CURRICULUM VITAE

Harlan Stevens

harlanstevens144@gmail.com
linkedin.com/in/harlan-stevens
github.com/Harlan144
385-384-9655

EDUCATION

Aug 2021–Apr 2024	Brigham Young University B.S. in Molecular Biology, Minor in Mathematics

RESEARCH EXPERIENCE

Aug 2021–present	**Molecular Biology Undergraduate Research Assistant** Brigham Young University, Department of Microbiology and Molecular Biology Laboratory of Dr. Steven Johnson - Characterize the effects of the *nmad-1* (N6 DNA demethylase) on longevity and healthspan in *C. elegans* - Knockdown *nmad-1* using RNAi-by-feeding and create a *C. elegans* line with overexpressed *nmad-1* through microinjection - Analyze and compare genome assemblers with custom Python scripts
Aug 2022–Jan 2023, Jun 2023–present	**Bioinformatics Undergraduate Research Assistant** Brigham Young University, Department of Biology Laboratory of Dr. Stephen Piccolo - Train and optimize a deep-learning computer vision model using Keras and Tensorflow to accurately classify scientific figures as color-blind friendly or not - Develop an accessible website using Node.js to publicize the ML model - Create an R/Bioconductor package to tidy and consolidate breast cancer datasets
Jan 2023–present	**Computational Chemistry Undergraduate Research Assistant** Brigham Young University, Department of Chemistry and Biochemistry Laboratory of Dr. Daniel Ess - Optimize a machine learning model to predict Tolman Electronic Parameters and deploy it using a custom-made web server - Generate a novel, electronically-balanced library of >100,000 phosphine ligands - Build a neural network with DeePMD using interatomic potentials from DFT simulations to perform longer molecular dynamics simulations

PUBLICATIONS

Nov 2023	**Stevens HP**, Winegar CV, Oakley AF, Piccolo SR. Identifying images in the biology literature that are problematic for people with a color-vision deficiency. BioRxiv. DOI: 10.1101/2023.11.29.569308. [Preprint, Submitted for review].
Oct 2023	**Stevens HP**, Olsen J, Kirkland JK, Ess DH. Tolman Electronic Parameter Predictions Using a Fast, Accurate, and Robust Machine Learning Model. ChemRxiv. DOI: 10.26434/chemrxiv-2023-wjnpj. [Preprint, Under Review at Organometallics]
Sep 2023	Carter JL, **Stevens H**, Ridge PG, Johnson SM. Short Sequence Aligner Benchmarking for Chromatin Research. International Journal of Molecular Sciences. 2023 Sep 14; 24(18):14074. PMID: 37762379. DOI: 10.3390/ijms241814074.
Sep 2023	Skyles TJ, **Stevens HP**, Obray AM, Jensen JL, Miner DS, Bodily RJ, Nielson BU, Poole BD. Changes in Attitudes and Barriers to Seasonal Influenza Vaccination from 2007 to 2023. J Community Health. 2023 Sep 11. PMID: 37697225. DOI: 10.1007/s10900-023-01277-7.

PRESENTATIONS

Oct 2023	Ty Skyles, **Harlan Stevens**, Acelan Obray, Jamie Jensen, Dashiell Miner, Rush Bodily, Bryce Nielson, Brian Poole. Increased Flu Vaccine Uptake at BYU. *College of Life Sciences CURA Poster Presentations, Provo, UT* [Poster].
Feb 2023	**Harlan Stevens**, John Carter, Steven Johnson. RNAi Knockdown of NMAD-1 To Affect Longevity. *Utah Conference on Undergraduate Research (UCUR), Salt Lake, UT* [Poster]. A*merican Society for Microbiology Intermountain Branch Conference, Boise, ID* [Poster].
Dec 2022	**Harlan Stevens**, Arwen Oakley, Stephen Piccolo. Figures in biological journal articles are often unfriendly to people with color vision deficiencies. *Rocky Mountain Bioinformatics Conference, Snowmass, CO* [Poster].

FUNDING

Jan 2022, Jan 2023	Life Sciences College Undergraduate Research Award (CURA)
Jan 2023, Apr 2023, Aug 2023	Chemistry Undergraduate Research Award (URA)

PROFESSIONAL EXPERIENCE

Jun 2022–Aug 2022 **Summer Web Developer**
ITCON Services, Vienna, Virginia
- Collaborated in a team of developers to operate and manage Drupal-based government websites
- Improved USDA's WIC Breastfeeding website performance speed by 35%
- Automated unit and regression testing for multiple websites using Selenium

Jan 2022–May 2022 **Chemistry Camp Co-Director**
Brigham Young University, Department of Chemistry and Biochemistry
- Designed and improved chemistry experiments for 9-10 year olds
- Trained and led counselors for a university-sponsored camp

AWARDS AND HONORS

Feb 2023	Best Poster Presentation in Health Sciences at UCUR
Jan 2023	Garth Lee Teaching Assistant Award (Organic Chemistry)
Nov 2022	Best Poster Presentation at CURA
Apr 2022, Apr 2023	Organic Chemistry/Biochemistry Student of the Year Award
Aug 2021–present	Presidential Scholarship at Brigham Young University (150% tuition, 4 years)

TEACHING EXPERIENCE

Aug 2022– Dec 2022 **Organic Chemistry 2 Teaching Assistant**, BYU Department of Chemistry
- Led weekly recitations where I taught 30-50 students.
- Lectured for exam reviews and mentored students one-on-one during office hours

VOLUNTEER EXPERIENCE

Aug 2019–Jul 2021 **Volunteer Representative**, The Church of Jesus Christ of Latter-day Saints, Finland
- Taught biweekly language classes to immigrants in Finnish and English
- Coordinated food drives, community projects, and participated regularly in sponsored service projects
- Supervised groups of 10-12 missionaries, conducted weekly training meetings, followed up on goals, and created weekly progress reports

Apr 2019–present **Certified Emergency Medical Technician**
- Volunteered with the Fairfax County Fire and Rescue Department as an NREMT
- Worked in stressful situations as part of a team

SKILLS

Computational:

- Python (inlc. pandas, numpy, seaborn, matplotlib)
- R (inlc. tidyverse packages, survival analysis, data visualization)
- Linux (shell scripting and slurm)
- Machine Learning (inlc. tensorflow, keras, scikit-learn)
- Genome Assembly and Analysis
- Web Development (Node.js, Javascript, HTML, CSS, Wordpress, Drupal)

Laboratory:

- Gene cloning (Plasmid preparation, ligation, bacterial transformation)
- DNA/RNA isolation
- PCR, qRT-PCR
- Gel electrophoresis
- RNA interference by feeding
- Maintenance of *C. elegans*
- DNA sequencing (Sanger, Illumina, Nanopore)
- Microinjection
- Microscopy

Miscellaneous:

- Proficient in Finnish
- Conversational in Swedish
- Scientific writing (manuscript and grant preparation)

EXTRACURRICULAR INTERESTS

- Intramural soccer
- Avid fantasy reader
- Freelance web design
- Amateur pickleball player