Julia Howes

SUMMARY

I am a biomedical engineering graduate-turned-prospective software engineer. My most impactful experiences during University helped to expose my appreciation for software and inspire a career shift, which I have pursued head-on since graduating in Spring 2020. I am eager to apply what I love doing to challenging and innovative projects that improve the lives of others!

INFORMATION

Los Angeles, CA
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SKILLS

- Git
- JavaScript
- TypeScript
- HTML
- CSS
- Angular
- React
- Bootstrap
- C#
- C++
- Python
- SQL
- ASP.NET
- NodeJS
- Express
- MATLAB
- LabVIEW

EXPERIENCE

Computer Engineering Intern at Monteris Medical, Plymouth MN

May 2019 – August 2019

- Developed LabVIEW software to automate and triple the efficiency of a time-consuming inspection process. The program initializes a serial connection, collects and plots a data stream, validates input from the inspector, and automatically generates a report.
- Implemented LabVIEW features to improve ease, accuracy, and speed (10x) of medical laser analysis. Script rapidly processes historical data points to calculate and index laser waveform characteristics. It also provides a graphical display with the option to isolate wave pulses to investigate anomalies.

PROJECTS

PetNet – A Peer to Peer Pet Adoption Web Application

May 2020 – August 2020

- A platform where owners looking to rehome their pets can connect with those looking to adopt.
- The app is built with an Angular front-end written with TypeScript and using Bootstrap CSS components, a RESTful API server built with ASP.NET Core in C#, and SQLite.
- Features include user registration and login, secure authentication, session management, photo-upload with Cloudinary, private messaging, pagination, filtering, and sorting.

BB Bottle - Biofeedback Bottle for Monitoring Infantile Dysphagia

September 2019 – May 2020

- Collaborated with clinicians, an industry advisor, and a small student group to design a solution to quantify infant feeding coordination, and developed a prototype with Arduino.

EDUCATION

Bachelor of Biomedical Engineering, University of Minnesota – Twin Cities

September 2016 – May 2020 GPA: 3.4

Assistant Researcher at Department of Biomedical Engineering

- Designed fabrication procedures of optical ultrasound detectors for intravascular photoacoustic imaging of narrow coronary arteries.
- Assessed device quality by analyzing optical resonance with LabVIEW and MATLAB.

Publication: *S.V. Thathachary, J. Howes and S. Ashkenazi, "Polymer Waveguides for Improved Sensitivity in Fiber Fabry-Perot Ultrasound Detectors," in IEEE Sensors Journal, Feb. 2020.*

Member of Engineering World Health Campus Organization

- Co-led the design team for a 3D-printed prosthetic arm for a child in the community.
- Part of a small team to prototype a low-cost IV drip-rate counter with Arduino.

Continuing Education

Build an app with ASP.NET Core and Angular from Scratch • The Complete Python Bootcamp Beginning C++ Programming • The Complete SQL Bootcamp • The MERN Fullstack Guide