Andrew Fantino

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EDUCATION

University of California, Los Angeles (UCLA)

MS Electrical & Computer Engr. Focus in Circuits & Embedded Systems — Expected June 2024
BS Computer Engr. Concentration in Business Management — June 2023
Coursework — *GPA: 3.64*

    Operating Systems, Computer Security, Network Fundamentals, Algorithms & Complexity

SKILLS

Programming Languages: C, C++, Python, SystemVerilog, Reactjs	**Hardware:** Lab Equipment, Arduino, ARMv7/v8 SoCs
Software: Linux, Git, Jira, Tableau, Solidworks, LaTeX	**Misc.:** 3D printing, I2C, SPI, UART, STM32, KiCad, Autodesk Eagle, LT Spice

WORK EXPERIENCE

Viasat Inc. — Carlsbad, CA

Software Engineer Intern — *June 2023 - Sept. 2023*
- Ported custom Linux kernel drivers from 3.8 to 5.4 for embedded software router
- Cross-compiled kernel with OpenWRT and containerized code in LXC container
- Researched API changes in kernel changelogs to discern updates between kernel versions

Software Engineer Intern — *June 2022 - Sept. 2022*
- Researched and evaluated next generation user/kernel-space packet processing solutions, such as DPDK, XDP, and ODP for network encryption modules
- Loaded layer 3 forwarding code on various ARMv7/v8 SoMs with Yocto and Buildroot
- Automated test and analysis of packet processing software with Python for a 10x speedup from baseline Linux networking stack

Ocean Aero Inc. — San Diego, CA

Electrical Engineer Intern — *June 2021 - Dec. 2021*
- Architected firmware on ARM v7 MCU for autonomous water sampling project for University of Washington research group for detection of algal blooms in the Pacific Northwest
- Enhanced functionality of ultrasonic anemometer test platform by automating UART logging in existing firmware, resulting in a 4x speedup and eliminating manual supervision
- Prototyped power management/distribution system and layout resulting PCB with Autodesk Eagle

Qualcomm Inc. — San Diego, CA

GSOC Ops Intern — *June 2020 - Sept. 2020*
- Created new Tableau dashboards to improve UX, pushed to production to be used by thousands of full-time staff

OTHER EXPERIENCE

IEEE at UCLA — Los Angeles, CA

Project & Lab Manager — *May 2022 - June 2023*
- Spearheaded 'How to be an Officer' workshops to teach new officer technical and leadership skills to new officers
- Managed lectures, parts orders, and specification documents for project leads to ensure smooth experience leading general members

Digital Audio Visualizer Project Lead — *May 2021 - June 2022*
- Taught 7 lectures on SystemVerilog, Digital Signal Processing, and serial communication protocols using Altera FPGA for 50+ students with 98% completion rate
- Designed piano and pipelined calculator projects assignments and updated lesson plans for in-person teaching

PROJECTS

Build Your Own Router | *C, IP Routing* — Dec. 2022
- Implemented a software router with ARP functionality and Access Control Lists in C++
- Tested performance and functionality in a Mininet virtual network inside Docker container

BOLDR | *ReactJS, Firebase, Git, CSS* — Mar. 2022
- Built social media platform to rate difficulty and quality of bouldering problems and bookmark favorites
- Used Firesbase Auth and Firestore with custom React hooks to securely store user data and gym info