James Brisson
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PROFILE

I am a UT-trained Electrical Engineer, and am widely considered a Jedi-Master programmer by my peers. I have designed the entire stack for computers from transistors and computer architecture to operating systems and application level software. I have performed significant work in all development phases of a project life cycle. In addition to computers, I also have experience with interfacing to reality via DSP. I am clearly passionate about Electrical Engineering as many of my hobbies are related to programming, embedded systems, and automation.

EDUCATION

BS in Electrical Engineering	UT Austin in December 2013
Current Enrolment	Student at UT Austin
Tech Areas	Computer Design, Communications/Digital Signal Processing
Notable Classes	Operating Systems Honours (using C), Real-time DSP Lab, Computer Architecture, Real-time Embedded Systems
Current Classes	Multicore Computing, Algorithms

SKILLS

Test and Measurement	Signal Generators, Oscilloscopes, Logic Analyser, Protocol Sniffer
Assemblies	Freescale 6812, LC3, TI TMS320C6000 DSP, Intel i686 (GAS), ARMv7E-M (GAS)
Mechanical CAD	AutoDesk Inventor, OpenSCAD, ImplicitCAD
Hardware Description Languages	Verilog, VHDL, Cλash
Programming Languages	C, Python, Common Lisp, Haskell, Scheme, Clojure, Java, Ruby, C++, Perl, Matlab/Octave, Bash/Zsh, TCL, elisp, Make, LaTeX
Software Development	Emacs, Vim, Make, Ant, Eclipse, Xilinx ISE, Cadence, SimVision

Operating Systems:

- Developed an exokernel for the i686 in C and assembly; ext2 drivers, self-hosting, graphical
- Implemented an RTOS for the ARM Cortex-M in C and assembly
- Compiled custom kernels, Linux and Android, with patching

PROFESSIONAL EXPERIENCE

May 2013 - December2013: Intern Silicon Labs:

- Automated build system creating patch-able 8051 ROM and automated patch making
- Created testing framework for pre and post silicon (simulation, FGPA emulation, evaluation)
- Wrote firmware RC oscillator calibration algorithm and several patches
- Developed waveform capture tool for firmware symbols on a simulated 8051 processor

Summer 2010: Outback Director BTSR:

- Managed 3 staffers leading a trek a week
- High adventure backpacking program
- Planned and tracked food and gear distribution across many campsites

Summer 2009: Scout Skills Director BTSR:

- Managed 3 staffers teaching classes
- Taught camping and outdoor skills
- Responsible for the teaching of 14 classes
- Lead toten chit and fireman chit sessions

COMMUNITY SERVICE

- Mentor for 2013 and 2014 UT RAS Robotathon, Region V, and Mercury teams
- Eagle Scout Project — build privacy fence for Humane Society of Williomson county
- Over 125 hours of community service through Boy Scout Troop 513

SOCIETY MEMBERSHIPS

- Eagle Scout
- IEEE Robotics and Automation Society UT student branch
- IEEE UT student branch

PROJECTS

- Remote controlled mobile couch with turn signals
- Intelligent ground vehicle software design
- Planar image stitching algorithm using phase correlation
- QPSK transceiver
- Custom Keyboard, with custom layout and firmware
- libholonomic: holonomic (omni-wheel) drive and localization library in C
- RASLib: intro to robotics library targeted at the TI Stellaris/Tiva Launchpads
- Robotics Boosterpack for TI Stellaris/Tiva Launchpads (PCB design)
- Discussion Day: Tracking of student understanding through random sampling. Android application in Scheme

Recommendations available upon request