

# John Echols

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## Education

**University of California, Berkeley**

**Expected Graduation: May 2018**

*B.S. Bioengineering,*

*3.1 GPA*

**Relevant Course Work:** Bio-mechanics, Instrumentation in Biology and Medicine, Information Devices and Systems, Data Structures, Medical Imaging Signals and Systems, Artificial Intelligence, Systems and Signals, Physiology

## Research Experience

**Vandsburger Lab**

**June 2017 - Present**

*University of California, Berkeley*

*Berkeley, CA*

*Undergraduate Research Assistant*

*June 2017-Present*

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

## Leadership and Extracurricular Activities

**University of California Marching Band**

**August 2014 - Present**

*University of California, Berkeley*

*Berkeley, CA*

*Student Director*

*January 2017-Present*

- o 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
- o Lead of team of 6 members who together are responsible for all musical aspects of the 250 person organization
- o Plan and coordinate with clients in order to facilitate over 100 performances throughout the Bay Area
- o Lead and conduct the band during rehearsals as well as at all football and basketball games
- o 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**.....

- o Web-based mapping application of Berkeley written in Java
- o Pac-Man AI written in Python
- o Voice controlled toy car, including front end circuit design and back end control scheme and signal processing
- o Low-noise pedometer made with noise-matching techniques that had accurate step counting within <1%

**Personal Projects**.....

- o Personal website, www.johntechols.com