SAM ZECKENDORF

ELECTRICAL & COMPUTER ENGINEER

sam@zeckendorf.me
(862) 220-0477

Education

Tufts University
Bachelor of Science in Electrical Engineering

May 2014
GPA: 3.70

Selected EE Coursework: Feedback-Control Systems, Communication Systems, Microprocessor Architecture & Assembly Code, Digital Logic Circuits, Analog Design I & II, Physics of Solar Cells, Data Structures, Usability Engineering

Selected Other Coursework: Linear Algebra, Discrete Mathematics, Multivariable Calculus, Differential Equations, Music Applications on the iPad, Game Design

Experience

Nest Labs Inc.
Hardware Integration Engineer

September 2014
Palo Alto, CA

Drove schematic design and layout for 1st generation Active IR sensor circuits. Managed bring-up in factory, and drove validation through prototype phase

Designed and spec'd several subsystem flexes and PCBs, drove layout and bring-up in lab. Identified design/manufacturing issues, and pursued through resolution

Created and maintained MATLAB/SPICE simulations for sensitive circuitry to allow data-driven hardware design, in particular for IR Reciever Rx chain.

Wrote and maintained python libraries for interfacing with various test equipment, from Agilent DMMs and GWInstek Power Supplies, to Agilent/Tektronix Oscilloscopes

Apple Inc.
Systems Integration Engineer (iPhone)

January 2013—September 2013
Cupertino, CA

Uncovered hardware bug resulting in power management unit malfunction, identified root cause, and helped provide final schematic and layout changes

Examined signal and power integrity in several subsystems, including Touch-ID. Identified issues resulting from flexible PCB shape, and helped provide alternative designs

Investigated audible noise resulting from piezoelectric properties of ceramic capacitors — designed and fabricated drive and measurement circuitry to stress components under different signal inputs, analyzed resultant audio data

Loopit Inc.
Software Engineer

2012, 2013
Cambridge, MA

Designed web service that aggregates product details across variety of websites and generates growing/adaptive lexicon for use in smart shopping tool

Designed smart comparison tool to bin products into similar categories; company was acquired on merit of software efficacy

STOMP Lego Engineer
Engineering Education

September 2011 — December 2013
Somerville, MA

Travel to classrooms in Cambridge and Boston Massachussets to teach engineering fundamentals to middle and elementary school students

Designed lessons around important and esoteric ideas such as collaborative design, limited materials, abstract problem solving

Solar Energy Research
Research Assistant

September 2010 — December 2012
Medford, MA

Investigated thin film Copper(I) and Copper(II) Oxide growth as semiconductor over ITO substrate

Created proof of concept electrodeposition circuit to show possibility of thin film solar cells powered by solar energy

Projects	imPact	Squid	Smart Hydroponics
	Created iPhone music application "imPact: Remix", funded by Steinway Music	Xbox indie game, awarded Indie Gem award on Joystiq.com (affiliate of engadget)	Intelligent, learning, home-hydroponics system for city dwellers to grow fresh produce. White paper available

Languages & Skills	Assembly	C/C++/C#/Java	Python
	Objective-C	Matlab	Verilog/VHDL