
EDUCATION

Providence College, Providence, RI May 2023
Major: Biology BA, Computer Science BS
Honors: Summa cum laude, Dean's List, Phi Beta Kappa, Sigma Xi, Upsilon Pi Epsilon, Liberal Arts Honors GPA: 3.87

DIS Study Abroad, Copenhagen, Denmark Spring 2022
Biomedicine Program: Medical Biotechnology and Drug Development

RELEVANT EXPERIENCE

Research Assistant Fall 2023-Present
Laboratory of Systems Pharmacology, Harvard Medical School and Brigham and Women's Hospital

- Researched the restructuring of the tumor microenvironment in melanoma, under PI, Ajit Nirmal
- Developed and carried out imaging experiments in human and mouse tissues to study melanoma development
- Applied spatial analysis methods to immunofluorescence images to detect, quantify, and analyze the spatial organization of distinct cell populations present in tissues

Computer Vision Research Fellowship Fall 2022-Summer 2023
Providence College Biology and Computer Science, *Researcher*

- Conducted independent research project with Dr. James Waters and Dr. Martin Hellwig
- Tracked and quantified novel antennal communication in an ant species using computer vision softwares

ThermoFly: Research Experience in Thermal Biology Summer 2022
University of Vermont Biology, *Bioinformatics Research Intern*

- Compared two RNA-sequencing methods by examining differences in library quality, expressed genes, and splicing
- Extracted RNA from *Drosophila melanogaster* subjected to distinct thermal stress conditions
- Cleaned and analyzed RNA-seq libraries of over 55 million reads to create effective data visualizations in R

Public Health Scholar – Infectious Diseases Fall 2021
Rhode Island Department of Health, *Intern*

- Collected, matched, sorted, and prioritized laboratory, case, and treatment data for all reportable STDs in Rhode Island
- Monitored STD surveillance database for new reports, performed data entry, and ensured data completeness
- Supported the division's phone triage reporting system, appropriately routing calls

Bioinformatics Research and Interdisciplinary Training Experience Summer 2021
Boston University Bioinformatics, *Bioinformatics Research Intern*

- Researched detection of DNA tandem-repeats with Dr. Gary Benson via NSF-funded REU
- Tested and implemented new data processing pipelines to increase the speed of a genetic variation-detecting software by 86% while retaining accuracy of over 90%
- Created a comprehensive guide on the new workflow and communicated my work in both talk and poster presentations

VOLUNTEER EXPERIENCE

Residence Hall Eco-Representative Fall 2019, Fall 2022-Spring 2023

- Communicated sustainable topics, tips, and events to residence hall via monthly infographics and illustrations

World-Wide Opportunities on Organic Farms Summer 2022

- Engaged in work-for-stay opportunities on organic farms for periods of two weeks
- *Stevns, Denmark*: Self-sustaining family farm providing catering and quaint farm-style inn
 - Fed farm animals, planted crops in the greenhouse and outdoors, assisted with cooking
- *Saunderstown, RI*: Family-run organic garlic farm
 - Tested new weed-killing technique, split wood and built a Holz Hausen, assisted at farmers market events

TECHNICAL SKILLS

Computer: Python, R, C++, Bash, SQL, Linux OS, HTML, Github, Microsoft Office, Adobe InDesign
Biology: immunofluorescence, stereo and compound microscopy, PCR, gel electrophoresis
Bioinformatics: image analysis, sequence alignment, sequence analysis, RNA-seq analysis