Niharika Desaraju

https://www.linkedin.com/in/niharika-desaraju | (669)-900-2009 | niharika.desaraju@berkeley.edu

EDUCATION

University of California, Berkeley
B.S. Bioengineering
Minor in Computer Science
Class of 2021

RELEVANT COURSEWORK

CS61A - Structure and Interpretation of Computer Programs
CS61B - Data Structures
CS61C - Computer Architecture (Machine Structures)
BioE 131 - Computational Biology

Stat 140 - Probability for Data Science
CS 189 - Machine Learning

SKILLS

PYTHON | C | JAVA | SQL | GIT | DOCKER | RESTful |CLOUD INFRASTRUCTURE | | SIMD | JUPYTER NOTEBOOKS | NODE JS | BIOPYTHON | FSLEYES | SWIFT | AWS | GCP

https://github.com/ndesaraju

WORK EXPERIENCE

Research intern, UCSF - Henry Roland Laboratory | August 2018-Present

- Built a secure Apache HTTPS Server to create a dynamic web application for physicians and researchers to query for and visualize volumetric data.
- Utilized Google Compute Instances to construct a high performance computing infrastructure to process over 7,000 C2-C3 and C3-C4 PSIR images collected from clinical trials. This pipeline segments the spinal cord and extracts volumetric data that will be used to examine the correlation between spinal cord volume and progression of MS.
- Developed a Docker image to run Neeb, a tool that extracts maps of water and myelin content in the brain, on T1 MRI images from clinical trial. Utilized image to build a Flywheel gear, creating an automated pipeline to run this data standardizing protocol on uploaded scans.
- Trained a convolutional neural network on patient T1 MRI scans to produce accurate brain stem binary masks; a technique crucial for precise volumetric analysis of neurodegeneration in Multiple Sclerosis (MS) patients.

Research intern, Berkeley Institute of Data Science | August 2018 - Present

- Developed a pipeline to parse ~3000 DNA enhancer sequences of 25 different species of Drosophila and output a data frame organizing the motif sequences of interest. Packaged the pipeline as a command-line tool.

Writer & Head Editor, Berkeley Medical Journal | January 2018 - Present

- Mentors 1-2 writers every semester on analyzing scientific papers and composing articles intended for audiences with limited STEM backgrounds.
- Manages the website: issues.berkeley.edu.

Writer, Spoon University | August 2019 - Present

- Published 5 articles to assist and inform college-aged students attempting to navigate our campuses and kitchens for the first time.
- https://spoonuniversity.com/author/niharikadesaraju

AWARDS

3rd Place, iHackHealthAppathon | October 2019

- Collaborated with UCSF physician and utilized OS Frameworks like HealthKit and ResearchKit to develop an iOS app for parents with children suffering from Pediatric Pancreatitis which provides resources, a symptom tracker, and real-time communication with primary care physicians.