Benjamin Fair

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OBJECTIVE

Seeking an electrical, computer, embedded systems, or software engineering internship or co-op, available starting August 2017; open to relocation, preferred city is Seattle, WA or San Francisco Bay Area.

EDUCATION

The Ohio State University, Columbus, OH
B.S. Electrical and Computer Engineering, Expected Graduation: December, 2017
Overall GPA (4.00 scale): 3.95; Major GPA: 4.00

QUALIFICATIONS

Computer and Technical:
- Many programing languages including Go, C, C++, Java, Python, MATLAB, bash; some HTML, PHP, SQL
- Some assembly including x86, ARMv8, and MSP430
- Able to learn new languages quickly
- Experience with Coreboot, U-Boot and some Linux internals such as syscall implementations and boot process
- Designing and prototyping electronic circuits using Eagle, breadboards, and VHDL
- Programming microcontrollers including Arduino, Propeller, and MSP430
- Working in a team using git for version control, Gerrit and mailing lists for code review
- Using Linux since 2009, comfortable with the command line and custom configurations
- Some Linux networking experience including TCP/IP, DHCP, and TFTP

Coursework Includes:
- Computer Science: Software Development; Advanced C Programming; Algorithms I; Operating Systems II
- Electrical and Computer Engineering: Microcontrollers; Advanced Digital Design; Electronics; Signals and Systems
- Mathematics: Calculus series; Differential Equations; Linear Algebra; Foundations of Higher Mathematics

WORK EXPERIENCE

Texas Instruments, Dallas, TX
Software Engineering Intern (August – December 2016)
- Working on next generation of TI SoCs
- Research and early development in C and assembly on low level ARMv8

Google, Mountain View, CA
Software Engineering Intern (May – August 2016)
- Develop and improve audio performance testing tools for Android
- Programming Teensy microcontrollers and Android apps with NDK and OpenSLES
- Written in Java, C, and C++, open source and available on request

Google, Mountain View, CA
Software Engineering Intern (May – August 2015)
- Work on a team to implement, test, debug, profile, and optimize a Linux kernel virtualization platform
- Main code written in Go with tests in C and C++

ENGINEERING PROJECTS

U-Root in Firmware   Google (Ron Minnich) (July – August 2015)
- Built a tiny but functional version of the Linux kernel which fits into 300kB
- Configured a custom version of Coreboot capable of booting this kernel from a BIOS chip
- Created a highly compressed distribution of the U-Root project which can be run by the kernel
- Assembled these parts into a firmware image which boots on general purpose x86_64 hardware
- Documented this process for possible future use at Google to improve overall security of servers

HONORS AND ACTIVITIES
- Participant in OSU Hackathon, 2013 – 2015 and Makeathon, 2014
- Member of Open Source Club and Electronics Club, 2014 – Present
- Honda-OSU Math Medal Recipient, 2012