

IAN C. HARTWIG

mail@ihartwig.me
www.ihartwig.me/resume

SMC 2928
5032 Forbes Ave. 614 Woodlawn Ave.
Pittsburgh, PA 15289 Royal Oak, MI 48073

EDUCATION:

DEGREE

Present

Carnegie Mellon University
Pittsburgh, Pennsylvania

B.S. ECE (expected May 2015)
M.S. ECE (expected May 2016)

2011

Current GPA: 3.79/4.00

SKILLS

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

EXPERIENCE:

INDUSTRY

Present

Hardware Engineering Intern

iOS Device Accessories, Apple Inc.
Drove PCB level integration for several close-to-market products. Selected parts and verified designs. Interacted frequently with mechanical, layout, RF, and SI engineers. Spearheaded test equipment automation standards in Python to save engineering time.

2014

Software Engineering Intern

Network Systems, Google Inc.
Built routing preferences interface for Google's content distribution network (CDN). C++/Python servers and with HTML/AngularJS interface.
peering.google.com

Intro. Computer Systems (15-213) TA

CS Department, CMU
Lead C & systems programming recitations for 30 students. Developed exams and held office hours for curious, struggling, or stuck students.

2013

Test Engineer Intern

Seegrid Corporation, Pittsburgh, PA
Tested software and hardware on linux-based industrial robots. Developed real-time messaging debugger in Python/javascript with RabbitMQ, SocketJS, socket.io, and node.js.

VOLUNTEER/EXTRA-CURRICULAR

Activities Board (AB) Coffeehouse Co-chair

CMU
Act as venue booking agent for mid-sized (\$5,000-20,000) concerts at CMU.

Gadgetry (16-250) TA

Robotics Institute, CMU
Advised and debugged student projects in interdisciplinary embedded circuits and PCB-design course; many students had no prior experience.

Solar Splash 2013

CMU
Led hardware design and construction of data logging and control platform for team's solar boat. Leveraged differential signaling and distinct core functions processor for increased reliability.

AB Tech Executive Board

CMU
Live audio engineer and entertainment electrical designer for student-run sound & lighting company. Mix shows of 2-64 channels, implement 100-600A 3-phase AC power distribution systems, approve smart capital purchases, and train new members.

PROJECTS:

ACADEMIC

2014

Gravel Kernel

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

Map-Reduce Framework

Distributed Systems (15-440) Projects
Designed and built a Java framework for executing map-reduce jobs across the Andrew cluster. Included construction of node controller, clients, and distributed file system.

2013

EXTRA-CURRICULAR

Robotic Buggy

Building a self-guiding, gravity-powered vehicle based on RTK-GPS navigation with small group from the CMU Robotics Club. Primary designer for the radio data link behind RTK-GPS.

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