Sophia Sanchez

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Education

Stanford University, Stanford, CA (Anticipated June 2018)
Masters of Computer Science, Biocomputation Track
Selected Coursework:
- *Large-Scale Neural Network Modeling for Neuroscience (CS375)* - TensorFlow, Convolutional Neural Nets (CNNs)
- *Algorithms for Computational Molecular Biology (CS274)* - Machine learning, mol. dynamics, sequence alignment
- *Biodesign Innovation: Concept Development and Implementation (BIOE374B)* - Medtech design and engineering

GPA: 3.94

Yale University, New Haven, CT (May 2013)
Bachelor of Science in Psychology, Neuroscience Track - *Magna Cum Laude, Phi Beta Kappa, Honors in Psychology*
Cumulative GPA 3.95; Major GPA 4.00

Work Experience

Stanford Center for Cancer Systems Biology (CCSB) - Stanford, CA
Computational Biology Research Assistant Dec. 2017 - Present
- Python, R, Perl - Write and utilize scripts to delineate prognostic genes for survival and metastasis in cancer
- Optimize algorithms to decrease runtime from 3 hours to 2.5 minutes, allowing for increasingly complex genetic analyses

Cala Health - Burlingame, CA Jun. 2017 - Sept 2017
Software Engineering Intern
- Python - Developed algorithm to predict tremor severity with up to 90% accuracy using accelerometer and gyroscope data
- Swift, AWS - Designed and implemented an iOS app from scratch to receive data over bluetooth, send data to AWS, process data, and display data on a patient dashboard

SparkCentral – San Francisco, CA Jun. 2015 - Sept 2016
Backend Software Engineer
- Python Pandas, PHP MapReduce - Generated real-time statistics dashboard on 2 million social media message records
- PHP – Created a flexible API to route messages into the Sparkcentral app from Facebook, Twitter, Instagram, email
- Built a secure authentication service for social security number and personal contact data, valued at $300,000

Halo Neuroscience – San Francisco, CA Jan. 2014 – Jun. 2015
Associate
- Python, R - Coded programs to filter and analyze neurostimulation data from 700 subjects
- Named inventor on patent to coordinate tablet-based brain training games with neurostimulation
- Designed and executed neurostimulation research experiments in over 100 healthy participants and patient populations

Engineering Achievements and Projects

Stroke Therapy Assistive Robotic Glove Patent (Provisional)
- Named co-inventor on the provisional patent “Systems and Methods for a Hand Therapy and Assistive Device”
- Wrote algorithms to help user complete 8 key fine motor tasks by inferring intended movement via embedded sensors

Neurostimulation Device Patent
- Named co-inventor on US patent 20150066104 A1 for a combined hardware and software system to provide weak neurostimulation to a patient in conjunction with rehabilitative motor tasks

1st Place - Sparkcentral Hackathon 2016
- Worked in a team of three to produce a real-time data visualization and data filtering application using NVD3 charting and Amazon Redshift data warehousing over 2.5 days

Skills
Coding and development: Python, Swift, PHP, HTML, CSS, JS, Django, R, some experience in Java, C, C++
Github: https://github.com/sophialsanchez