William Harrington

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Education

B.S., Computer Engineering, Minor, Mathematics **GPA: 3.4/4.00**
Portland State University, Portland Oregon *2013-2016*

A.A., General studies **GPA: 3.8/4.00**
St. Petersburg College, St. Pete, FL *2009-2012*

Technical Skills

- **Programming:** C/C++, Verilog, Objective-C, Python, MATLAB, ARM assembly, x86 assembly
- **Dev tools:** Git, GNU tools (Make, GCC, Emacs, gdb, gnroff, etc.), Spyder/Anaconda, Xcode, Visual Studio, Arduino, EagleCAD, OpenOCD
- **Project management:** Scrum, Trello
- **OS:** Linux, Mac OSX, Windows XP/7/8

Work Experience

Digital Signal Processing Intern – APDM, Inc. – *Portland, Oregon* *6/2015 - Present*
- Embedded system design and development
  - Schematic capture and PCB layout using EagleCAD
  - Firmware development in C/C++
  - Assembly (soldering) and debug/testing
  - Project documentation (project proposal, requirements, test plan, etc.)
  - Manage projects using Scrum framework and Trello
- Customer support
  - Managed RMA process
  - Implemented out of warranty program to generate revenue from RMAs
  - Developed software utilities for customers in python
- Used git for version control on all software, CAD designs, and documentation

Engineering Intern I – APDM, Inc. – *Portland, Oregon* *6/2014 - 1/2015*
- Algorithm development
  - Implemented kinematic tracker in C++ that utilizes Unscented Kalman Filter
  - Made heavy use of MATLAB and Python for verification and validation
  - Used git for version control
  - Participated in Scrum framework
- Software development
  - Developed iOS app for motion tracking in Objective-C that utilizes OpenCV
  - Used git for version control

IEEE Computer Engineering Tutor – Portland State University – *Portland, Oregon* *9/2013 - 06/2015*
- Topics: Mathematics, programming, digital design, and circuit analysis.
  - Differential equations workshop (`Workshop materials`)
  - Intro to Verilog (`Part 1, Part 2`)

Extracurricular activies

Embedded Systems Engineer – Portland State Aerospace Society – *Portland, Oregon* *7/2015 - Present*
- Designed and developed C3 avionics module for CubeSat
  - Schematic capture and PCB layout using EagleCAD
  - Firmware development, written in C
  - Project documentation (project proposal, requirements, test plan, etc.)

Control Systems Engineer – Portland State Aerospace Society – *Portland, Oregon* *6/2014 - 7/2015*
- Roll control for LV2.3 airframe
  - PID algorithm (Python)
  - Python simulation
  - Code for flight computer
  - Video of Launch-12
  - Analysis pt 1, Analysis pt 2

Honors

ECE Faculty scholarship – Portland State University – *5/2014*
- Awarded for academic excellence.

Rohde and Schwarz Case Study Competition – USA Finalist – *4/2014*
- First round USA winner with team Droning On
- Travelled to Munich, Germany and competed internationally

William Ketchum Mathematics Award – St. Petersburg College – *2012*
- Awarded for works in applied mathematics sponsored by the Mathematics department and the Honors college