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# 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.