

Olivia Frary

BIOINFORMATICS STUDENT

UTAH VALLEY UNIVERSITY, OREM, UT

Education

Bachelor of Science in Bioinformatics

Utah Valley University

Expected to Graduate Spring 2025

GPA: 4.0

Research Experience

Independent Researcher Hjelmén Lab, Utah Valley University Fall 2023 – Present

Advisor: Carl E. Hjelmén, PhD

Investigating: The relationship between heteromorphic sex chromosome size and organism longevity

- Data mining genome size and lifespan data for several species
- Working to produce a pipeline for large-scale phylogenies in R
- Performing statistical and phylogenetic analyses in R

REU Internship Logsdon Lab, University of Iowa Summer 2024

Advisor: John M. Logsdon, Jr., PhD

Investigating: Sex determining genes and chromosomal regions in asexual species of snails

- Genome and transcriptome mapping
- Identification of biallelic sites and sex determining patterns
- Bash scripting with high-performance computing clusters
- Data analysis and filtering in R

Presentations

*Presenting Authors

Poster Presentations

- 2024 *Sex Determination in New Zealand Mud Snails: Identifying Genes & Chromosomal Regions with Sex-limited Features*, *O. Frary, L. Palmeri, C. Mulcahy, J. Jalinsky, J. Logsdon
- REU Summer Undergraduate Research Conference, University of Iowa
- 2024 *Do the differences in size between heteromorphic sex chromosomes influence organism longevity?* *O. Frary, C. Hjelmén
- Utah Conference on Undergraduate Research, Utah Valley University
- 2023 *Ancient Genomics: An Overview on the History and the Future of the Field*, *O. Frary, *R. Motte, *J. Prescott
- Fall Biology Department Research Poster Session, Utah Valley University

Awards & Honors

Scholarships

Presidential Merit Scholarship
Utah New Century Scholarship

2022-2026
2022-2026

	Awards	
	Utah Valley University Study Abroad Grant	2023
	Ohio Rural Letter Carriers Book Grant	2023
	Honors	
Experience	Dean's List, <i>Utah Valley University</i>	2020 - 2024
	Science Sterling Scholar, <i>Provo High School</i>	2021
	Top First Year Chemistry Student, <i>American Chemical Society</i>	2019
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	Biology Study Abroad	Summer 2023
	<i>Aeolian Islands, Italy</i>	
	<ul style="list-style-type: none"> - Immersed in culturally rich environment to learn about the biology and geology of the Aeolian Islands - Learned how locals and endemic plants and animals coexist with active volcanoes - Researched and presented on population genetics of the islands 	
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	General Biology Teaching Assistant	Spring 2023
	<i>Utah Valley University, Orem, UT</i> Bioinformatics Data Skills	
	<ul style="list-style-type: none"> - Worked with students to answer questions and provide support - Reviewed and graded college-level work and provided constructive feedback - Gave insights into ways to improve class material 	
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	Stability Intern	Jan 2022 – Dec 2022
	<i>doTERRA Quality Control, Pleasant Grove, UT</i>	
	<ul style="list-style-type: none"> - Worked with and maintained lab equipment - Regulated various reports through Microsoft Office Suite and Information Management Software - Managed numerous studies and samples - Increased department efficiency by implementing automated formulas into regular use documents 	
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Membership	UVU Evolution and Bioinformatics Club (Vice President 2024)	Fall 2023 – Present
	UVU Women in Science Affinity Group	Spring 2023 – Present
	UVU LGBTQ+ in Science Affinity Group	Spring 2023 - Present
	UVU Agnostics and Atheists in Science Affinity Group	Spring 2023 - Present
	UVU Chemistry Club	Spring 2023 - Present
	UVU Women in the Physical Sciences	Fall 2022-Present
Relevant Courses	<hr/>	
	Computational	Biology
	<ul style="list-style-type: none"> - Fundamentals of Programming - Object Oriented Programming - Database Fundamentals - Calculus I & II - Principles of Statistics - Design of Experiment - Bioinformatics Data Skills 	<ul style="list-style-type: none"> - Molecular Biology - Genetics - Genomics - Principles of Chemistry I & II - Data Analysis for Biologists - Intro to Bioinformatics
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Skills

- R for statistics and data analysis
- Python basics
- Bash scripting/Linux
- SQL
- Microsoft Office Suite
- Phylogenetic methods
- Using and maintaining lab instruments