Joshua Seligman

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Experience

- **Optum**, Basking Ridge, NJ

  Technology Development Program Associate   Jul 2024 - Present
  - Architecting a web application with Go, Templ, and PostgreSQL that collects and analyzes the current running state of networking devices, assisting network engineers to quickly identify problems when a site goes down.
  - Designing a web-based wrapper for Ansible using Python and Django to provide non-engineers an accessible interface to execute batch data collection jobs on a user-defined set of networking devices.
  - Building a GitHub Actions library using TypeScript and Bash to promote code reusability in CI/CD pipelines.

  Technology Development Intern   Jun 2023 - Jul 2024
  - Developed a tool to track business-level events as they occur within a pre-existing data pipeline.
  - Built a web application with React.js and TypeScript to display the event history in a user-friendly way.
  - Fetched necessary data with an Express.js API that queries an OpenSearch database.
  - Modernized CI/CD pipelines through the creation of GitHub Actions and workflows.

  Technology Development Intern   Jun 2022 - May 2023
  - Migrated Java Spring APIs from an on-premises environment to AWS EKS to reduce costs and increase availability.
  - Improved CI/CD processes by creating new Jenkins pipelines and shell scripts to support everyday tasks and ease the transition to AWS.
  - Transferred the data for the APIs to AWS OpenSearch and developed AWS Step Functions in Bash to streamline the process of uploading new data to the data stores.
  - Automated events within the AWS ecosystem through Lambda functions written in Python that worked alongside other AWS resources.
  - Provisioned new AWS resources with Terraform for a standardized infrastructure within the AWS environment.

- **Marist University**, Poughkeepsie, NY

  Tour Guide   Mar 2021 - May 2023
  - Gave tours to prospective students to show them around Marist's campus and answered their questions about the academic and social offerings at Marist.
  - Assisted in the Admissions Office as an Ambassador by communicating with prospective students and helping guide them through the college search process.

Education

- **Marist University**, Poughkeepsie, NY

  Master of Science in Software Development   2023 - 2024
  Bachelor of Science in Computer Science   2020 - 2023

Projects

- Created a system resource metrics monitor for Linux machines using Rust, TypeScript, React.js, and SQLite.
- Implemented the Potential Fields algorithm for an Arduino-based robot to navigate through an obstacle course and reach an end goal.
- Built a compiler in Rust for a custom language grammar that targets 6502 opcodes and RISC-V assembly.
- Developed an operating system in TypeScript that manages and executes programs and handles operations related to a virtual file system.
- Designed an algorithm to solve a variation of the hospitals and residents stable matching problem in C++.
- Created a virtual ARM processor in Go and utilized it as a package within a website built with React.js and JavaScript on the front-end and Gin and Go on the back-end.
- Built a virtual 6502 CPU in TypeScript and designed programs to run on the CPU using a subset of the original 6502 instruction set.
- Created a social media web application using the MongoDB, Express.js, EJS, and Node.js stack in JavaScript.