Olivia Sandvold

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Objective
Graduating Biomedical Engineer passionate about computer science, machine learning, and applications to healthcare in biomedical imaging.

Education

BSE Biomedical Engineering, The University of Iowa   Anticipated May 2020
- Minors: Mathematics, Computer Science   GPA: 4.08 / 4.00
- Dean's List, President's List, UI Honors Rhodes Dunlap Scholar

Study Abroad, The University of Strathclyde   Jan 2019 – May 2019

Skills
- C++
- Java
- Python
- JavaScript
- MATLAB
- Ruby
- Swift
- Docker
- NodeJS
- Django

Work Experience

ECE: 5480 Digital Image Processing Teaching Assistant, The University of Iowa   Aug 2019 – Present
- Facilitating grading of ImageJ plugin and MATLAB homework

Corporate Research and Development Intern, 3M Company   May 2019 – Aug 2019
- Designed an IOS application to track and measure manufactured parts utilizing OpenCV, Amazon Web Services including Amplify, CloudFormation, Lambda, and Cognito, and Swift

Software Engineering Intern, Bio::Neos, Inc   May 2018 – Aug 2018
- Developed NodeJS incremental backup system and monitoring website
- Restructured Ruby pipeline for analyzing human genomic cancer data

Electrical and Computer Science Engineering Researcher, The University of Iowa   May 2017 – Jan 2018
- Detected neuronal activity in calcium ion images by performing blind source separation and optimizing image processing algorithms in MATLAB

Project Experience

Senior Design Dental Treatment Appraisal Project   Aug 2019 – Present
- Utilizing mesh data of teeth and gum scans to determine if a model can be built for predicting dental treatment success or failure

Magnetic Resonance Imaging Eye Segmentation Project   Oct 6 – 7 2018
- Created a convolutional neural network with Nifty Net and Simple ITK to segment eyes in head MRI scans at the University of Iowa Big Data hackathon

Systems, Instrumentation, and Data Acquisition Final Project   Spring 2018
- Built accelerometer circuit system and implemented accompanying Arduino code to simulate blunt force trauma in football plays for preventing injury

Activities

Secretary of Tau Beta Pi, Iowa Beta Chapter   May 2018 – Present
- Organizes t-shirt fundraisers and outreach events for organization

President of HackIowa   Jun 2018 – Dec 2018
- Oversaw five Chair members and all club functions at highest level through delegation of work, GitHub issues, and weekly standup meetings

Volunteer in Child Psych and Behavioral Unit, UI Hospitals and Clinics   Jun 2017 – Present