Neel Homchowdhury

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EDUCATION

The University of Texas at Austin , Austin, TX   05/20(Graduation Date)

Bachelor of Science and Arts in Neuroscience

    Certification in Scientific Computation and Data Sciences
    Certification in Pre-Health Professions

Relevant Coursework: Biostatistics, Scientific Programming, Linear Algebra, Data Visualization, Computational Biology

EXPERIENCE

Preston Lab , Austin, TX

09/17 - 06/19

Senior RA

- Conducted neuro-psych testing for both adult and child participants
- Collected and analyzed neuro-psych data, and direct neural data from MRI scans
- Wrote Python scripts for analyzing specific datasets containing socio-economic information
- Created a series of stimuli for usage in future studies, using 3D software

Kishore Gawande, Austin, TX

06/18 – 04/19

Data Sciences Research Assistant

- Aided in analyzing various government voting patterns in order to determine the effect of the "China Shock" on governmental voting patterns
- Used SQL, Python, and R to analyze various segments of congressional voting data, often converting BSON to JSON via mongoDB

UCSF Young Adult and Family Center, San Francisco, CA

07 /13- 07/14

Intern at Dept. of Psychiatry

- Shadowed Dr. Kim Norman throughout the Department of Psychiatry
- Worked with a group of interns to develop a "High School Survival Guide", a podcast containing helpful tips for teens in high-school and first-year college students
- Worked with Dr. Norman about the usage of CBT, and its application in treating children with various learning disorders

FRI Bugs -in-Bugs Lab, Austin, TX **PI: Nancy Moran**

01/17- 05/17

FRI Research Assistant

- Ran and Analyzed PCRs, and their subsequent genetic data for various insect species

- Performed bacterial assays for a variety of insect species

- Collected insects

- Set up a series of experiments to understand social and micro-biotic behavior of various insect species

- Created a project proposal centered around restoring microbial properties in bees

WellHive, Austin, TX

06 /19 - Present

Data Science Intern
- Researching and identifying the ontology and taxonomy of health care terminology available from various sources such as CMS, SNOMED, RxNORM
- Developed scripts in Python to transform the above data available in diverse formats such as text files, CSV & XML to prepare them for uploading into a graph database of WellHive's Health Analytics product
- Creating a terminology graph in Neo4j with multiple connections among the various terms and their relationships with each other as well as connecting it to other health data for real-time analytics

ACTIVITIES & LEADERSHIP

DKMS UT Chapter, Austin, TX   09/16 - 04/18

Vice President of Logistics
- Worked with the Austin chapter of DKMS to register over 3000 potential bone marrow donors to the international registry

- Helped to advertise donor registration events, package samples, and ensure that the samples were properly received by the testing facilities

Afterglow ATX, Austin, TX   08/18 - 04/19

Program Coordinator
- Was one of the inaugural members of the first music magazine at UT Austin

- Ran Profit-shares, booked bands, set-up 5 live events showcasing local talent

- Promoted the magazine at a variety of live shows, resulting in almost 35000 total page hits over the course of 8 months

- Raised $7500 > for this organization in the space of 6 months

Capital Community, Austin, TX   01/17 - 01/18

Volunteer
- Lead financial literacy programs aimed at children between the ages of 4-10 in low-income areas of Austin
- Helped to create effective lesson plans each week to instruct these children about good financial practices

Events and Entertainment at UT Austin: HEADLINERS, Austin, TX   08/16 - 10/19

Budgets and Analytics Officer
- Put on a series of comedy and music shows sponsored by the university

- Monitored a $90,000 budget for the purposes of bringing artists to campus, managing all transactions incurred per event
- Had a strong hand in managing/sending out artist contracts and maintaining offers that would remain within the budget
- Created a yearly data presentation justifying the usage of university funds and petitioning for more funds

SKILLS

Technical /Computer Skills:
- High level of experience with Python
- High level of experience with C++
- High level of experience with R
- High level of experience with TensorFlow
- High level of experience using Tableau
- High level of experience using SQL
- Some experience with Java
- High level of experience with the entire Office Suite (PowerPoint, Word, Excel)

Other Skills: Experience running PCR's and working with bacteria. High level of experience running whole-cell patch clamps of neuronal rat brain slices, as well as inducing various drug washes onto these slices and measuring their effect on the neuron.

Languages: English, Bengali, Hindi, French. Limited Proficiency in Italian and Spanish.

Certifications / Professional Memberships / Exams: Level 1 Certified MRI researcher, AI for Everyone(Coursera), Python Basics(Coursera), Natural Language Processing in TensorFlow(Coursera)

Projects

- Currently working with a digital healthcare company to create a machine learning system for the purpose of expediting pre-triage/triage processing

Thesis

- Looking to see if specific musical artists within a genre have similar following's on various social media websites, and whether or not this commonality can be used to find up-and-coming musicians with a similar following demographic
- Doing so by gathering relevant information from Facebook, Instagram, Twitter, Spotify (via API's) and running a series of statistical analyses on the resulting dataset to determine level of similarity of the followers (ex. ANOVA, Clustering Analysis, PCA, etc.)