

# CLAYTON SANFORD

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## EDUCATION

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**Brown University**, Providence, RI

Graduating Class of 2018

*Relevant Coursework:* Abstract Algebra; Linear Algebra; Introduction to Software Engineering; Discrete Structures and Probability; Differential Equations; Accelerated Introduction to Computer Science; Models of Computation, Topics in Chaotic Dynamics, Analysis: Functions of One Variable, Probability and Computing  
GPA: 3.9

**Soquel High School**, Soquel, CA

Graduating Class of 2014

*Significant Awards:* Valedictorian, National AP Scholar, Departmental Honors in Science and Social Sciences

## WORK EXPERIENCE

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**Brown University**, Undergraduate Teaching Assistant

September 2015 - Present

- Assisted with CSCI 190 (Accelerated Introduction to Computer Science), CSCI 220 (Discrete Structures and Probability), and CSCI 1010 (Theory of Computation).
- Tutored students during office hours, graded homework assignments, created problem sets, and responded to students' emails.

**UC Santa Cruz Bioinformatics**, Software Intern

June 2013 - August 2013

May 2015 - August 2015

- Developed software that moves large genome files from Amazon's S3 storage to a distributed format on computer clusters of virtual machines from Amazon's EC2 services.
- Used Scala to add functionality to upload to S3, to allow for inputs and output data to be either files or directories, and to create unit and integration tests.
- Investigated the link between the RANK1 gene and survival likelihood of breast cancer.
- Performed statistical analyses using Python and the UCSC Cancer Genomics Browser.

**UC Santa Cruz Geosciences**, Intern

June 2012 - August 2012

- Identified flower species and the extent of blooming in a variety of local sites.
- Compiled data from the 1990s to compare with current research.

## AWARDS

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**Interdisciplinary Contest in Modeling**, Outstanding Winner

February 2016

- Selected as one of the top five papers of over 3000 submissions.
- In a team of three, designed a mathematical model for water scarcity in India, and applied the model to real-world data using Matlab.
- Wrote a twenty page paper discussing our model and methods of addressing water scarcity.

## LEADERSHIP EXPERIENCE

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**Brown Applied Math Department of Undergraduates**, Secretary, Treasurer

January 2015 - Present

- Planned and ran events for applied math concentrators including math contests, professor lectures, and information sessions for potential concentrators.
- As secretary in fall 2015, recorded minutes and took notes at all meetings.
- As treasurer in spring 2016, monitored all monetary transactions and DUG finances.

**Brown Outing Club, President**

November 2014 - Present

- Organized transportation, obtained supplies, coordinated participants, and planned routes for outdoor activities and trips.
- Oversaw leader training, recruited new board members, and managed club logistics.
- Planned a hiking trip to Mt. Monadnock for 44 people, which involved significant logistical planning and delegation of tasks.

**Meiklejohn Peer Advising, Advisor**

September 2015 - Present

- Mentored five first year students interested in math and computer science.
- Assisted students with course selection and helped them adjust to college life.

**Algebra in Motion, Volunteer Representative**

January 2015 - May 2016

- Volunteered as a tutor in physics to help students at Hope High School understand basic concepts.
- Involved in both after school tutoring for students behind on work and in class tutoring assisting a teacher in running her class and helping students with assignments and labs.
- Starting in Spring 2016 as a volunteer representative, mentored other tutors and helped steer the organization as a whole.

**White Stag Leadership Development Academy, Adult Leader**

November 2011 - Present

- Managed over sixty individuals as a senior leader for the 2014 camp and staff development year.
- Recognized with the Silver Stag, the program's highest award, in 2013.
- Taught leadership skills such as communication, planning, and counseling to teenagers.

**Soquel High Homework Club, Tutor**

December 2011 - May 2014

- Volunteered as a peer tutor to help socioeconomically-disadvantaged students understand Algebra, Geometry, and Chemistry.

**Boy Scouts of America, Eagle Scout**

September 2004 - February 2014

- Organized fifteen people for over 150 hours of work in building eight barn owl boxes for the Watsonville Wetlands to control rodent populations.
- Provided mentorship to younger members as patrol leader and senior patrol leader.

**ADDITIONAL SKILLS**

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**Programming Languages:** Java, Scala, Python, Matlab, Javascript, HTML, CSS, C++

**Languages:** English (native), Spanish (intermediate)