

# Olivia Sandvold

## Summary

Incoming Biomedical Engineering senior passionate about computer science, machine vision, and product development. Experience in image processing and analysis, system architecture, and IOS application development. Looking to leverage expertise in an engineering research and development or software developer role.

## Contact

Cell Phone: (515) 322 3310  
Email: [osandvold@outlook.com](mailto:osandvold@outlook.com)  
Github: [/osandvold302](https://github.com/osandvold302)

## Education

BSE Biomedical Engineering, The University of Iowa  
Minors: Mathematics, Computer Science

Expected Graduation May 2020  
GPA: 4.08

Study Abroad, The University of Strathclyde

Jan 2019 – May 2019

## Skills

- |        |              |          |          |          |
|--------|--------------|----------|----------|----------|
| ▪ C++  | ▪ Python     | ▪ MATLAB | ▪ NodeJS | ▪ AWS    |
| ▪ Java | ▪ JavaScript | ▪ ImageJ | ▪ Docker | ▪ Vue JS |

## Work Experience

- |  |                     |
|--|---------------------|
| Corporate Research and Development Intern, 3M  | May 2019 – Present  |
| ▪ Designing an IOS application to track manufactured parts utilizing OpenCV, Amazon Web Services including Amplify, Cloudformation, Lambda, and Cognito, and Swift |                     |
| Teaching Assistant, Introduction to Engineering Computing, University of Iowa  | Aug 2017 – Dec 2018 |
| Software Engineering Intern, Bio::Neos, Inc  | May 2018 – Aug 2018 |
| ▪ Developed NodeJS incremental backup system with front-end webpage for monitoring   |                     |
| Electrical and Computer Science Engineering Researcher, University of Iowa   | May 2017 – Jan 2018 |
| ▪ Detected neuronal activity in calcium ion images by performing blind source separation and optimizing image process algorithms in MATLAB                         |                     |
| Anatomy and Cell Biology Researcher, University of Iowa  | Jan 2017 – Aug 2017 |
| ▪ Investigated potential enhancers of transcription factor AP2 and their effects on regulation of neural crest development in zebrafish                            |                     |

## Project Experience

- |  |                     |
|--|---------------------|
| Magnetic Resonance Imaging Brain Segmentation Project  | Oct 6 – 7 2018      |
| ▪ Created convolutional neural network using SimpleITK and TensorFlow to segment scans of human heads into components at the University of Iowa's Big Data hackathon |                     |
| Systems, Instrumentation, and Data Acquisition Final Project   | Apr 2018 – May 2018 |
| ▪ Implemented Arduino and accelerometer circuit system and accompanying code to simulate blunt force trauma on football players during practice                      |                     |

## Activities

- |   |                     |
|---|---------------------|
| Volunteer Chair and Secretary of Tau Beta Pi  | May 2018 – Present  |
| President of Hacklowa   | Jun 2018 – Dec 2018 |
| ▪ Oversaw five Chair members and all club functions at the highest level through delegation of work, GitHub issues, and weekly standup meetings |                     |
| Volunteer in Child Psych and Behavioral Unit, University of Iowa Hospitals and Clinics  | Jun 2017 – Dec 2018 |