Rithika Adavikolanu : Biomedical Engineer

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Relevant Experience

Texas A&M Biofabrication Research Lab
Fall 2018 - Current // College Station, TX

- Principal Investigator: Roland Kaunas
- Engineer micro-tissues containing mesenchymal stem cells as a means for regenerating musculoskeletal tissues
- Investigating novel methods for cultivating osteogenic tissue by harvesting and tethering extracellular bone matrix to hydrogel scaffolds via click-chemistry
- Utilize Weka machine learning to analyze and quantify datasets of interest

University of Miami Neural Cognition Research Lab
Summer 2017 // Miami, FL

- Principal Investigator: Lucina Uddin
- Wrote MATLAB code to preprocess raw MRI data to create artifact-free, brain scan datasets
- Code was used to contrast the resting-state functional analyses of MRI imaging data of children with autism against those of other developing children

Genentech Internship
Summer 2016 // San Francisco, CA

- Learned CAD software to develop 3D printing biotechnology based models of cardiovascular tumor biology
- Worked on fabricating 3D printed scaffolds for use in heart valves to later be implanted into patients with the intent of building muscle tissue and repairing nerves

Projects

Amazon Alexa Show 5 Skill Development (In Progress)

- Implemented Alexa Skills SDK for Python in order to develop a skill that can be summoned hands free
- Provides user with the music, images, and breathing tutorials that have proven to be effective for stress-control

Fitbit App Development (In Progress)

- Utilized FitBit SDK to develop a FitBit app that captures data using accelerometer, gyroscope, and heart rate sensors and stores it in a server
- App creates datasets of physical parameters before and during recurring medical episodes in hopes of analyzing concrete data to compare the effectiveness of therapy techniques

Skills

Lab Skills: Western Blot, Gel Electrophoresis, BCA Assay, Biosafety Cabinet Environment, Cell Plate Imaging, ELISA, Fluorescence Microscopy

Languages: Python, Java, Arduino, HTML, CSS, JavaScript

Libraries/Applications: Weka Machine Learning, Python Flask, OpenCV, NumPy, Solidworks, socket.io, jQuery

Education

Texas A&M University
B.S. Biomedical Engineering
May 2022

Completed Coursework

University
- Computing for Biomedical Engineering
- Physiology for Bioengineers I
- Physiology for Bioengineers II
- Introduction to Biomaterials
- Signals and Systems
- Bioelectronics with Circuits
- Medical Device Design

eDX Courses
- Introduction to Biomedical Engineering (IEEE)
- Fundamentals of Biomedical Imaging: MRI (EPFL)
- Medicine in the Digital Age (Rice)

Find Me Online

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