

# IAN C. HARTWIG

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EDUCATION:	DEGREE	SKILLS
May 2016 (expected)	<b>Carnegie Mellon University</b> M.S. Electrical & Computer Engineering GPA pending first semester grades.	<ul style="list-style-type: none"><li>▪ CAD – Cadence, Eagle, KiCAD, AutoCAD</li><li>▪ System Simulation – Spice, System Verilog</li><li>▪ EE Lab Equipment – incl. USB certification, Audio Precision analyzers, SMT soldering</li><li>▪ Programming – C, Python, Javascript, Java</li><li>▪ Web – Markdown, HTML, CSS, PHP, SQL</li><li>▪ Basic Machining – Mill, Lathe, Laser Cutting</li></ul>
May 2015	<b>Carnegie Mellon University</b> B.S. Electrical & Computer Engineering	
Aug. 2011	GPA: 3.81/4.0	

EXPERIENCE:	INDUSTRY	ACADEMIC
Aug. 2015	<b>Hardware Engineering Intern</b> Pure Storage, Mountain View, CA <i>Developed tools and tests to validate design of close-to-market product. Significant SMD rework and measurement coupled with advanced embedded firmware development.</i>	<b>Robotics Club Officer</b> Student Life, CMU <i>Oversee and drive campus hackerspace.</i>
May. 2015		<b>Embedded System Design (18-549) TA</b> ECE Department, CMU <i>Mentored several capstone design projects. Created coursework in HW design and Eagle.</i>
Aug. 2014	<b>Hardware Engineering Intern</b> iOS Device Accessories, Apple Inc. <i>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 to save engineering time.</i>	<b>Activities Board (AB) Coffeehouse</b> Student Life, CMU <i>Mid-sized (\$2-10k) concert logistics.</i>
Jan. 2014		<b>Intro. Computer Systems (15-213) TA</b> CS Department, CMU <i>Lead C &amp; systems programming recitations for 30 students. Developed exams and held office hours for curious, struggling, or stuck students.</i>
Aug. 2013	<b>Software Engineering Intern</b> Google, Cambridge, MA <i>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.</i>	<b>AB Tech Executive Board</b> Student Life, CMU <i>Live audio engineer and electrician for student-run entertainment productions company.</i>
May 2013	<a href="http://peering.google.com">peering.google.com</a>	

PROJECTS:	HOBBY	ACADEMIC
In Progress	<b>Robotic Buggy</b> <i>Building a self-guiding, gravity-powered vehicle with the CMU Robotics Club. Embedded SW and (experimental) radio HW. <a href="https://github.com/CMU-Robotics-Club/RoboBuggy">github.com/CMU-Robotics-Club/RoboBuggy</a> <a href="http://upverter.com/ihartwig/73003c63baaeffd7">upverter.com/ihartwig/73003c63baaeffd7</a></i>	<b>Children's Museum "Ant Farm"</b> Systems Engineering (16-850) Projects <i>Light-animated path building game for young children. Embedded hardware network reacted to state from magnetic footprints. <a href="http://upverter.com/ihartwig/4baecc0e3bcd3e67">upverter.com/ihartwig/4baecc0e3bcd3e67</a></i>
Aug. 2014	<b>Ace Monster Toys RFID Entry</b> <i>Extended RFID locks at hackerspace in Oakland, CA. Custom microcontroller HW and SW with power relays and USB data. <a href="https://github.com/ihartwig/amtdoor2">github.com/ihartwig/amtdoor2</a></i>	<b>Monkey Bot</b> Mechatronic Design (18-578) Projects <i>Capstone design project. Electromechanical design of window cleaning robot. <a href="https://trevordecker.github.io/">trevordecker.github.io/</a> <a href="https://github.com/CMU-Mechatronics-2015-TeamB">CMU Mechatronics 2015 TeamB</a></i>
Aug. 2013	<b>Assassins SMS Gateway</b> <i>Led small group to develop SMS interface and admin panel for assassins game using the Tropo API and Django python framework. <a href="https://github.com/ihartwig/camassassins">github.com/ihartwig/camassassins</a></i>	<b>Gravel Kernel</b> Embedded Systems (18-349) Projects <i>Wrote a real time multi-process kernel on a basic ARM platform (Gumstix) with 2 peers.</i>