

Andrew Ramsey

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www.github.com/ARamsey118

Education

Aug. 2014 – Present **Computer Engineering BSMS**, *Rochester Institute of Technology*, Overall GPA: 3.97, Honors

- Senior Design I/II
- Circuits I/II with Lab
- Electronics I with Lab
- Digital IC Design with Lab
- Communication Systems with Lab
- Digital System Design I/II with Lab
- Reconfigurable Computing with Lab
- Applied Programming
- Digital Signal Processing
- Random Signals and Noise
- Assembly Language with Lab
- Interface and Digital Electronics
- Data & Communication Networks
- Computer Organization/Architecture

Computer Skills

Languages: VHDL, Verilog, C, 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

Jobs

May 2017 – Aug. 2017 **Research Assistant**, *Technische Universität Dortmund*

Researched autonomous drone navigation via computer vision and ultra-wideband positioning

- Scaled computer vision-based location using curve fitting
- Achieved autonomous, scale accurate flight using only a single camera
- Overcame language communication barriers to work in an international setting

May 2016 – Jan. 2017 **Computer Engineering Intern**, *Parsons Corporation*

Designed FPGA programs and software defined radio based applications

- Wrote, integrated, and tested 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

Aug. 2017 – Present **Avionics for FAR OUT Rocketry**

Designing a custom engine controller and flight computer for a liquid powered rocket

- Building a ground station using GNURadio and SDRs
- Verifying link budgets and protocols through hand calculations and field testing
- Developing a PCB to hold the engine controller power supply and gather engine data

Mar. 2017 – May 2017 **Freescale Car Competition**

Built and programmed an autonomous car, achieving 3rd place in a multi-collegiate competition

- Designed filters to determine line locations
- Developed embedded C code for PID control

Extracurriculars

Eagle Scout Award, Assistant Scout Master

Contra Costa County Sheriff's Search and Rescue

German Club