

# Brian Krentz

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## Education

### Harvard College

BS Electrical Engineering. Coursework in Computer Hardware, Multivariable Calculus, Linear Algebra, Circuit Design, Physics (Mechanics, E&M), and Feedback Systems. GPA: 3.7/4.0

Cambridge, MA  
May 2017

### Summer 2014 HBX | Harvard Business School

HBX Credential of Readiness (CRe) – Passed with High Honors.  
Coursework in Economics, Financial Accounting, and Business Analytics

Cambridge, MA  
September 2014

### New Trier High School

Honor Roll, National Mathematics Honor Society, AP Scholar with Distinction

Winnetka, IL  
May 2013

## Experience

### Program Manager Intern at Microsoft

May 2016-Present

Worked in the Windows COIN team, which focuses on the monetization of Windows during retail, out-of-box-experience (OOBE), and post-OOBE. I focused on developing contextual notifications, which would target key business metrics. From this I was able to generate a forecasted \$10 million in revenue.

### Teaching Fellow at Harvard University

September 2015-Present

Assisting to teach as a Teaching Fellow for the Intro to Electrical Engineering courses at Harvard University (ES50 and ES52). Responsibilities include leading a lab session, leading a section to review material and provide homework assistance, grading homework, and assisting students to design and build projects at the end of the term.

### Harvard-HKUST Summer International Research Experience

June 2015-August 2015

Led an engineering design project with UAVs. Built a delivery system that utilized quadcopters to deliver small packages on autonomous routines. I focused on building firmware to enable autonomous flight routines and object detection/avoidance. In addition, we created a control interfaces for both computers and android phones.

## Projects\*

### NASA Funded ICOS Instrument for HCL Detection:

January 2016-May 2016

As part of a NASA funded Harvard Junior design course, ES96, 21 students (myself included) worked with the Anderson Group to design and build a prototype ICOS instrument for HCL detection in the lower stratosphere (10-80 parts per trillion accuracy required). My personal contributions to the project were focused on designing a PCB board for driving the laser.

### Harvard Robotics Club UAS Project:

Fall 2015-Spring 2016

Project leader for creating a quadcopter to enter into the AUVSI UAS competition. This competition requires an unmanned aerial system to perform automated flight, target recognition, search and assist operations, and more. Our current design will have a quadcopter scanning a plot of land according to an algorithm to determine the most efficient path, while a ground control station analyzes a video stream with a computer vision algorithm to detect targets.

### Sleep Tracking Smart watch:

Spring 2015

Designed a smart watch that can track the quantity and quality of a person's sleep. It consists of a 5x5cm PCB, which utilizes an accelerometer and heart rate sensor to track sleep. The design uses an E-ink display for low power. There are 4 buttons that enable the user to toggle between different displays (watch, graph, sleep data, and alarm). The expected battery life before recharging is a little over 48 hours.

*\*For a full portfolio of projects, please go to [briankrentz.github.io](https://github.com/briankrentz)*

## Leadership Experience and Activities

### Figure Skating:

Competitive from 2003-2013

Member of Team USA (2013); 2013 8<sup>th</sup> Place Finisher (Junior Level), 2012 6<sup>th</sup> Place Finisher (Novice Level) - USFS National Championships; 19<sup>th</sup> - 2013 Junior Grand Prix Baltic Cup in Gdansk, Poland.

### Captain for Harvard Men's Frisbee:

September 2015-Present

Captain of BRedLine, Harvard's ultimate Frisbee B-team. Duties include organizing team practices and workouts every week, coordinated logistics for multiple tournaments every year, and marketing the club to recruit new members. 2016 Developer Regional 2<sup>nd</sup> Place, 2015 Developer Regional Champions, 2014 Greater Boston Area Sectional Champions

### President of Harvard Krav Maga:

September 2015-Present

President. Duties include organizing classes, hiring instructors, teaching classes, recruiting new members, marketing the club, and managing the club's finances.

## Technical Skills and Languages

**Computer Languages:** Python, C, Verilog, OCaml, C++, Assembly

**Operating Systems and Programs:** Mac OS X, Win10, EAGLE, PADS, MatLab & Simulink, Solidworks, FinalCutPro

**Languages:** An intermediate level of Chinese linguistic skills, as well as reading and writing of Chinese characters