

Cody Schafer

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Summary

Familiar with leveraging industry standard open source tools, frameworks, and libraries to design and develop complete solutions.

Has developed projects that span servers & embedded (linux & bare-metal) systems.

Enjoys having ownership of a project. Prefers projects focused on physical products.

Experience

Software Engineer at Cybex International (June 2014 – present)

Developed a Bluetooth interface to fitness equipment using standard open source technology (BlueZ & Linux). Designed & developed a secure, zero downtime remote update system for thousands of Internet connected embedded devices. Collaborated with a team to develop next-generation hardware control software utilizing standard Linux software (dbus, systemd, OpenEmbedded) targeting the Beaglebone Black. Created and maintained the meta-rust OpenEmbedded (yocto) layer in addition to developing and maintaining company internal OpenEmbedded layers. Improved memory safety and eased debugging on minimal (embedded cortex-m3 arm) hardware targets via partial memory protection. Maintained and extended department wide continuous integration systems (buildbot).

Software Engineer at IBM's Linux Technology Center (July 2012 – May 2014)

Contributed changes to open source projects (libunwind, perf, and the linux kernel) while collaborating with their respective communities in support of IBM's hardware and software platforms and strategic goals. Developed support for runtime NUMA reconfiguration. Enabled firmware supplied performance counters via Linux's perf API.

IBM Extreme Blue Internship in Austin, Texas (May - August 2011)

As part of a small team, created a driver development kit for Power systems' boot environment (Open Firmware with extensions). Drove the development of the API within the group using existing APIs as guidance. Formally presented the projects' value to executives.

ICAP Software Development Summer Internship (June - August 2010)

Developed maven2 plugins to streamline the internal and external release of software. Created an internal web service to interact with centralized version control to provide diff reporting between module revisions.

Internship at the Advanced Robotics Environmental Assessment Laboratory at the Environmental and Occupational Health Sciences Institute (August – September 2010)

Reworked existing research code for an AVR micro-controller to control a indoor and outdoor air-sampling robot.

Education

Rutgers, The State University of NJ

Bachelor of Electrical and Computer Engineering, Magna Cum Laude

Technical Skills

Knows: Rust, cmake, ninja, GNU make, bash, POSIX shell, C, C++, yocto/openembedded/bitbake, network programming, multithread programming (pthreads, etc), Linux (opensource in-kernel development), python

Familiar with: u-boot, digital circuit design, nodejs, embos, Forth, Open Firmware, Verilog HDL,

Has worked with: Beaglebone black (ARMv7 SoC), ARM Cortex microcontroller architectures, Atmel AVR, Microchip PIC, and others.

Github: <https://github.com/jmesmon/>