Michael Pratt

Contact Information

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github.com/prattmic

Objective

To expand my knowledge of embedded and operating systems through internship experience.

Relevant Experience

Google, Mountain View, California

Software Engineering Intern, Google Chrome OS — **May – August 2013**

- Developed support to boot an ARM device from embedded MMC
- Ensured eMMC boot met the Chrome OS boot security requirements
- Worked primarily on the U-Boot bootloader and Chrome OS Verified Boot
- Interfaced with ARM SoC peripherals and the Linux kernel
- Learned to work on a fast-moving project with several other developers

Aerial Robotics Club, North Carolina State University Student Organization

Payload Team Lead — **August 2012 – present**

Member — **August 2011 – present**

- Develop and maintain hardware and software solutions for unmanned aerial systems
- Synthesize subsystems into a complete, autonomous, unmanned aerial system
- Built interface libraries to a machine vision camera and autopilot with the Python C API
- Designed and implemented aerial imaging pipeline, from image capture aboard the aircraft to target recognition and permanent image storage on the ground
- 2013 team at AUVSI Student UAS competition took home 2nd place overall out of 35 teams

F4OS, Personal Project

github.com/prattmic/F4OS — **May 2012 – present**

- Real-time operating system supporting several ARM Cortex-M4 microcontrollers
- Soft real-time scheduling using a preemptive rate-monotonic scheduler
- Modular memory management sybsystem, with multiple memory management schemes
- Currently focusing on more powerful resource model, allowing operations specific to device type

Other Experience

Orange County Schools, Hillsborough, North Carolina

Information Technology Intern — **January – June 2011**

- Maintained and repaired school computers and network
- Assisted in initial implementation of computer ghosting system
- Worked independently to solve IT problems

Boy Scouts of America, Durham, North Carolina

Senior Patrol Leader — **January 2010 – January 2011**

Eagle Scout Award — **October 2010**

- As Senior Patrol Leader, led troop meetings, activities, and leadership council
- For Eagle Scout project, designed and led project to improve an elementary school nature trail

Programming Software

C, Python, ARM Assembly, Go, Bash
Linux, Git, GDB, Make, CADsoft Eagle, LaTeX, HTML

Education

North Carolina State University, Raleigh, North Carolina

B.Sc. Computer and Electrical Engineering — **August 2011 – May 2015**

- Current GPA: **4.00/4.00**
- Courses include: Elements of Controls, Microelectronics, Introduction to Embedded Systems, Discrete Control Systems (Fall 2013, Grad), Compiler Optimization and Scheduling (Fall 2013)

Honors and Awards

Dean's List, North Carolina State University, Fall 2011 through Spring 2013
Goodnight Scholarship, North Carolina State University, 2011
People Helping People Scholarship, NC State Employees' Credit Union, 2011
Eagle Scout Award, Boy Scouts of America, 2010