

Derek Gutheil

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School:
220 John Street 5103
Rochester, NY 14623

Objectives

To further my education in Computer Engineering and gain valuable experience with co-op employment. Available Summer and Fall 2013.

Education

2011-2016 | Rochester Institute of Technology, Rochester, NY

- Bachelor of Science in Computer Engineering, expected May 2016
- Dean's List honors (Fall 2011 and Spring 2012)
- 3.21 GPA
- Lead Electronics Engineer of RIT's Electric Vehicle Team

Projects

Summer 2012 | Arduino-Android RGB LED controller

- RGB LED's controlled over Bluetooth via commands sent from an Android tablet
- Studied op-amp, transistor, IC, diode, resistor, and microprocessor circuits; analog and digital
- Studied serial communications between microcontrollers, PC, and tablet
- <http://youtu.be/Z50HQEto14k>

Fall 2012 - present | Arduino based battery and motor controller monitor

- Created a motor controller monitor consisting of an Arduino and an Alltrax AXE motor controller
- Studied Serial and RS232 communication protocols; designed a user interface for a 4 line LCD screen

Skills

- **Languages:** Java, Python, C++, Assembly, C#, VHDL
- **Operating Systems:** Windows, Linux, Unix
- **Hardware:** Freescale HCS12, Atmel AVR, Raspberry Pi, Oscilloscope, Function Generator, Multimeter
- **Software:** Eclipse, Visual Studio, Altera Quartus II, Freescale CodeWarrior, ModelSim
- Eager to learn. e.g. RS232 protocol was studied extensively in the motor controller monitor project

Courses

Digital Systems	Computer Engineering	Computer Science 1-4	Software Engineering*
Assembly Language	Innovation Capstone	HW Description Languages	Circuits 1*

Labs

Digital Systems Lab

- Built combinational and sequential systems on breadboards using knowledge of decoders, counters, multiplexers, shifters, and registers

Assembly Language Lab

- Designed assembly language code for the Freescale HCS12 Microcontroller to perform basic arithmetic, and IO, as well as handle data-structures, subroutine linkage and interrupts

Hardware Description Languages

- Designed, simulated, and synthesized digital components and combinational and sequential circuits

Experience

March 2013 - Present | TA for the RIT Computer Engineering Department

- Mentoring, teaching, and assisting students in a Digital Systems lab course.

* indicates course will be completed by Summer 2013

3/17/2013