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# Andrew Ramsey

## Education

Aug. 2014 – Present

**Computer Engineering**, *Rochester Institute of Technology*, Overall GPA: 3.96, Honors

- Digital System Design II with Lab
- Assembly Language with Lab
- Circuit Analysis I with Lab
- Circuit Analysis II
- Electronics I with Lab
- Product Innovation

## Computer Skills

Languages: C, VHDL, Verilog, Python, Assembly, LaTeX, Bash

Software: Linux, Vivado, ISE, ModelSim, OrCAD PSpice, Quartus II, GNURadio, Git, Vim

Hardware: FPGAs, SDRs, Cortex-M0+, Oscilloscope, Multimeter, Function Generator

Interests: Hardware Design, Digital Signal Processing, Embedded Systems, Open Source

## Jobs

May 2016 – Present

**Computer Engineering Intern**, *Parsons Corporation*

Designing FPGA programs and software defined radio based applications

- Writing, integrating, and testing prebuilt and custom IP to create a complete FPGA design
- Generated spec-compliant radio transmissions based on decoded data
- Replaced GNURadio with a custom, lightweight version using only C

Aug. 2015 – Present

**Teaching Assistant & Mentor**, *Rochester Institute of Technology*

Assist first-year students in lab exercises and adjusting to college

- Graded lab exercises and reports
- Explained digital design concepts in a straightforward manner
- Rewrote lab handouts to be understandable and self-contained

## Projects

Dec. 2015 – Present

**Mastermind**

The game of Mastermind on the Freescale Freedom KL46Z

- Designing a PCB to use as an outreach tool for children
- Wrote mixed C and ARM Assembly to provide software functionality
- Enhanced the game using RGB LEDs for feedback

Oct. 2014 – Present

**Clue**

An effort to recreate the board game Clue on the computer in C

- Learning how to create complex data structures in C
- Developed a decision model based on real world experience
- Self taught graph theory principles

Nov. 2014 – May 2015

**Freescale Car Competition**

Built and programmed an autonomous car to compete in an international race

- Developed with MATLAB, Simulink, and mbed
- Learned to work with others' code

## Extracurriculars

Eagle Scout Award & Scholarship, Assistant Scout Master

Contra Costa County Sheriff's Search and Rescue

Launch Initiative – Avionics