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

## 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, Assistant Scout Master  
Contra Costa County Sheriff's Search and Rescue  
Launch Initiative – Avionics