

EDUCATION

Seeking a co-op for January 2023 – June 2023

- > **Northeastern University, Khoury College of Computer Sciences, Honors** Boston, MA
Candidate for a B.S. in Computer Science & Mathematics \\\ Physics Minor \\\ 3.87 GPA Aug. 2021 – Dec. 2025
- > **Holliston High School** Holliston, MA
Track/XC \\\ NHS \\\ Science Olympiad \\\ SAT: 1570 \\\ National Merit Finalist Aug. 2017 – May 2021




COMPUTER KNOWLEDGE

- > **Web Dev:** React, MaterialUI, JavaScript, HTML/CSS, PHP, MySQL, REST API, Express, Jest, Node
- > **Scientific Computing:** Lean (Formal Verification), Slurm/HPC, TensorFlow, \LaTeX , Schrodinger Maestro
- > **General:** Java, Racket, Python, Linux, Bash, Git, C, Cuda, VEX RobotC, Git, Github, QtPy

COURSEWORK * := in progress

- > **CS:** Object Oriented Design, Algorithms, Networks and Distributed Systems*, Logic and Computation*
- > **Math:** Calculus 3, Linear Algebra, Probability & Statistics, Statistics & Stochastic Processes*, Group Theory*
- > **Physics:** Physics 1, (Mechanics, Basic fluid dynamics), Physics 2 (Waves, Electricity, Magnetism)

PROJECTS * := in progress

- > **ML Excitation Model*** *Python, Maestro, MATLAB, Bash, TensorFlow* Email for code Aug. 2022 – Present
Identify what aspects of chloramide, flavins, and styrene influence their excitation wavelengths when they are in proximity to each other. Have written a matlab/python script that transforms the raw coordinates of each atom into more usable and interpretable features, which then can be used as input for a neural network or rounded for use in a neural network to predict excitation wavelengths and strengths.
- > **Automated Docker** *Python, Maestro, Slurm, QtPy* /automated_docking_script July 2022
Designed a GUI add-on and backend script for Schrodinger Maestro that automated a time-consuming and error-prone process of generating docking poses for three molecules in all permutations.
- > **N-Bullets in Racket** *Racket* /nbulletsrkt Apr. 2022
Rewrote a project for a Java-based course in Racket to compare the two languages. Racket was terser, easier to properly test, and (subjectively) more readable. Additional findings and opinions are in the README.
- > **Grave Finder** *ReactJS, PHP, MySQL, Cloudflare, cPanel, SSL* /findagravemiddleborough.ml Dec. 2020
Website to view grave data for a local cemetery preservation nonprofit. Makes use of join tables, searching, filtering, React+MaterialUI forms, an administrator login with a cooldown period after too many login attempts.

RESEARCH AND WORK

- > **Peer Tutoring:** Discrete, Fundies 1 & 2, OOD, Algo, Phys 2, Calc 3, LinAlg, Prob & Stats Sep. 2022 – Present
 - Demonstrate patience and professionalism with tutees having a variety of skill levels
 - Generate new ways to explain content
- > **Sijia Dong Lab:** Computational chemistry research group Dec. 2021 – Present
 - Bypass time-consuming processes and calculations using automation scripts and ML
 - Listen and understand technical constraints and communicate progress and possible avenues for progress
- > **Internship with Town of Holliston Director of Technology:** Nov. 2020 – Feb. 2021, Apr. 2021 – May 2021
 - Implement proper settings and software on new desktops for various town departments such as the police and the senior center
 - Resolve problems with phones, printers, and file storage for various town employees
- > **Kitchen Worker at Hannah BG Shaw Home for the Aged:** Server, dishwasher & cook June 2020 – Aug 2021
 - Fulfill resident requests in compliance with dietary restrictions
 - Exhibit patience and communicate clearly in a fast-paced environment

INTERESTS AND OTHER SKILLS

- > B2 Proficiency in French \\\ Proofs/logic \\\ Climate emergency \\\ Running \\\ Amateur cooking \\\ Political economy