

Liam Murphy

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science

Bachelor of Science in Computer Science

Expected May 2024

Major GPA: 3.44/4.00 | Cumulative GPA: 3.46 /4.00

TECHNICAL SKILLS

Languages: Java, C++, C, X-86 Assembly, Python, HTML, CSS

Software and OS: Git, Logisim, Linux, Vim

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Discrete Mathematics, Automata Theory

WORK EXPERIENCE

GreenLight Networks, Field Tech Internship | Rochester, NY

June 2022 - August 2022

- Contributed to Greenlights presence in Rochester by adding new points of contact to their network and assisting with installations
- Assisted in the provisioning of Optical Network Terminals as well as the construction of Greenlights fiber-optic network
- Communicated with Greenlight customers to promote customer satisfaction
- Contributed to Greenlights success by connecting hundreds of new customers and helping break three consecutive monthly records

AeroSafe Global, Engineering Internship | Rochester, NY

June 2021 - August 2021

- Assisted in the production and testing of vacuum-insulated packages for Pfizer, Merk, and NASA
- Performed sublimation testing, incoming quality inspections, and qualified new tests to help prevent excursions
- Created new organizational procedures to improve efficiency for the Procurement and Engineering departments
- Contributed to AeroSafe landing contract with Pfizer and Merk to distribute Covid-19 vaccines across the United States

Monroe Golf Club, Lifeguard | Pittsford, NY

June 2017 - August 2020

- Ensured the safety and well-being of members
- Assisted in the supervision and maintenance of the pool area

PROJECT EXPERIENCE

C Programmer, Independent Project | Binghamton, NY

March 2022 - April 2022

- Used Bit Manipulation to convert IEEE doubles to varying-size floating-point numbers based on input
- Implemented a method of using Bit Manipulation to make the conversion, managed with the GitHub Version Control System
- Successfully converted IEEE doubles to arbitrarily sized IEEE floating point numbers based on input

Java Programmer, Independent Project | Binghamton, NY

November 2021 - December 2021

- Programmed a method of searching and sorting input text files with a GUI
- Assembled the data with selection sort, measured the run time of adding and searching the data to linear and non-linear data structures

C/x86 Programmer, Independent Project | Binghamton, NY

February 2022 - March 2022

- Performed a simulated buffer overflow attack on a C program to change the data being entered into an array without being detected
- Programmed a script in x86 that would overflow the buffer of a target function, change the data, and then return to the next function
- Successfully altered the program to change the data without detection

x86/GDB Programmer, Independent Project | Binghamton, NY

February 2022 - March 2022

- Successfully diffused the Binary Bomb by completing a series of puzzles hidden in the x86 code
- Operated the GDB debugger to step through the disassembled program to figure out how to pass the different phases
- Completed the project without blowing up the Binary Bomb

Python Programmer, Independent Project | Binghamton, NY

December 2020

- Programmed a method of extracting data from different JSON files using APIs that sent an email with the current number of covid cases
- Accessed data stored in JSON files using different API's then sent the email using python's mailer library
- Presented the final result of the project to a class of 50 people

Python Programmer, Team Member | Binghamton, NY

November 2020 - December 2020

- Programmed a playable space invader spin-off game using the python Pygame library
- Managed the front-end and back-end of the program making sure everything worked together
- Presented a demo of the game to a class of 50 people

LEADERSHIP EXPERIENCE

Binghamton University Men's Swimming and Diving Team, Division 1 Athlete | Binghamton, NY

August 2020 - Present

- Training 20 hours a week to compete and be successful while fostering a positive environment for the team to thrive
- Earned a total of ten top-three finishes with four first-place finishes at the America East Conference Championships
- Contributed to Binghamton Men's Swimming and Diving's first America East Conference Championship win in 18 years

Binghamton University Student-Athlete Advisory Committee, Member | Binghamton, NY

February 2022 - Present

- Participate in educational meetings and assist in the planning and execution of sponsored events
- Advocated for mental health awareness and equality for the America East Conference

HackBU, Member | Binghamton, NY

February 2022 - Present

- Participate in weekly skill-building workshops in the field of computer science
- Build relationships with other students interested in computer science