Feroze Mohideen

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CURRENT EDUCATION

Duke University **Graduation Date May 2020**

- Intended Major: Biomedical Engineering, Electrical/Computer Engineering and Computer Science triple major
- Relevant completed courses:
    - Freshman Year: Organic Chemistry, Linear Algebra and Differential Equations, Molecular Biology, Data Structures and Algorithms
    - Sophomore Year: Ordinary and Partial Differential Equations, Quantitative Physiology, Introduction to Electrical and Computer Engineering, Computer Architecture, Signals and Systems, Data and Decision Science, Semiconductor Device Physics, Design and Analysis of Algorithms
- Cumulative GPA: 3.97/4.00

RELEVANT EXPERIENCE

Data Automation Intern - AxoSim Technologies, New Orleans, Louisiana (Summer 2018 – present)

- Took charge on project to automate extraction of several key parameters from the start-up's novel nerve-on-a-chip technology, turning a 10-hour manual and subjective process into a 10-minute automatic and objective one
- Collaborated with a Canadian team to incorporate deep learning and neural networks in Python using TensorFlow to automatically segment myelinated axons in TEM images, saving even more time
- Used previous lab experience to help in other tasks such as dorsal root ganglia extraction from rat embryos and live/dead assays of nerve cells combined with drugs of differing concentration

Research Assistant - Huang Acoustofluidics Lab, Duke University (Summer 2018 – present)

- Recently joined this lab for more exposure to electrical engineering and computer science in a research setting
- Developed and tested a mobile application for iOS to communicate with an HM10 Bluetooth module and read serial data from an Arduino using the CoreBluetooth framework. Mentor: Dr. Tony Huang
- Application dynamically graphs and redraws a line plot to display incoming serial data values as they are read

Research Assistant - Bellamkonda Lab for Neurological Biomaterials and Cancer Therapeutics, Duke University (Spring 2017 – present)

- Developing methods for enhancing wound healing models in diabetic patients. Mentor: Dr. Tarun Saxena
- Experience in cell culture and 3D cell scaffolds including thiol-ene hydrogel preparation and gel rheometry

Team Leader - Institute of Electronics and Electrical Engineers (IEEE) Student Branch, Duke University (Fall 2017 – present)

- Created and currently leading project on wearable LED "light-suits" to be used by a university dance team
- Integrating hardware interfacing and writing gcode to adapt songs and beats into light-up routines
- Ultimate goal is to incorporate multiple suits into a public performance

RELEVANT SKILLS

Clinical Research

- Aseptic technique
- Cell culture procedure
- Flow cytometry
- NMR
- Fourier-transform infrared spectroscopy
- Critical point drying

Computer Programming

- Python, C, Java, MATLAB, Arduino
- Front-end: HTML, CSS (with Bootstrap), JavaScript
- Microsoft Office, LaTeX
- Python web development in Django and Flask

Data Viz and Machine Learning

- NumPy and Pandas in Python
- Matplotlib and Seaborn as graphing utilities
- Regression and classification models using Sci-Kit Learn
- Big Data and Spark using AWS S3
- Neural Nets and Deep Learning

EDUCATION AND ACADEMIC AWARDS

Duke University **Fall '16, '17, Spring '17, '18**

- Dean's List with Distinction

Briarcliff High School, Briarcliff Manor, NY **June '16**

- Briarcliff High School Class of 2016 Valedictorian

Interests: 3D Printing, Machine Learning, Front-end Web Development, Microcontroller Programming, Wearable Technology, Duke Basketball, Vertical Jump Training, Hip-Hop Dance

LinkedIn: www.linkedin.com/in/feroze-mohideen
GitHub: www.github.com/ferozemohideen