engaged with ~21 different engineers to action on such tickets, which led to 7 caught bugs.

Intel Corporation – **Assembly & Testing Technology Development /** *May 2021 – September 2021*
Automation Engineer Intern | Manufacturing, Internet of Things, Web Server, ESP32 Microcontroller
- Designed, prototyped, and deployed IoT automation solution that triangulates location and measures battery level for a fleet of 32 material handling vehicles inside a 921,600 ft^2 semiconductor fabrication plant. The data is sent to a web server and it enables operators to manage the fleet from a remote UI, which saves ~250 annual engineering hours, ~450 hours in annual fleet charging downtime, saving approximately $156,000 per year in fab operating costs.

UC Berkeley EE/CS Department - Data Structures / *January 2021 – May 2021*
Student Instructor | EdTech, Automation, Scaling, Git Version Control
- Lead weekly labs and discussions for ~45 students and received teaching reviews with above dept. average marks across all metrics. Maintained and supported in-house automation infrastructure for course website, grading, course management, exam administration, and extensions. Such internal innovation made it possible to deliver high quality education to 1800 students ($600 per class x 1800 students = ~$1,080,000 tuition) with constraints of 5600 instructor hours spent across 40 part time student instructors (~ $112,00 total pay).

PROJECTS

Apple's Berkeley Hardware Acceleration Contest / October 2020 - December 2020
High Performance Matrix Operations Library | Hardware Acceleration, C, Python
- Given standardized Intel Haswell compute servers, implemented and verified a hardware accelerated matrix multiplication library using techniques such as loop unrolling SIMD, OpenMP parallel computing, and caching exploits. Placed 4th overall out of ~700 Berkeley teams in relation to speedups benchmarked against naive libraries. Achieved max performance of 18 gigaFLOPS for single thread and 46 gigaFLOPS for multi thread on large matrix multiplication operations.

EDUCATION

University of California, Berkeley - Electrical Engineering and Computer Science (GPA: 3.8/4.0)
Activities: Machine Learning at Berkeley, Blockchain at Berkeley, Computer Science Mentors, EECS Honors Program, Kairos Society Berkeley Chapter, Phi Kappa Sigma, Cal Triathlon, Cal Ski & Snowboard
Relevant Coursework: Machine Learning, Artificial Intelligence, Algorithms and Complexity Theory, Digital Design and Integrated Circuits, Computer Architecture, Discrete Mathematics, Probability Theory, Linear Algebra, Data Structures, Designing Information Devices and Systems, Leadership.