**John Echols**

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# Education

**University of California, Berkeley Expected Graduation: May 2018**

*B.S. Bioengineering, 3.1 GPA*

Minor in Electrical Engineering and Computer Sciences

**Relevant Course Work**: Bio-mechanics, Instrumentation in Biology and Medicine, Information Devices and

Systems, Discrete Math, Data Structures, Computer Architecture, Medical Imaging Signals and Systems, Artificial Intelligence

# Research Experience

**Vandsburger Lab June 2017 - Present**

*University of California, Berkeley Berkeley, CA*

*Undergraduate Research Assistant June 2017-Present*

* Performed analysis of cardiac MRI images in MATLAB
* Collaborated with the University of Florida on a gene therapy for Friedreich’s Ataxia

# Leadership and Extracurricular Activities

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| **University of California Marching Band** | **August 2014 - Present** |
| *University of California, Berkeley* | *Berkeley, CA* |
| *Student Director* | *January 2017-Present* |

* Member of the 5 person Executive Committee responsible for planning band events, working with the university to create a positive public image, and managing a $500,000 annual operating budget
* Lead of team of 6 members who together are responsible for all musical aspects of the 250 person organization
* Plan and coordinate with clients in order to facilitate over 100 performances throughout the Bay Area
* Lead and conduct the band during rehearsals as well as at all football and basketball games
* Coordinate with the Athletic Department in order to create an exciting fan experience at sporting events

# Computer skills (proficiency in parenthesis)

**Languages/Frameworks**: Python (5/5), Java (5/5), C (3/5), MATLAB (5/5) **Web**: HTML5 (5/5), CSS3 (4/5), Django (3/5), jQuery (2/5)

**Software**: Git (3/5), LaTex (3/5), Microsoft Excel (2/5), COMSOL(2/5)

**Projects**

Class Projects. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

{ Pac-Man AI written in Python

{ Voice controlled toy car, including front end circuit design and back end control scheme and signal processing

{ Low-noise pedometer made with noise-matching techniques that had accurate step counting within <1%