

## Education

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*University of California, Santa Cruz*

**September 2013 – June 2017**

Bachelors of Science with Honors in Computer Engineering with a focus on Digital Hardware.

*Significant Course Work:*

- Digital Signal Processing
- VLSI Digital System Design
- Microprocessor System Design
- Logic Design with Verilog
- Analog Circuits
- Computer Architecture

## Experience

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*Computer Science Database Systems II Staff*

**April 2017 – June 2017**

**Tutor and Grader**

**UC Santa Cruz**

- Graded assignments for Professor Sheldon Finkelstein's Database Systems CS capstone course.
- Tested student's implementation of database systems using C++ test benches.
- Assisted students with questions regarding C++ and course concepts.

*RT-2M Replacement Senior Design Project*

**January 2017 – June 2017**

**Lead DSP Engineer**

**Plantronics**

- Interdisciplinary senior design project that maintained a professional relationship with Plantronics.
- Designed LabVIEW software for the NI cRIO to replace Plantronics' outdated audio test equipment.
- Utilized event driven, object oriented, and multithreaded LabVIEW code for a robust software architecture.
- Engineered Digital Signal Processing algorithms for crest factor optimization, calibration, and audio signal generation and analysis.
- Successfully provided Plantronics with a working prototype of an RT-2M replacement tester.
- Worked in a team of six.

*Leeps Lab Research Intern*

**December 2015 – December 2016**

**Lead Software Engineer**

**UC Santa Cruz**

leeps.ucsc.edu

- Worked under Professor Kristian Vargas Lopez on a behavioral economics project.
- Designed a facial recognition program to determine and log the emotional state of a subject.
- Utilized Shimmer Sensors to log heart rate (PPG) and skin conductance (GSR) data.
- Helped set up and run pilot experiments involving collecting data from student volunteer subjects.
- Gained knowledge on C++ compilers and libraries in Linux.
- Successfully provided Professor Lopez with a working program used in many data collecting experiments.

*Emocar - Sponsor Prize at CalHacks Hackathon*

**October 2014**

**Lead Embedded Software Engineer**

**CalHacks**

- Designed a brain-computer interface that allows a user to control an Arduino rover with their mind.
- Engineered a machine learning algorithm to detect patterns in noisy data. Used this to determine if the raw EEG data matched a command for the rover.
- Won a sponsor prize for most connected project.
- Worked in a team of four.

## Skills

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**5 years:** Microcontroller/FPGA embedded system programming (NI cRIO, Cypress PSoC5, Xilinx FPGA, Arduino)

**5 years:** Git for large scale version control

**4 years:** C/C++ systems programming (Embedded Systems, OpenCV, Boost, Affdex)

**3 years:** Digital and Analog circuit design and analysis

**2 years:** Hardware synthesis and VHDL (Verilog, System Verilog)

**2 years:** Digital Signal Processing

**2 years:** Matlab, Python, and Java programming

**1 year:** LabVIEW (OOP, Event Driven, Multithread, RTOS, FPGA)