Keaton Armentrout

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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
Docker
Flask
JavaScript

PROJECTS / POSTERS

Wisdom of the Flock
+ Personal full stack project using a Python Twitter bot to scrape tweets and display them
+ Built backend API and DB using Flask and SQLAlchemy, frontend with JavaScript and React.

Personal Site
+ Taught myself JavaScript and React to build my personal website using Gatsby.js

M.S. 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 app using Flask and React.js to reduce emergency room overcrowding

EXPERIENCE

READCOOR. *Software Engineer*
February 2018 – Present ▪ Boston, MA
+ Built multiple APIs using Flask and PostgreSQL and deployed on AWS
+ Created DNA probe design software using Python and Nextflow to generate unique, gene-specific barcoded DNA probes for R&D
+ Led a small team to create and deploy frontend and backend components for the probe design software for use in-house
+ Building a suite of tools to generate synthetic image data and benchmark image processing algorithm performance
+ Designed and implemented database architecture for biological data storage

APEX NEURO. *Biomedical Engineer*
July 2017 – February 2018 ▪ Boston, MA
+ Analyzed subject biometrics and subjective metrics from human studies to assess efficacy of a noninvasive 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 – January 2019 ▪ Boston, MA
+ Writer and Editor of the "New Emerging Tech" and "Machine Learning for BCIs" content for the NeuroTechEDU open education platform
+ Organized 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
+ Analyzed heart rate data to assess efficacy of a gaming platform in helping players regulate emotion across weeks
+ Built automation pipeline for administrative tasks handling over 4000 users within a caregiver educational platform

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