

MITCHEL ALLEN HUMPHERYS

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WORK EXPERIENCE

Qualcomm Inc.

San Diego, CA

Senior Software Engineer

2012-current

Led development of the SMMU driver for the Linux kernel. Served as the main PoC for the Linux memory subsystem for bringup and commercialization of the Snapdragon 820 and Snapdragon 400 processors. Made key enhancements to the memory subsystem (Ion memory manager, 64-bit DMA APIs, etc). Contributed tools, documentation, and unit tests for Android and general Linux kernel development using Docker, Python, Rust, NodeJS, and other cutting edge technologies. Administered training to dozens of engineers regarding SMMUs and Linux kernel memory frameworks for multimedia driver development.

L-3 Communications, Linkabit Division

San Diego, CA

Senior Software Engineer

2011-2012

Implemented protocol enhancements for a satellite IP modem in C and C++. Made improvements to the over-the-air message format to optimize bandwidth utilization. Worked on porting a customized FreeBSD network stack to VxWorks. Implemented an Ethernet software bridge in C to simulate satellite network latency in a test environment. Administered training to other team members on the git version-control tool.

Utah State University Research Foundation

Logan, UT

Research Assistant

2007 - 2010

Worked in a research lab in the ECE department to develop a wireless sensor network to monitor horse distress levels using an AVR-based ZigBee software/hardware stack. Developed web applications using Python, Tcl, JavaScript, and PostgreSQL in a Unix environment.

Center for Self-Organizing and Intelligent Systems

Logan, UT

Research Assistant

2008 - 2009

Helped develop a platform for an Unmanned Aerial Vehicle project. Developed an airplane-tracking feature in C++ and OCaml for the UAV ground-station control software.

OTHER PROJECTS

Android Development

Developed *Track That Thing*, an application for sharing your location with friends. Includes Android native and web interfaces for real-time location streaming. Available on the Google Play Store.

EDUCATION

Utah State University

2004 - 2010

Graduated cum laude with a B.S. in Computer Engineering and a minor in Computer Science. GPA: 3.67.

SKILLS

Programming Languages: C, Python, Bash, JavaScript, Emacs Lisp, C++, Java, Go, Rust, Clojure, PHP, TCL, Assembler (x86 and ARM), C#.

Libraries, Tools, and Systems: Linux, Git, JTAG, Docker, ftrace, Gnu Make, Gerrit, TCP/IP, Emacs, GCC, GDB, Vim, SQL, HTML, CSS, Google App Engine, Django, Android SDK, FreeBSD, VxWorks, L^AT_EX, I²C.

Miscellaneous: Linux Foundation Certified System Administrator. Fluent in the Portuguese language.

ACTIVITIES AND ACCOMPLISHMENTS

Activities: Qualcomm Futsal Club Committee Chair. Ambassador for the Utah State University College of Engineering. Utah State University IEEE Council.

Accomplishments: U.C. Riverside Chancellor's Distinguished Fellowship recipient. Completed a 2-year service mission in Brazil. Finalist in the Fall 2007 USU Voices writing competition. USU Presidential Scholarship recipient. Eagle Scout.