Ethan Phan

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EDUCATION

University at Buffalo, The State University of New York Buffalo, NY
B.S. in Computer Science December 2024
GPA: 4.00, Honors: Dean's List, Pride of New York Scholarship

EXPERIENCE

University at Buffalo Buffalo, NY
Undergraduate Teaching Assistant August 2022 -

- Instructed Data Structures (Fall 2023), Computer Science Seminar (Fall 2023 and Fall 2022), Discrete Mathematics (Spring 2023)
- 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 Buffalo, NY
Technology Intern June 2023 - August 2023

- Orchestrated Docker integration in M&T Bank's GitLab CI/CD pipelines for smooth deployment of .NET web apps on OpenShift, collaborating closely with the Consumer Lending and Account Opening team.
- Developed expertise in Docker, YAML, Angular, C#, and .NET, crafting a resilient CI/CD pipeline and a prototype web application.
- Led a transformative proof of concept, elevating application performance and sustainability across the organization's web portfolio, culminating in project recognition and an award.

PROJECTS

Containerization of Web Applications, **Docker, Angular, C#/.NET, and GitLab CI/CD** June 2023 - August 2023

- Implemented 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 testbed for the project.

Dynamic Memory Allocator, **C** November 2022

- Implemented a dynamic memory pool allocator that manages a system heap space and can replace the standard C library memory allocation functions.

Abstract Genetic Algorithm, **Scala** April 2022

- Engineered a custom genetic algorithm that could be used to produce the best solution to abstract problems given a data set incubator and a cost function.
- Algorithm generated random decimals (genes) that were put in an incubator to create data samples stored in lists. The best samples are saved and mutated. Added more random genes to the list and the process was repeated via recursion.

Self-Checkout Machine, **Scala** February 2021

- Designed a self-checkout machine that switches states, using Object-Oriented Programming, to incorporate different functionalities.
- Polymorphism and Inheritance were also heavily utilized 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.
- Web application ran on a bottle web server that used AJAX to fetch the necessary data.

SKILLS

Programming Languages: Python, C, C#, Scala, Java, MIPS Assembly
Web Development: Angular, TypeScript, JavaScript, HTML, SCSS, CSS, .NET Framework, Bottle Web Framework, Flask
Technologies: Unix, Git, GitHub, GitLab, Jira, Confluence, SQLite3, MongoDB, Docker
Libraries: NumPy, Pandas, Matplotlib, Hashlib, Bcrypt
Languages: Fluent in English and Vietnamese, Familiar with Spanish and Korean