

## Education

MS Physics // March 2022  
GPA 3.85

University of Oregon

BS Mathematics and Physics // June 2020

Cum Laude, 3.83 GPA  
University of Oregon

## Awards & Honors

Departmental Honors in Physics  
(Undergraduate)

Phi Beta Kappa Honors Society

## Languages, Software, and Other Technical Proficiencies

Python, Fortran, Bash, R,  
Arduino

NumPy, Matplotlib, Numba,  
Pandas, ggplot2

GROMACS, LAMMPS,  
Mathematica, RStudio, PyMol,  
Anaconda

High Performance Computing,  
Slurm Workload Manager

Shell scripting (Unix/Linux),  
GNU Toolchain for Linux, Monte  
Carlo simulation

Machine Learning for  
Regression and Classification,  
PCA

## Work Experience

**Graduate Research Assistant, The Guenza Lab, University of Oregon**  
**Sept 2020 – Present**

### Research Projects:

*Modeling DNA-Protein Complex Formation with a Coarse-Grained Langevin Equation*

- Assisted with the continued development of coarse-grained theoretical models for macromolecules using a Langevin equation.
- Performed and analyzed molecular dynamics simulations using GROMACS on the Comet and Expanse High-Performance Computing Systems at the San Diego Supercomputer Center.
- Created and modified custom Python libraries and Fortran code for simulation trajectory analysis.

*Integral Equation Coarse Grained Potentials for Polymer Melts*

- Performed simulations of polymer melts in LAMMPS on the Expanse HPC system.
- Developed Fortran code and Unix shell scripts for the analysis of LAMMPS simulations of polymer melts.

**Library Student Assistant, University of Oregon Libraries, University of Oregon**  
**Sept 2017 – Present**

- Tutored library patrons in elementary algebra, calculus, differential equations, linear algebra, partial differential equations, and physics.
- Trained library student employees on library systems software and the Library of Congress Classification system.
- Assisted library patrons with use of library services and systems.

**Volunteer Teaching Assistant, Eugene Math Circle, University of Oregon**  
**Sept 2021 – Present**

- Assisted with teaching elementary school children problem solving for logic and math.