## EDUCATION

**UNIVERSITY OF VERMONT** ***BURLINGTON, VT*** *Graduated: May 2023*

*Majors: Computer Science (3.92 GPA) , Physics (3.56 GPA)*
*Minors: Mathematics, Political Science*
*Trustees Scholarship Award*
*Member of Sigma Pi Sigma: Physics and Astronomy Honors Society*

- **Relevant Courses:** Operating Systems, Computer Architecture, Data Structures & Algorithms, Algorithm Design and Analysis, Software Engineering, Mobile App Development, Machine Learning, Computational Physics

## WORK EXPERIENCE

**TEACHING ASSISTANT,** ***UNIVERSITY OF VERMONT, BURLINGTON, VT***

*Algorithm Design and Analysis, and Software Engineering,* *September 2022 - May 2023*

- Strengthened skills in Python, SQL, agile development, version control systems, greedy algorithms, dynamic programming, shortest path, max flow/min cut through grading homework assignments, tests, and projects.

*Physics for Engineers,* *September - December 2020 & January - May 2022*

- Supported the Professor by assisting 50+ students in troubleshooting physics solutions.
- Communicated high level physics concepts to an entry level of understanding by introducing algorithmic methods of solving complex problems.

**RESEARCH ASSISTANT IN MATHEMATICS,** ***UNIVERSITY OF VERMONT, BURLINGTON, VT,*** *September 2021 - January 2023*

- Constructed simulated potential functions for graphene lattices of varying strain through MATLAB code.
- Experimented with perturbation theory as to whether particle perturbations would disrupt the system.
- Interpreted mathematics papers on iterative solutions to the schrodinger equation under a periodic potential.
- Crafted different data visualization models to interpret results.

**RESTAURANT SERVER, BARTENDER, LINE COOK,** *The Local, Waltham MA,* *November 2017 - August 2022*

## PROJECTS

### Fall Injury Reduction Education: CS275 Mobile App Development

- Worked with a team to gather requirements from UVM Medical Center sponsor to create an informational IPhone App to reduce the risk of falling.
- Developed backend code using Swift JSON encoding and designed frontend UI using SwiftUI

### Sudoku App: Personal Project

- Designed a dynamic algorithm to create a filled in sudoku board.
- Modeled and implemented UI to allow users to edit both inputted answers and notes.
- Designed testing algorithm to discern if there is a possible way to complete the game from the current board state

### Chess Classifier: Personal Project

- Designed neural network to classify chess board states by their players
- Trained and optimized a fully connected neural network in tensorflow keras to above a 99% accuracy to identify players of chess games.

**TECHNOLOGIES:** C, C++ (OpenGL, Glut), Java, Python (Numpy, Scipy, Matplotlib, Pandas, Jupyter, SQLite), Matlab, Swift (SwiftUI, UIKit), Windows, iOS, Unix

**OTHER INTERESTS:** Music (jazz guitar, bass), Board Games (Executive Board for UVM Games Club), Cooking, Rock Climbing (bouldering)