COLIN GLADUE

New York, NY | 860-639-0596 | cpg39@cornell.edu

EDUCATION

Cornell Tech, New York, NY — May 2021
Master of Engineering in Computer Science
Merit Scholar

Relevant Coursework: Algorithms and Data Structure, Applied Machine Learning

Cornell University, Ithaca, New York — May 2016
Bachelor of Science in Mathematics (Concentration in Physics), Bachelor of Science in Chemistry | GPA: 3.9
Taught General Chemistry I/II supplementary sections and tutored for multiple chemistry courses

Honors/Awards: Phi Betta Kappa (Top 3% of Class), Dean's List, Shelton Scholarship Award for Excellence in the Field of Chemistry

TECHNICAL SKILLS

Coding Language:	Python, Fortran, Java, JavaScript, HTML, CSS, C
Operating Systems:	UNIX, Linux, Windows, macOS
Other Tools:	Git, TravisCI, Keras, Scikit-learn, Xcode, TensorFlow, Pandas

EXPERIENCE

Geophysical Fluid Dynamic Laboratory (SAIC, NOAA), Software Manager, Princeton, New Jersey — Feb 2020- Aug 2020
Part of the F group. This team developed the Flexible Modeling System, a software framework upon which scientists develop various efficient atmospheric, oceanic, and climate system models. Particularly useful for developers who want to seamlessly incorporate models built by other into their own models

- Managed the open-source and internal development of the Flexible Modeling Systems GitHub repository (https://github.com/NOAA-GFDL/FMS), used largely by NOAA and NASA.
- Reviewed code submitted by GFDL scientists and open-source contributors to ensure that it was cohesive and worked reliably with the rest of the software package
- Developed and integrated unit tests to ensure software was reliable throughout continuous integration
- Orchestrated the release of 3 production versions to satisfy various customer requirements, preceded by 7 alpha/beta testing versions of FMS

AP and Standardized Testing Tutor, Voluntown, Connecticut — June 2018- Nov 2019

- Tutored local high school students in AP Physics and SAT prep

Cornell University, Computational Chemistry Researcher, Ithaca, New York — Aug 2016- Feb 2018
Part of the DiStasio group. This team applies the computational techniques of quantum and statistical mechanics to address challenging problems in theoretical chemistry

- Formulated and added quadrupole and octuple polarizability functionality to the NWChem software package, written in Fortran. These functions from quantum mechanics have the potential to approximate fundamental properties of atoms and molecules much more accurately than previous physical experiments and low-powered calculations
- Developed novel algorithms to efficiently repurpose existing physics software within the package, based on selecting the exact set of parameter pairs necessary to calculate enough interactions to satisfy quadrupole and octuple polarizability formulas while minimizing redundancy
- Produced quadrupole and octuple polarizability values of atoms and molecules that far exceeded the accuracy found in the existing literature, leading to a pending publication

PROJECTS

Complex Analysis Research (Mathematica, Python) — Fall 2015- Spring 2016
Investigation of unexplored 3 and 9 variable inequalities

- Used data visualization within Mathematica to observe regions in which certain 3 and 9 variable inequalities hold true to assist Professor Strichartz in finding new interesting research areas
- Uncovered mathematical patterns (similar to PCA) that could be used to optimize run time, ultimately producing 9 variable visualizations in minutes of computation rather than days