

# JUSTIN MI

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

*BS, Electrical Engineering and Computer Science*

*August 2016 to May 2020*

Coursework: 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

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## EXPERIENCE

### Berkeley Institute for Data Science

Berkeley, CA

*Undergraduate Researcher*

*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 publically available species data.
- Classified over 3000 species using machine learning, reducing the need for expert analysis and manual classification
- Achieved a classification accuracy of 95% for at-risk plants in the United States, Australia, and the Pacific islands
- Integrated the algorithm with an interactive web framework to automate and visualize the classification process

### NASA Ames Advanced Studies Laboratory

Mountain View and Santa Cruz, CA

*Research Intern*

*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
- Detected and demonstrated memristive properties for zinc oxide thin films to be used in solar cell applications

### Mitty Summer Robotics Class

San Jose, CA

*Student Teacher*

*June 2014 to August 2014*

- Developed and taught electrical engineering and basic programming using VEX robotics to 20 elementary school kids
- Created and led an end-of-session competition and showcase to 20 kids ranging from 7 to 12 years old

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## 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>*

**Yelp Maps** – Created a visualization of restaurant ratings using machine learning and the Yelp academic dataset. Used k-means clustering as an unsupervised learning algorithm and a Voronoi diagram to visually group restaurants based on common features. Used simple least-squares regression as a supervised learning algorithm to predict user ratings for similar restaurants based on the ratings they gave to previous restaurants.

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## 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.
- 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.

### Camp Krem Outdoor Camp – Counselor

Boulder Creek, CA, *August 2015 to August 2016*

- Organized and facilitated learning activities for 40 developmentally disabled children, teens and adults (campers).
- Developed and organized an end-of-session prom night that was adopted as an official activity for the campers.

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## SKILLS & QUALIFICATIONS

**Skilled** – Python (*NumPy, SciPy, pandas, scikit-learn, BeautifulSoup*), Java (*SE and EE*), LaTeX (*XeLaTeX*), CAD (*Solidworks, AutoCAD*), Git, Scheme, SQL, Mandarin Chinese (*reading, writing, speaking*)

**Proficient** – LabVIEW, web development tools (*HTML, CSS, Javascript, Bootstrap*), Lisp, RubyOnRails