

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
AWS
Java
MATLAB

Lab Techniques

Oscilloscope and multimeter use
Breadboard / circuit construction

COURSEWORK / PROJECTS

MSc Final Poster Presentation

- + “Deriving bilateral lower limb kinematics from cortical population activity during bipedal primate locomotion”
- + Duke University, Dec. 2016

THINC 2016 Hackathon: Third Place

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

Invention to Application

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

Introduction to Medical Instrumentation

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

EXPERIENCE

READCOOR. Software Engineer

February 2018 – Present ▪ Boston, MA

- + Building a backend system with PostgreSQL database and Flask API to interface between bioinformatics data and downstream image processing
- + Working with bioinformaticists to design DNA probe sets

APEX NEURO. Biomedical Engineer

July 2017 – February 2018 ▪ Boston, MA

- + Analyzed subject biometrics and subjective metrics from human studies to assess efficacy of a nerve stimulation device
- + Refactored and extended Python codebase to generalize across multiple experiments
- + Designed backend infrastructure with PostgreSQL and Tableau visualization

NEUROTECHX. Editor, Writer, Organizer

August 2017 – Present ▪ Boston, MA

- + Writer and Editor of the “New Emerging Tech” and “Machine Learning for BCIs” content for the NeuroTechEDU open education platform
- + Organize speaker events and Hack Nights around neurotechnology for NeuroTechBOS, the Boston chapter of NeuroTechX with over 750 members

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 5 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
- + 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 PyQt5 and SQLAlchemy
- + Integrated functionality of existing article providers via API calls

