

# Joe Rowley

Consultant at Bellus3D

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## Summary

I hope to continue working in healthcare. My time has been spent working in several disciplines. As a software engineer I've built web applications (both frontend and backend), and worked on code for microprocessors. As a hardware engineer I've designed a few PCBs. I've also worked extensively in teams, at times taking roles in leadership.

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## Experience

### **Consultant at Bellus3D**

August 2015 - December 2015 (5 months)

Research and Development, hardware prototyping.

### **Course Developer Assistant at University of California, Santa Cruz**

September 2014 - March 2015 (7 months)

I helped Phokion Kolaitis, the Chair of CS at UC Santa Cruz (at the time), create a new course, CMPS 185: Technical Writing And Communication In Computer Science. This involved researching related courses at other universities, developing curriculum and assignments, and creating a repository of interesting research papers and patents related to computer science.

### **Undergraduate Research Intern at UC Santa Cruz**

July 2014 - March 2015 (9 months)

I served as the lead engineer, designed a prototype of an experimental camera flash with 10 individually controlled high power LEDs. For more info check out the links below: <https://imgur.com/a/AzWaE> [https://github.com/joer14/Portable\\_RTI/](https://github.com/joer14/Portable_RTI/)

### **Programmer at Sana.mit.edu**

February 2014 - October 2014 (9 months)

I'm was the lead software developer for the Sana Protocol Builder, a tool that allows clinicians to create medical algorithms that run on community health workers' smartphones in rural and low resource environments.

### **Guest Lecturer at Sana.mit.edu**

July 2014 - July 2014 (1 month)

I presented with a group from MIT at Vellore institute of Technology in India, and a gave a few lectures about the Sana medical platform, and web application engineering to undergraduates.

**Teaching Assistant at UC Santa Cruz**

March 2014 - June 2014 (4 months)

I was teaching assistant for an undergraduate computer science course, CMPS 119: Software for Society under professor James Davis. I wrote tests and quizzes, organized student groups, managed grades, and facilitated communication between students and project mentors from various NGOs.

**Residential Assistant at Crown College, University of California, Santa Cruz**

September 2012 - June 2014 (1 year 10 months)

Provided assistance, guidance and counseling to 75 college freshman and upperclassmen. Tried to keep them from doing anything too stupid. More seriously, I provided support to students and staff alike - both technical and interpersonal skills were used greatly.

**Student Ambassador at Google**

August 2013 - November 2013 (4 months)

I acted as Google's liaison to my university, educating students, staff and faculty about how to better use Google products.

**Computer Technician at Learning Support Services, University of California, Santa Cruz**

January 2013 - October 2013 (10 months)

I worked on a team that supports hundreds of computers on campus and the infrastructure that powers them. In addition, I developed an internal web application for tracking printer usage.

**Google Chrome Academy at Google**

June 2013 - June 2013 (1 month)

Learned from industry experts about HTML5 and the latest web frameworks and technologies. Developed a multiplayer game with a group that uses voice recognition for interaction and Google+ for authentication.

**Web Master & Strategist at Millennium Alliance for Humanity and the Biosphere at Stanford**

June 2012 - February 2013 (9 months)

Worked with developers and project leaders to develop a strategy for online growth and development, implemented and maintained both content and code on the site.

**Intern at University of Wisconsin-Madison, Department of Computer Science**

June 2010 - September 2010 (4 months)

I developed software with an undergraduate student to track laptops for the UW - Police Department.

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**Projects****RGB LED Connect 4 Game**

June 2014 to Present

Members: Joe Rowley

Quick Overview with pictures: <https://imgur.com/a/9oMJc> For my CMPE121 Microprocessors final project I implemented the classic Connect 4 game using the Cypress PSOC5LP dev kit and a custom board I designed and built. I tested updating the displaying using hardware timers, interrupts, DMA and custom logic I implemented in verilog. The game was multiplayer and connected to an opponent over serial. The game also records players moves to microSD card. Check out the link to learn more about the project.

### **Gadcalc**

January 2014 to Present

Members:Joe Rowley

I built a gadolinium contrast agent dosage calculator for technicians and medical doctors. A quick hack I threw together over a couple of days. Built in Angular.js and Bootstrap. It allows the user to supply an adjusted dose and gives warnings when a dose is outside FDA guidelines. [joer14.github.io/GadCalc](http://joer14.github.io/GadCalc)

### **Oceanic Scales**

February 2013 to June 2013

Members:Joe Rowley

I created some of the initial prototypes for the project. I learned to use a laser cutter and created an user controlled wheel that interfaced with a microprocessor using a magnetic rotary encoder. The system I helped to design controlled over a thousand RGB LEDs. I worked on both hardware and software for this project.

### **UCSC Course Planner**

January 2013 to March 2013

Members:Joe Rowley, Sam Wing, Graham Greving, Tommy Beeman

A project I made with a few classmates in a couple of weeks for my HCI (human computing interaction) class. I worked both on the frontend design and implementation, and backend with ajax requests and database models. src: [https://github.com/sampwing/cmpe231\\_project](https://github.com/sampwing/cmpe231_project) JQuery, Bootstrap, Django

### **Solar Powered Watershed Simulator**

March 2012 to July 2012

Members:Joe Rowley

Designed and implemented the technical components of a solar powered watershed simulator for a campus greenhouse. I designed, selected parts, and installed a solar panel, charging station and water pump. Many other students collaborated on the artistic aspects, as well as the initial planning phases. I was brought in to provide momentum and technical expertise to the project.

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## **Volunteer Experience**

### **Software Engineer at Health Records for Everyone**

July 2013 - Present (2 years 8 months)

I traveled to rural Ethiopia for 3 weeks, learned about the existing health care system, and looked for places where technology could meet a need. I wrote an app ([etmedtools.appspot.com](http://etmedtools.appspot.com)) and hope to write more.

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## Honors and Awards

### **Ira and Kate Pohl Computers and Society Award**

University of California, Santa Cruz

May 2015

Ira and Kate Pohl scholarship is to recognize and support outstanding undergraduate students who are committed to using computer science for social good. <https://www.soe.ucsc.edu/news/article/2350>

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## Education

### **University of California, Santa Cruz**

Bachelor of Science (B.S.), Computer Engineering, 2011 - 2015

### **University of California, Santa Cruz**

Bachelor of Arts (B.A.), Computer Science, 2011 - 2015

Activities and Societies: Association of Computing and Machinery

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## Interests

Information Communication Technology for Development (ICT4D), music, distance running, the outdoors!

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## Certifications

### **Protecting Human Research Participants Course**

National Institutes of Health

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## Skills & Expertise

**Python**

**Web Application Design**

**JavaScript**

**Programming**

**Public Speaking**

**C**

**Linux**

**OS X**

**Matlab**

**HTML5**

**Google App Engine**

**Django**

**HTML 5**

**CSS3**

**CSS**

**Java**

**Microsoft Excel**

**AJAX**

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## Languages

**English**

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## Courses

### **Bachelor of Science (B.S.), Computer Engineering**

University of California, Santa Cruz

Probability/Stats	CMPE 107
Intro Operating Systems	CMPS 111
Intro Comp Networks/Lab	CMPE 150
Verilog Design / Lab	CMPE 125
Data Prog & Viz with D3.js	CMPS 165
Computer Architecture	CMPE 110
Micro System Design / Lab	CMPE 121
Systems & Signals	EE 103
Database Systems I	CMPS 180
Intro Computer Graphics	CMPS 160
Software for Society	CMPS 119
Human Computer Interaction	CMPE 131

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[Contact Joe on LinkedIn](#)