Muhammad Oshean Lehrmann

(760) 815-4519   osheanman@berkeley.edu   https://osheanman.github.io/
Emerging professional with proficiency in biological lab research techniques and computer science design.

EXPERIENCE

Mote Marine Laboratory and Aquarium   Undergraduate Research Intern   06/2021-08/2021
Sarasota, FL
• Worked with coral disease data using the R programming language in order to model the impacts of diseases such as Stony coral tissue loss disease, monitor the health of corals, and examine the efficacy of disease treatments.
• Designed a corallivorous snail prey preference experiment using flumes of water to deliver chemical cues to the snail species *Coralliophila abbreviata* to determine if it was more likely to follow the flow towards the coral species of *Acropora cervicornis*, *Montipora capricornis*, or *Montastraea cavernosa* and presented my findings.
• Aquatic lab maintenance involved coral husbandry and water quality testing.
• Applied learned protocols for DNA extractions, PCR, gel electrophoresis.

Atlas SCST   Geophysical Technician / Office Assistant   05/2017–01/2021
San Diego, CA
• Geophysical Technician in charge of data collection for environmental and geologic studies.
• Assistant to engineering division head.
• Managed incorporation of the database of client information into a new database for marketing use.
• Sanitized environments as part of COVID-19 response.

UC Berkeley, Blackman Lab   Undergraduate Volunteer Assistant   05/2019– 08/2019
Berkeley, CA
• Prepared, germinated, and planted sunflower samples.
• Set-up and monitored the data collection equipment used in an experiment examining sunflower circadian rhythm and heliotropism.

Moore's Cancer Center   Call Pool Volunteer   09/2016-06/2017
La Jolla, CA
• Assisted medical staff with patient relations. Served to comfort patients and help guide them to their appointments.

PROFICIENCIES

Computer Science: Python, Java, C, SQL, R, Ruby on Rails
Biology: PCR, Cell Culture, Organism Handling, Seed Germination, Gel Electrophoresis

EDUCATION

Bachelor of Arts in Molecular & Cell Biology and Computer Science   University of California, Berkeley
MCB Focus: Genetics, Genomics, and Development   *Start*: Aug 2017   *Grad.*: May 2022
Relevant Coursework
Computer Science: Software Design, Algorithm Design, Computer Security, Data Structures, AI Development, Database Management, Computational Biology, Software Engineering
Biology: Biochemistry, Biochemical Adaptation, Cell Biology, Chemistry, Genetics, Molecular Biology, Organic Chemistry

PROJECTS

Actionmap: *Skills Used: Ruby on Rails, Agile Development, Git, Test Architecture*
• Actionmap is a SaaS app that provides users with a politically neutral way to see the delegates that represent an area. With a group of students, we fixed bugs in the existing codebase, integrated the Google Civic Information API and login support for Google and GitHub accounts, and added a user entry system for sharing relevant news articles and ratings for representatives.

End-to-End Encrypted File Sharing Service: *Skills Used: Go, Encryption Schemes*
• Designed and implemented a system in Go for storing files on insecure public servers, in such a fashion that users could have a guarantee that the files they were storing were secure from adversaries and that they would not try and decrypt files that had been tampered with, using multiple layers of different encryption schemes at every step.

Pacman AI: *Skills Used: Python, Search Algorithms, Machine Learning*
• Given problems for Pacman to solve, we coded an agent that could navigate mazes with characteristics such as complex mazes, adversarial agents, and limited maze info, using various search and machine learning algorithms.

Vocal Recognition Controlled Car: *Skills Used: Circuit Design, Linear Algebra*
• Designed a circuit that could provide correct voltages and signals to both the motors and the computer of a car, identified the system variables that made the car controllable, and used linear algebra to classify a collected dataset of control phrases that enabled the computer of the car to move the motors in response to hearing the phrases.

References available upon request.