

Ben Zarom

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EDUCATION

University of Pittsburgh, Pittsburgh, PA | August 2020 - Expected May 2024.

Bachelor of Science in Computer Science | Applied Statistics Minor | Cumulative GPA: 3.63.

Relevant Courses: Advanced Data Structures and Algorithms, Programming Languages for Web Applications, Software Quality Assurance, Database Management Systems, Introduction to Operating Systems.

WORK EXPERIENCE

University of Pittsburgh | Python Programming Teacher Assistant | Pittsburgh, PA | January 2022-Present

- Assisted in the development and implementation of **Python** coding exercises and lesson plans.
- Led comprehensive labs weekly on fundamental principles in **object oriented programming**.
- Provided supplemental assistance to students as necessary during scheduled office hours.

The Clearing House | Database Enterprise Systems Intern | New York City, NY | June 2022-July 2022

- Automated workflows in **BMC Control -M** for a variety of infrastructure processes at The Clearing House.
- Wrote and edited Scripts that **automate a Database Failover** in Control -M.
- Rebuilt the Control -M training course to enable easier and more effective onboarding.

PROJECTS

Virtual Memory Simulation | Introduction to Operating Systems | Java | November 2022

- Implemented a variety of page eviction algorithms to optimize handling of page faults across multiple test cases.
- Utilized independent classes and a common interface demonstrating a strong understanding of **object oriented principles**.
- Applied **Encapsulation** and **Polymorphism** to improve code readability and understanding.

Semaphore Synchronization Project | Introduction to Operating Systems | C Programming Language | October 2022

- Used **Multi-Process Programming** to implement Producer-Consumer Problem.
- Created Semaphore structures and methods to enable atomic operations.
- Eliminated race conditions and deadlocks through appropriate utilization of semaphores.

Connect Four Multiplayer Game | Programming for Web Applications | CSS/HTML/JavaScript/Python | September 2022

- Implemented backend Connect Four board logic for consistent and thorough gameplay.
- Designed and wired web pages for web application for an enjoyable and intuitive user experience.
- Utilized **Google App Engine** for live gameplay.

Airline Network Program | Advanced Data Structures and Algorithms | Java | March 2022

- Architected **graph data structure** to model airline routes connecting cities.
- Utilized **Breadth First Search** to enable calculation of fewest stops between two cities and **Dijkstra's Algorithm** for implementation of shortest path calculation using miles or price as edge weights.

LEADERSHIP EXPERIENCE

Sigma Phi Epsilon | Balanced Man Scholarship Chairman | Pittsburgh, PA | August 2022-Present

- Designed and led application process, which included a formal application and an interview.
- Distributed \$1600 in scholarships to underclassmen exhibiting strong values and leadership potential.

Israeli Leadership Academy Member | Kiryat Gat, Israel | September 2019-July 2020

- Coordinated and planned large scale events for academy alumni featuring influential guest speakers.
- Delivered educational presentations to peers enabling insightful discussions on the boundaries and benefits of freedom of speech.

KEY SKILLS

Languages: Java, C, HTML/CSS/JavaScript, MIPS Assembly Language, Python.

Software Platforms: BMC Control -M Enterprise Scheduler, Excel, Google App Engine.

Additional Skills: Project Management, Data Communication & Presentation, Fluent Hebrew Speaker, Encryption, Computer Architecture, Algorithm Implementation, Operating Systems Solutions, Data Analytics.