

# Joey Hejna

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## Education

### UNIVERSITY OF CALIFORNIA, BERKELEY | 4.0 GPA

2017-PRESENT

Major: B.S. in Electrical Engineering and Computer Science

- Coursework: Linear Algebra, Designing Information Systems, Data Structures & Algorithms, Discrete Math/Probability

### STANFORD UNIVERSITY | 4.0 GPA

SUMMER 2016

- Relevant Coursework: Client-side Internet Technologies, Differential Equations for Engineers

## Professional Experience & Research

### RESEARCH APPRENTICE | ROMPS GROUP | BERKELEY

SPRING 2018-PRESENT

- Designing a 100m oscillating atmospheric probe to measure temp, pressure, humidity data for cloud modeling.
- Utilizing raspberry pi integrated system and packages for collecting/storing sensor data into database
- Creating mechanically oscillating winch system for weather balloon driven package.

### RESEARCH ASSISTANT | STANFORD UNIVERSITY

SUMMER 2016

- Utilized Python's Natural Language Toolkit to parse and clean 1.3 Terabytes of Corporate 10K and 10Q filings.
- Formed bigram datasets uses to predict corporate donation tendencies based on language
- Created a web-based visualizer using JavaScript, SQL, and Google Charts API to allow researchers to view changes in word usage frequency over time, filtered by industry or location.

### HEAD SAILING INSTRUCTOR | SHORELINE LAKE

2015-2017

- Directed staff of twelve employees to run effective youth summer camps and adult workshops for tech firms.

## Personal Experience, Activities, & Volunteer Work

### ANDORID DEV | PROJECT MANAGER | MOBILE DEVELOPERS OF BERKELEY

FALL 2017-PRESENT

- Developed Streamline – a social mobile application for sharing music using the Spotify API. Designed layout for app screens and interfaced with API for token authentication and streaming. Implemented Firebase database schema for data / post storage for each user. The App is downloadable on the google play store.
- Contract team – developing professional Android messaging application for a local startup called Switchboard.

### LAUNCHPAD AT BERKELEY | MACHINE LEARNING / AI

SPRING 2018-PRESENT

- Member of student team designing methods for unique object tracking in video using TensorFlow. Our object is to move beyond pure classification of type and track unique objects (of the same type) as they move.
- (Indep.) Used OpenCV, python 3 to implement facial recognition and tracking in video with Haar Cascade filters.
- (Indep.) Trained emotion recognition neural net using the Yale Faces dataset to categorize facial expression in video.

### CAPTAIN | FIRST ROBOTICS TEAM 114

2015-2017

- Lead team of over thirty students through the build process of two full sized \$10k competition robots.
- Designed more than two-hundred solid-works components for drive, flywheel, and pneumatic systems.
- Spearheaded championship robot designs, winning 1<sup>st</sup> place at the 2017 Ventura Robotics competition and competing at the 2017 First Robotics Championship and 2016 Quarterfinals at Silicon Valley Robotics comp.

### CAPTAIN, VICE PRESIDENT | MVLA SPEECH AND DEBATE

2015-2017

- Competed nationally, ranking 42<sup>nd</sup> in CA, one of two-hundred to compete at 2016 UK Tournament of Champions, 1<sup>st</sup> speaker awards at UOP and La Costa Invitational tournaments of over a hundred and fifty competitors.
- Head of middle school outreach, taught and designed curriculum for debate classes across two school districts.

### WEB DEVELOPMENT

2015-PRESENT

- Created modern personal / portfolio website [joeyhejna.com](http://joeyhejna.com) utilizing Bootstrap, jQuery, SCSS technologies.
- Web Manager for Beyond Fistula - Created and maintained WordPress website for non-profit providing aid to women in Kenya post fistula surgery from 2015 to 2016

## Skills & Distinctions

**PROGRAMMING:** Java, Python, JavaScript, HTML/CSS, Android, TensorFlow, SQL, Firebase, Language Processing, Unix, R

**ENGINEERING:** SolidWorks CAD, mill lathe 3D printer & laser fabrication, MATLAB, diff eq, multivariable calc, stats

**ACADEMIC:** UC Berkeley Regents and Chancellors Scholarship, 2017 Rambus Innovator of the Future Scholarship