

## Education

- **North Carolina State University** Raleigh, NC  
*M.S.C. Physics* 2019
- **University of North Carolina at Greensboro** Greensboro, NC  
*B.S. Physics* 2016
  - Graduated on Chancellor's List with Minors in Chemistry and Mathematics
  - Inducted into Phi Beta Kappa Honors Society

## Certifications

- CompTia Security+, 2022

## Core Skills

- Python, Rust, C/C++, bash/shell, SQL, MongoDB, C#, Java, code debugging, fast-learner, detail-oriented, GNU/Linux, Windows, system/network administration, Git, PyTorch, Computer Vision, Scikit-learn, LaTeX, technical writing, technical support

## Research and Work Experience

- **ExoCrypt Investments, LLC** Raleigh, NC  
*Data Scientist and Machine Learning Engineer* August 2020 - May 2022
  - Built a framework in Python and PyTorch for the rapid training and testing of deep neural networks
  - Used ideas adapted from image classification literature to discover unique insights about market data
  - Built several Python scripts to aid data annotation performed by other team members
  - Produced performant models that could search for rare patterns within millions of hours of market data
  - Performed extensive model validation to ensure expected results across different end-user devices
- **NCSU Department of Physics** Raleigh, NC  
*Lead Teaching Assistant* August 2018 - December 2019
  - Instructed General Physics labs in electricity/magnetism and Newtonian Mechanics for undergraduate students.
  - As Lead TA was responsible for the instruction of lab lesson plans to other TAs
  - Received consistently high reviews from students regarding my communication and knowledge of the subject matter
- **NCSU Department of Physics** Raleigh, NC  
*Brief Research Work* December 2018 - April 2019

- Simulated the travel of ultracold neutrons through experimental setups in C++.
- Performed data analysis using the CERN Root library
- After leaving the project I helped instruct group members to bring them up to speed on the code's inner working so that they could continue the project.

- **CData Software, Inc.** Chapel Hill, NC  
*Software Developer/Technical Support Representative* *March 2017 - July 2018*
  - Helped connect customers' databases like SQL, MySQL, etc to business intelligence sources like Salesforce, Dynamics 365, QuickBooks and dozens more
  - Worked at fast pace with customers and team members to solve issues quickly
  - Debugging and development in Java and C#
- **UNCG Department of Chemistry and Biochemistry** Greensboro, NC  
*Undergraduate Researcher - Physical Chemistry* *January 2014 - December 2016*
  - Programmed microcontroller for solar tracking of a linear Fresnel reflector
  - Managed the operation of laser-induced photodissociation experiments of ozone with carbon tetrachloride to create chlorine monoxide
  - Programmed Lua scripts in SIMION for the simulation of molecular transport to guide design of an electric molecular trap
- **UNCG Department of Physics and Astronomy** Greensboro, NC  
*Undergraduate Teaching Assistant - General Physics* *January 2016 - December 2016*
  - Aided the in-class instruction of advanced general physics classes
- **Grubbs Tree and Shrub Care** Broadway, NC  
*General Laborer* *2008 - 2016 (Summers)*
  - Performed general landscape maintenance and installation tasks

## Extra

- **Side Projects**
  - *Personal code and writing projects - see Github and personal website link at top*
  - Logging system in Rust
  - Navier-Stokes Fluid simulation in C++
  - IT tutorials for SIEM configuration and exploit detection
  - Object detection with neural networks