

## EDUCATION

### University of California, Berkeley

Berkeley, CA

*BS, Electrical Engineering and Computer Science (EECS)*

*August 2016 to May 2020*

Coursework: Data Structures, Discrete Mathematics and Probability Theory, Linear Algebra and Differential Equations, Structure of Computer Programs, Designing Information Systems and Devices, Multivariable Calculus

### Archbishop Mitty High School

San Jose, CA

*Graduated with honors*

*August 2012 to May 2016*

GPA: 3.95. SAT: 2380. Awards: American Invitational Math Exam (AIME) qualifier, Interstellar National Math Competition Quarterfinalist, US History Bee National Championship Qualifier, St. Francis of Assisi Service Award

## EXPERIENCE

### Berkeley Institute for Data Science

Berkeley, CA

*Undergraduate Researcher – Machine Learning*

*September 2016 to Present*

- Used machine learning methods (clustering, random forest, regression, PCA) to identify traits of invasive species
- Used data mining methods such as web scraping (BeautifulSoup) to parse and clean publicly available species data.
- Classified over 3000 species using machine learning, reducing the need for expert analysis and manual classification
- Achieved a classification accuracy of 87% for at-risk plants in the United States, Australia, and the Pacific islands
- Integrated the ML framework with an interactive web front end to simplify and visualize the classification process

### Blockchain@Berkeley

Berkeley, CA

*Software Developer – Blockchain*

*November 2016 to Present*

- Developed blockchain for supply chain and shared economy solutions using Ethereum for Airbus and City Innovate
- Used Ethereum to develop a blockchain accounting system that prevents financial fraud in large corporations

### NASA Ames Advanced Studies Laboratory

Mountain View and Santa Cruz, CA

*Research Intern – Memristors*

*June 2015 to August 2015*

- Characterized and modeled the electrical features of thin film for memristive applications relating to solar energy
- Ported over obsolete technology using LabVIEW and programming to be used by modern laptops and computers
- Developed data analysis and statistical analysis methods to characterize electrical characteristics of thin film
- Automated the thin film measurement process using LabVIEW, enabling remote access of the measurement system

## PROJECTS

**Dorm Ex Machina** – Won 1st place in Robotics@Berkeley's 2016 invention competition. Built a Arduino robotic system that uses RFID and Bluetooth technology to track whether a user has forgotten their belongings (keys, wallet, phone) in their room. Used CAD and 3D printing for rapid prototyping; created a "Find My iPhone"-like app as a hub for the user to retrieve forgotten belongings. *Github: <http://bit.ly/2eqwdQH>*

**Where to Eat** – Created a visualization of restaurant ratings in Python using machine learning and the Yelp academic dataset to predict favorite restaurants. Used k-means clustering and a Voronoi diagram to visually group restaurants based on common features. Used simple least-squares regression to predict user ratings for similar restaurants based on the ratings they gave to previous restaurants. *Github: <http://bit.ly/2f5rQv9>*

**Scheme Interpreter** – Created a Scheme interpreter using Python. The interpreter is able to understand and compute linked lists, tail call optimization, and streams in addition to the fundamental Scheme features. Implemented a read-eval-print loop, tokenization, dynamic and lexical scoping. *Github: <http://bit.ly/2h6IZ8b>*

## EXTRACURRICULAR ACTIVITIES

### Phi Beta Lambda – Web Development Project Manager

Berkeley, CA, *September 2016 to Present*

- Conducted market research on over 100 members in order to formulate targeted tech solutions for club operations.
- Created a bot on Facebook Messenger that pairs users up anonymously for spontaneous social interactions.
- Worked on a project team of 8 to create web-based solutions such as a custom-built wiki and user portal

### Sacred Heart Community Service – Volunteer Organizer

San Jose, CA, *August 2012 to May 2016*

- Organized the Pack-a-Back school supply drive for 2,800 low-income elementary school students in Santa Clara County
- Assisted Mandarin-speaking families in applying for services, Prepared and distributed food to families in need.

## SKILLS & QUALIFICATIONS

**Skilled** – Python, Java, Ruby on Rails, HTML, CSS, Javascript, SQL, Scheme, LaTeX, Git, CAD, Ethereum, Solidity, Mandarin Chinese

**Proficient** – PostgreSQL, Lisp, LabVIEW