Ian C. Hartwig

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www.ihartwig.me/resume

Education:

Degree

May 2016 **Carnegie Mellon University**
M.S. Electrical & Computer Engineering
GPA 3.73/4.0

May 2015 **Carnegie Mellon University**
B.S. Electrical & Computer Engineering
Aug. 2011 GPA: 3.78/4.0

Skills

- CAD – *Cadence, Eagle, KiCAD, AutoCAD*
- System Simulation – *Spice, System Verilog*
- EE Lab Equipment – *incl. USB certification, Audio Precision analyzers, SMT soldering*
- Programming – *C, Python, Javascript, Java*
- Web – *Markdown, HTML, CSS, PHP, SQL*
- Basic Machining – *Mill, Lathe, Laser Cutting*

Experience:

Industry

Present **Hardware Engineer**
Pure Storage, Mountain View, CA
July 2016 *Dreaming up future storage hardware.*

Aug. 2015 **Hardware Engineering Intern**
Pure Storage, Mountain View, CA
Developed tools to validate and margin Flash Module designs. SMD rework, measurement,
May. 2015 *and threaded firmware development.*

Aug. 2014 **Hardware Engineering Intern**
iOS Device Accessories, Apple Inc.
Drove PCB level integration for several close-to-market products. Worked closely with mechanical, layout, RF, and SI engineers to implement and verify circuits. Sparked test equipment automation collaboration in Python
Jan. 2014 *to save engineering time.*

Aug. 2013 **Software Engineering Intern**
Google, Cambridge, MA
Built ISP routing preferences interface for Google's content distribution network (CDN). C++ / Python servers with HTML / AngularJS UI. Committed fixes to Angular at Google.
May 2013 peering.google.com

Academic

Embedded Real Time Sys. (18-349) TA
ECE Department, CMU
Building coursework in ARM OS programming and real time embedded systems.
github.com/ihartwig/raspberrypi-debugger
github.com/ihartwig/rpi-labio

Robotics Club Officer
Student Life, CMU
Oversee and drive campus hackerspace.

Embedded System Design (18-549) TA
ECE Department, CMU
Mentored several capstone design projects. Created coursework in HW design and Eagle.

Activities Board (AB) Coffeehouse
Student Life, CMU
Mid-sized ($2-10k) concert logistics.

AB Tech Executive Board
Student Life, CMU
Live audio engineer and electrician for student-run entertainment productions company.

Projects:

Hobby

May 2016 **Robotic Buggy**
Building a self-guiding, gravity-powered vehicle with the CMU Robotics Club. Embedded SW and (experimental) radio HW.
github.com/CMU-Robotics-Club/RoboBuggy
upverter.com/ihartwig/73003c63baaefdd7

Aug. 2014 **Ace Monster Toys RFID Entry**
Extended RFID locks at hackerspace in Oakland, CA. Custom microcontroller HW and SW with power relays and USB data.
github.com/ihartwig/amtdoor2

Aug. 2013 **Assassins SMS Gateway**
Led small group to develop SMS interface and admin panel for assassins game using the Tropo API and Django python framework.
github.com/ihartwig/camassassins

Academic

Children's Museum "Ant Farm"
Systems Engineering (16-850) Projects
Light-animated path building game for young children. Embedded hardware network reacted to state from magnetic footprints.
upverter.com/ihartwig/4baecc0e3bcd3e67

Monkey Bot
Mechatronic Design (18-578) Projects
Capstone design project. Electromechanical design of window cleaning robot.
trevordecker.github.io/CMU_Mechatronics_2015_TeamB

Gravel Kernel
Embedded Systems (18-349) Projects
Wrote a real time multi-process kernel on a basic ARM platform (Gumstix) with 2 peers.