Tayler Fearn

Bioinformatician | Neural Network Enthusaist

CONTACT

Tayler.Fearn@uvu.edu

Orem, Utah

github.com/tcfearn1999

SKILLS

Computational:

- R
- Bash
- Python
- Kotlin
- SQL
- Unix system administration
- High Performance Computing

Statistical:

- Neural Networks (CNN/GAN/PNN)
- Survey Design
- Data Visualization

Current positions

Student Research Assistant — 2023-Present
Utah Valley University(UVU), Department of Biology

Student Research Assistant — 2023-Present
UVU, Department of Physics

Education

B.S. Bioinformatics with honors — epxected 2025
UVU, Major: Bioinformatics, Minor: Mathematics

Publications

Fearn T, *Epigenomics: An increasingly important subfield of biology*. Utah Valley University Honors Program Journal: Untold. https://www.uvu.edu/untold/archive.html

Presentations

Fearn T, Alcala A. *The Physically and Financial Exploitation of undocumented Agricultural workers in the United States*. In Map the Systems Competition at Utah Valley University 2022, December 1 2022. (Faculty advisor: Cassie Bingham)

McPherson K, Bischoff P, Simons L, Nez T, Fearn T, Dyer A, Charcanko M, Allen J, Bennet E & Truong P. *Honors Affinity and Belonging Group Launch.* The national Collegiate Honors Society Conference, November 2023.

Poster Abstracts

Fearn, T.; Hughes, J.; Jernigan, C. *Mitigating Stress in the Workplace through Conversational Artificial Intelligence (AI) and Positive Psychology*. In Station1 Frontiers FellowshipResearch Symposium in Socially-Directed Science and Technology, Poster Presentation, August 11, 2023. (Instructors and Research Project Co-Advisors: Martin-Martinez F., Yeo J., Gavrilov A., Spero E., Ortiz C.)
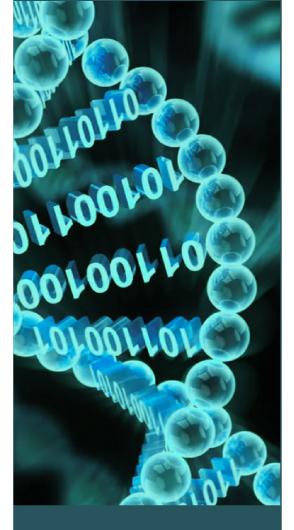
Fearn, T.; Hjlemen C. *Epigenomics: An increasing important subfield of biology*. In BIOL 4100 Final project Presentation. Decemeber 22, 2022

Awards and Funding

UVU Spot Award for Exceptional Accountability

GEL - Examining microbial Communities with Neural Networks
$5000

GEL - Cancer Identification with CDI and Neural Networks
$1000

Research Experiance

Undergraduate Research Assistant   2023-Present
UVU, laboratory of Dr. Zahn

Research focuses on elucidating the mechanisms and ecological theories at play in microbial communities through the use artificial neural networks (ANNs). Leading out on creating a convolutional neural network (CNN) that will accurately identify the different ecological mechanisms at play.

Undergraduate Research Assistant   2023-Present
UVU, laboratory of Dr. Hart

Developing a generative adversarial network (GANs) to artificial extrapolate the edges and increase pixel resolution of coherent diffraction images (CDI) of cancerous cells.

Undergraduate Research Intern   Summer 2023
Frictionless System

Worked with experienced software developer to assist to in developing Coefficient, a fitness tracker for the brain using patent-pending AI. Researched algorithms used in processing specific biological data and implemented those algorithms in code that were able to successful process biological data.

Undergraduate Research Fellow   Summer 2023
Station 1 Frontiers Fellowship

Awarded the Station1 Frontiers Fellowship, a highly competitive, fully funded fellowship to participate in an accelerated research program in Socially directed Science and Technology including interdisciplinary research curriculum (100 hours), a professional advancement curriculum, and inclusive-leadership orientation program, over 30 assignments including a capstone research poster and presentation. Participated concurrently in a research internship at Frictionless Systems (320 hours).

Leadership and Community Invovlvement

Presidential Internship   2022-2024
UVU Digital Transofrmation

Worked Closely with UVU's Vice President of Digital transformation on projects that looked to creatively solve funding challenges. Assisted in developing and implementation of artificially intelligent teaching assistant. Solicited, collected and analyzed data and provided executives reports on recommended improvements and future direction of learning technology

Honors Ambassador   2023-Present
UVU Honors program

Worked with the program director and group of 10 other ambassadors to recruit and increase awareness of the honors program. Mentored a group of honors students through their first year in honors. Assisted in the implementation of Honors Affinity and Belonging Group for LGBTQIA+ students.

Interfaith Student Council   2021-2023
UVU Interfaith Student Council

As a member coordinated a state wide interfaith week focused on service and environmental protection. As a co-president, led and mentored a group 5 students. Developed refined interpersonal communication skills and became adapt at inclusive leadership.

SCHOLARSHIPS & FELLOWSHIPS

- UVU Foundations Ambassador
- Honor's Program Student Ambassador
- UVU Student Association Inclusion Chair
- Station1 Frontiers Fellowship
- International Student Academic Scholarship
- Honor's program Housing Award
- UVU Interfaith Student Council

SOCIETIES

- Mycological Society of America
- National Collegiate Honors Society