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

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Experience

Nest Labs Inc.
Hardware Integration Engineer

September 2014
Palo Alto, CA

Designed several subsystem flexes and PCBs, drove layout and bring-up in factory/lab. Identified design/manufacturing issues at factory in OQC/IQC fixtures, 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.

Designed extensive test setup for validation of input power circuit, drove validation through proto phase of input power subsystem

Wrote and maintained python libraries for interfacing with various test equipment over USB/GPIB

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

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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

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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

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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

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Projects

imPact

Created iPhone music application "imPact: Remix", funded by Steinway Music

Squid

Xbox indie game, awarded Indie Gem award on Joystiq.com (affiliate of engadget)

Smart Hydroponics

Intelligent, learning, home-hydroponics system for city dwellers to grow fresh produce. White paper available

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Languages & Skills

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