

# Ethan Phan

Medford, NY | (631) 576-6328 | [elphan@buffalo.edu](mailto:elphan@buffalo.edu) | [ethanlphan.com](http://ethanlphan.com)

## EDUCATION

**University at Buffalo, The State University of New York**

*B.S. in Computer Science*

GPA: 4.00, Honors: Dean's List, Pride of New York Scholarship

Buffalo, NY

December 2024

## EXPERIENCE

**University at Buffalo**

*Undergraduate Teaching Assistant*

Buffalo, NY

August 2022 -

- Instructed 400+ students on the topics of Data Structures, Societal Computing, and Discrete Mathematics.
- Assist faculty in teaching students by leading students through recitation activities related to topics discussed in lectures.
- Assess assignments from students and provide quantitative and qualitative feedback promptly.
- Collaborate with faculty and consult feedback on issues regarding the class or recommendations for improving the class.

**M&T Bank**

*Technology Intern*

Buffalo, NY

June 2023 - August 2023

- Orchestrated Docker integration in M&T Bank's GitLab CI/CD pipelines for smooth deployment of .NET web applications,
- Pioneered the project's design, resulting in elevated application performance and sustainability across the organization's web portfolio, saving the bank 1 million dollars annually.
- Developed expertise in Docker, YAML, Angular, C#, and .NET whilst crafting a resilient CI/CD pipeline and a prototype web application.
- Attained recognition and an award during the program, underscoring the significance and impact of the project.

## PROJECTS

*PengyRL, Python*

November 2023

- Crafted a reinforcement learning framework and employed SARSA, Q-Learning, and Double Q-Learning Algorithms to gain invaluable insights into environmental navigation.
- Optimized the reinforcement algorithms to yield tailored environmental results by performing rigorous hyperparameter tuning and analyzing the effects of these hyperparameters on the algorithms.

*Containerization of Web Applications, Docker, Angular, C#/.NET, and GitLab CI/CD*

June 2023 - August 2023

- Engineered the automatic containerization and deployment of web applications in Docker containers.
- Designed a GitLab CI/CD pipeline to seamlessly build application binaries, create containers, and deploy to OpenShift.
- Developed a web application with Angular frontend and .NET backend, serving as a robust testbed for the project's functionalities.

*Dynamic Memory Allocator, C*

November 2022

- Implemented a multi-pool memory allocator that manages a system heap space, enabling the efficient execution of single-threaded UNIX commands.

*POS System, Scala*

February 2021

- Designed a Point-of-Sale system that switches states, using Object-Oriented Programming, to incorporate different functionalities.
- Utilized polymorphism and inheritance to store the user's cart and information associated with the items themselves.

*Vaccination Data Web Application, Python, JavaScript, and HTML*

December 2021

- Assembled a web application that fetches CDC data and neatly displays the data on a webpage using plot.ly graphs and charts.
- Leveraged a bottle web server to fetch the necessary data for the web application.

## SKILLS

**Programming Languages:** Python, C/C++, C#, Scala, Java, PHP

**Web Development:** Angular, React, TypeScript, JavaScript, HTML, SCSS, CSS, Tailwind CSS, .NET Framework, Flask

**Technologies:** Unix, Git, GitHub, GitLab, Trello, Jira, Confluence, MySQL, MongoDB, Docker

**Libraries:** NumPy, Pandas, Matplotlib

**Languages:** Fluent in English and Vietnamese, Familiar with Spanish and Korean