Andrew Fantino

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EDUCATION

University of California Los Angeles Expected June 2023
BS in Computer Engineering w/ Emphasis in Business Management *GPA: 3.59*

Coursework
- *Operating Systems* - *Digital Signal Processing* - *Signal and Systems* - *Analog Circuits I*
- *Digital Logic Design* - *Data Structures & Algorithms* - *Circuits Laboratory* - *Circuits Theory II*

SKILLS

Programming Languages: C++, C, Python, Java, SystemVerilog, SQLite (SQLAlchemy)
PCB and Schematic Design: Autodesk Eagle, Basic LT Spice

Hardware Tools: Lab Equipment, 3D printing, I2C Devices, SPI, UART, STM32, Arduino
Software: Linux, Git, MS Excel, Solidworks, LaTeX

EXPERIENCE

Software Engineer Intern June 2022 – Sept. 2022
Viasat Inc. *Carlsbad, CA*
- Researched and evaluated next generation user/kernel-space packet processing solutions, such as DPDK, XDP, and ODP for upcoming network encryption modules
- Loaded best performing solutions to various embedded ARMv7/v8 platforms for a 10x speedup from baseline Linux networking stack
- Reported results to product owners for future development on encryption hardware
- Applied Agile SCRUM process in development

Electrical Engineer Intern June 2021 – Dec 2021
Ocean Aero Inc. *San Diego, CA*
- Designed and developed firmware on Cortex ARM based microcontroller for autonomous water sampling project associated with University of Washington
- Designed and verify into PCB an iteration of proprietary power management/distribution system
- Implemented new features into existing firmware for ultrasonic anemometer test platform to speedup testing by 4x
- Improved skills in soldering, EAGLE PCB, design for manufacturing, quality control procedures, hardware debugging, and embedded C programming

Digital Audio Visualizer – Project Lead May 2021 – June 2022
IEEE at UCLA *Los Angeles, CA*
- Yearlong project to learn SystemVerilog with periodic projects on digital design and signal processing, including implementing 16pt FFT, with a final project of a digital audio visualizer using an FPGA with VGA output
- Taught 7+ lectures on SystemVerilog, DSP, and serial communication protocols using Altera FPGA for 50+ students with 98% completion rate
- Architected piano and calculator projects and updated existing lesson plans for in person teaching

GSOC Ops Intern June 2020 – Sept. 2020
Qualcomm Inc. *San Diego, CA*
- Designed RESTful API to connect web based super grid tool to Tableau.
- Advanced skills in Python, SQLAlchemy, and database migration
- Developed new Tableau dashboards to improve UX which was implemented into production to be used by thousands of full-time staff

Projects

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

Micromouse (IEEE) | *PCB Design, Embedded C, PID, Floodfill* May 2020
- Worked with a small team to create a maze solving robot with a self-designed PCB and schematic
- Implemented IR Sensors, and Wheel Encoders, PID and Flood Fill Algorithms in C

Arduino Electrocardiogram | *Arduino C, Laser Cutting, PCB Design* Mar. 2020
- Designed, built and tested an Arduino powered electrocardiogram using simple low and high pass filters to isolate frequencies of interest.
- Added OLED display and battery power to view QRS complex without the need for an external display
- Laser cut and assembled custom acrylic enclosure to enable hand-held portability at a low cost.

BAC Measuring Cup | *Arduino C, 3D Printing, Bluetooth* Jan. 2020
- Designed and programmed a weight-measuring cup consisting of an Arduino, a load cell, and basic Android app that tracks the user's BAC
- IDEAHacks - Sustainability Award