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614 Woodlawn Ave.
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EDUCATION:	DEGREE	SKILLS

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

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

EXPERIENCE:	INDUSTRY	VOLUNTEER/EXTRA-CURRICULAR

Present

Hardware Engineering Intern
iOS Device Accessories, Apple Inc.
Integrated electrical systems at the PCB level for several close-to-market products. Designed necessary circuits, conducted layout reviews, and verified designs. 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, SockJS, socket.io, and node.js.

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	EXTRA-CURRICULAR

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

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