

# SAM ZECKENDORF

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(862) 220-0477

## ELECTRICAL & COMPUTER ENGINEER

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### Experience

#### Space Exploration Technologies Corp. Lead Hardware Engineer (Starlink)

May 2018  
Hawthorne, CA

- Leading a team of engineers designing the next generation of hardware to connect the world to the internet via the Starlink constellation
  - Coordinating with cross functional partners across supply chain, manufacturing, test, reliability, and compliance to build an optimal production line
  - Responsible for schematic capture and layout for a variety of AC/DC power supplies, WiFi routers, and phased array antennas
  - Previously on team responsible for designing Dragon 2 power system and conops
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#### Google Inc. Hardware Design Engineer (Nest/Home & Daydream VR)

September 2014—January 2018  
Mountain View, CA

- Designed hardware for Daydream VR wearables team from schematic capture & layout to validation and test. Responsible for 8 separate PCBAs, FPCAs, and cable assemblies within flagship product from cross functional design to factory quality and bringup.
  - Drove hardware design from marketing requirements to engineering specification, e.g. developing production test tools for measuring "motion-to-photon" latency
  - Designed several FPCs and PCBs for Nest Secure, driving schematic capture, component selection, layout and bring-up in factory/lab. Identified design/manufacturing issues at factory in OQC/IQC, and pursued through resolution to optimize yields.
  - Created and maintained MATLAB/SPICE simulations for sensitive circuitry and power modeling to allow data-driven hardware design, e.g. RX for active IR intrusion detector
  - Wrote and maintained python libraries for interfacing with various internal test equipment over USB/GPIB, governed by web app
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#### Apple Inc. Systems Integration Intern (iPhone)

January 2013—September 2013  
Cupertino, CA

- Validated internal PMU across efficiency, phase/gain margin, load/line response, startup timing, etc.
  - Verified signal and power integrity in several subsystems, including the novel Touch-ID circuit. Identified issues resulting from FPC routing, and provided updated 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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#### Center for Engineering Education Outreach STOMP Lego Engineering Fellow

September 2011 — December 2013  
Somerville, MA

- Part of nonprofit that travels to classrooms in Cambridge and Boston Massachusetts 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
- See More: <http://www.legoengineering.com/about/>

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*Education*

Tufts University  
Bachelor of Science in Electrical Engineering

September 2010 - May 2014  
Medford, MA

*GPA 3.8*

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

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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*

Cadence (Concept + Allegro)  
Altium

C/C++/C#/Objective-C  
Matlab

Python  
VHDL