Roger Ji

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EDUCATION

University of California San Diego | B.S. Computer Science | *GPA: 3.92 (Major GPA: 4.0)*   Sep 2019 - Jun 2022
+ Coursework: Object-Oriented Programming, Discrete Mathematics, Data Structures, Mathematics for Algorithms & Systems, Software Tools & Techniques
+ Haag Scholarship Recipient, ACM at UCSD, IEEE at UCSD, TMC Honors Program, Provost's Honors

EXPERIENCE

Laboratory for Computational Cellular Mechanobiology | Undergraduate Researcher   Nov 2019 - Present
+ Implement ImagePy plugin for discretizing cellular shapes into variables otherwise difficult to obtain experimentally
+ Integrate principal component analysis and mean-values algorithm for symmetricizing irregular experimental graphs
+ Apply methods for minimizing differences between experimental and modeled data to refine parameter estimates

Triton Software Engineering | Software Developer   Oct 2019 - Present
+ Develop React Native app for housing nonprofit (Built it Green) to support its Greenpoint Rated certification program
+ Create RESTful API using MERN stack allowing users to modify and query environmental ratings for a given project

Triton Robosub | Simulation Suite Developer   Oct 2019 - Present
+ Remake underwater environment incorporating fluid dynamics, light refractions, and caustics using Unity3D
+ Transfer real-time footage from simulation to ROS (for training neural network) via rosbridge and WebSocket protocol
+ Write procedures for serializing non-visual simulation data into JSON objects then publishable to listeners

fortissimo | Full Stack Developer Intern   Mar 2018 - Sep 2018
+ Led UI design by employing Adobe XD and Photoshop to design 10+ wireframes for early-stage SaaS startup
+ Structured interactive landing and about pages by means of ReactJS interface compatible with a Firebase backend
+ Collaborated with other interns in the development of Android app's framework using React Native

MIT BeaverWorks Summer Institute | Participant   Jul 2017 - Aug 2017
+ Selective program focusing on the theory, mathematics, and NumPy implementation of machine learning models
+ Constructed facial recognition program, search engine, and k-means clustering algorithm to bolster understanding

Stanford Medicine | Bioinformatics Intern   Jul 2016 - Aug 2016
+ Developed Python scripts capable of parsing large FASTQ files and performing the relevant sequence alignments
+ Wrote modules streamlining the conduct of BLAST and selective interpretation of its outputs, respectively
+ Monitored genomic pipelines and occasionally performed maintenance upon them with Illumina BaseSpace

PROJECTS

Little Free Kindness | Flask, PostgreSQL, SQLAlchemy, Bootstrap   Aug 2019
Website allowing visitors to submit nice messages and randomly view/rate those submitted by other people.

Dailies-Bot | Python, Selenium   Jul 2019
Performs repetitive tasks in Neopets like clicking through daily activities, pricing shop items, and retrieving donations

SKILLS

Languages: Python, Java, HTML, CSS, Javascript, Scheme
Software: Flask, Bootstrap, NumPy, jQuery, React, Matplotlib, PostgreSQL, Selenium
Miscellaneous: Git/Github, Bash, Vim, Heroku, Jekyll, Ubuntu