

EDUCATION

Duke University

December 2016 • Durham, NC
M.S. in Biomedical Engineering
GPA: 3.83/4.00

Washington University in St. Louis

May 2015 • St. Louis, MO
B.A. in Neuroscience
Minor in Music
Alpha Delta Phi, Eliot Chapter
College Honors, Dean's List
GPA: 3.60/4.00

University College London

January – June 2014 • London, UK
Affiliate Student, Biosciences Division
Grade: Upper Second (2:1)

SKILLS

Development

Python
Database design
Web development
Java
MATLAB
Arduino / Photon

Lab Techniques

Oscilloscope and multimeter use
Breadboard / circuit construction

COURSEWORK / PROJECTS

THINC 2016 Hackathon: Third Place

- + Built a web application using Flask and React.js to reduce emergency room overcrowding

Introduction to Medical Instrumentation

- + Designed and built an Arduino-controlled, Fitbit-like activity monitor

Invention to Application

- + Developed a business plan for a medical software startup lead by Duke medicine faculty

Signal Processing & Applied Mathematics

- + Created a sign language alphabet to text transcription program in MATLAB

Personal Website

- + Built personal static site using the Hugo framework and custom HTML/CSS

EXPERIENCE

APEX NEURO. *Biomedical Engineer*

July 2017 – Present • Boston, MA

- + Analyzing subject biometrics and subjective metrics from human studies to assess efficacy of a nerve stimulation device
- + Refactoring and extending Python codebase to generalize across multiple experiments
- + Designing backend infrastructure with MongoDB and Tableau visualization

NEUROTECHBOS. *Volunteer*

August 2017 – Present • Boston, MA

- + Boston chapter of NeuroTechX nonprofit promoting innovation in neurotechnology
- + Organizing speaking events and hack nights around neuroscience and tech

FREELANCE. *Data Scientist & Developer*

May 2017 – August 2017 • Boston, MA

- + Designed and implemented a database for data analysis in PostgreSQL and SQLAlchemy – Neuromotion
- + Analyzed heart rate data to assess efficacy of a gaming platform in helping players regulate emotion across weeks – Neuromotion
- + Wrote library in Python for data retrieval, analysis, and visualization – Neuromotion
- + Built automation pipeline for administrative tasks handling over 4000 users within a caregiver educational platform – CareAcademy

TECHSTARS BOSTON. *Data Science & Tech Associate*

January 2017 – May 2017 • Boston, MA

- + Performed data analytics and software development projects for 13 early-stage startups in the Techstars Boston class
- + Created and deployed an automatic email notification and Google Calendar bot to help organize 350+ meetings a week across 24 teams
- + Restructured C# code in Python for AWS deployment in a supply chain startup
- + Wrote code to reconcile multiple MRI data formats and anonymize patient information for a neuroengineering startup

MIGUEL NICOLELIS NEURAL ENGINEERING LAB. *Research Assistant*

September 2015 – December 2016 • Durham, NC

- + Analyzed kinematic and in vivo neural data in a study of primate locomotion
- + Implemented Kalman filtering and multilinear regression in MATLAB to determine phase of gait and examine neural firing patterns
- + Created predictive models of leg motion from cortical neuron activity for potential application to brain-machine interfaces

WARREN GRILL NEURAL ENGINEERING LAB. *Research Assistant*

March 2016 – September 2016 • Durham, NC

- + Developed a suite of tools in Python for academic article reference and organization
- + Built front- and back-end components using SQLAlchemy and PyQt5 for database and GUI design
- + Integrated functionality of existing article providers via API calls
- + Tested Python code and practiced test-driven development with Nostests

DUKE NEUROSCIENCE CAMP. *Instructor*

July 2016 • Durham, NC

- + Prepared lectures and led discussions on neuroscience, ethics, and philosophy
- + Organized science-based activities and oversaw projects for 28 high school students