

EMILY BURNETTE

EDUCATION

CASTILLEJA SCHOOL – HIGH SCHOOL DIPLOMA, JUNE 2016, 4.2 GPA

JOHNS HOPKINS UNIVERSITY – B.S. BIOMEDICAL ENGINEERING, EXPECTED 2020

EXPERIENCE

RESEARCH ASSISTANT; BIOCHEMISTRY LAB, STANFORD MED – 2015-2016

As a summer research assistant in the Herschlag Biochemistry Lab at Stanford during 2015 and 2016, I studied the structure and history of the Alkaline Phosphatase family of enzymes, specializing in PafA mutations grown in E.coli. I gained important biochemical skills like running gels, making competent cells, and analyzing kinetic data from spectrophotometers & plate readers. I also presented my findings to the lab at group meetings, as well as in weekly meetings with Professor Herschlag. I also learned how to read and present journal articles as a member of the Herschlag lab Journal Club.

SUMMER INTERN IN GENERAL SURGERY; UCSF – 2014

I shadowed Dr. Kirkwood, Professor of Surgery at UCSF, over the summer. During that time, I learned what a life as a surgeon is like. I assisted Dr. Kirkwood in a clinical trial about doctor-patient communication by creating pamphlets to educate patients about various surgical procedures. These pamphlets are currently being used in Dr. Kirkwood's clinic.

FIRST ROBOTICS COMPETITION TEAM 1700, 2012-2016

I have been a member of FIRST Robotics Team 1700 for four years, focusing in operations, programming, and electronics. During my tenure, I have held three leadership positions: Entrepreneurship Lead (2015), Driver (2015, 2016), and Programming & Electronics Lead (2016). As Programming & Electronics Lead, I am in charge of programming and wiring the entire robot, as well as teaching younger team members. Over the summer and the first semester, I led 10 workshops about the basics of computer science. As Entrepreneurship Lead, I was the member of the leadership team in charge of all nontechnical activities including fundraising, budgeting, and updating the team's public image. I raised nearly \$100,000 in sponsorships from local companies and implemented a new system of mandatory outreach for team members. My efforts led to Team 1700 winning the Engineering Inspiration award for our outreach system and team culture. As the driver, I am in charge of the team at competition. I meet with the drivers of other teams at the competition and decide on strategies and a plan of action.

TEACHER'S ASSISTANT; CASTILLEJA CHEMISTRY DEPARTMENT – 2015- 2016

As a teacher's assistant for Castilleja School's department of Chemistry, I set up laboratory experiments, help honors students with their classwork, and help to design a new Organic Chemistry elective for the 2016-2017 school year with an after-school pilot seminar in March 2016.

TEACHER'S ASSISTANT; CASTILLEJA SCHOOL'S BOURN LAB – 2014- 2015

As a teacher's assistant at Castilleja's Bourn Lab, I helped Dr. Chau teach 7th and 8th graders about programming and engineering. I also led seminars for middle school students on a variety of topics ranging from soldering to java programming.

PEER TUTOR; CASTILLEJA SCHOOL – 2012- 2016

I have been a peer tutor at Castilleja for the past 4 years, teaching subjects varying from Spanish to Chemistry to students as young as 7th graders and as old as 11th graders.

VOLUNTEER; NATIONAL CHARITY LEAGUE MID-PENINSULA CHAPTER – 2010- 2016

I have been a member of the Class of 2016 of the National Charity League Mid-Peninsula chapter for six years. Through this time I have held leadership roles such as Treasurer, Vice-President of Programs, and President. I have also logged nearly 150 community service hours for organizations such as the American Cancer Society and the Ellen Meadows Prosthetic Hand Foundation.

PROJECTS

DWAYNE "THE ROCK" JOHNSON, A FRC ROBOT – 2016

I was the lead programmer for my team's robot in 2016, a small and strong ball-shooter named Dwayne "The Rock" Johnson. My primary objective (besides making a competitive robot and teaching) was to make every system as automated as possible. This meant including sensors, utilizing vision tracking with OpenCV, and coding using a command-based language.

TREXT, AN IOS APP – 2014

A couple friends and I wrote *Trext* for submission to the Technovation challenge, which in that year had a category for apps that helped the health of young women. We made *Trext* in the wake of hearing about covered up campus rapes at Stanford, which is only about 3 miles away from our high school, and wanted to do something to help protect women from sexual and domestic abuse. Trext is an app that allows users to send a preset message to a close group of trusted friends and the police with the touch of a button. Trext later went on to win the House App Challenge.

SKILLS

BIOCHEMICAL RESEARCH

COMMUNICATION WITH MENTORS

JAVA & HTML PROGRAMMING

GRAPHIC DESIGN

BUSINESS

FUNDRAISING & COMMUNITY OUTREACH