Maximo Machado

maximo@mit.edu | 215-696-1616 | Github: MaximoMachado

Education

Massachusetts Institute of Technology | **GPA: 4.7 / 5.0** — May 2023
Candidate for Bachelor's Degree in Computer Science and Engineering — Cambridge, MA

- Relevant Coursework: Performance Engineering, Intro to Operating Systems, Design and Analysis of Algorithms, Computational Photography, Intro to Machine Learning, Computation Structures (Computer Architecture)

Work Experience

CUDA Performance Intern — June 2022 – August 2022
NVIDIA

- Prototyped multithreaded improvements in CUDA's compute cache resulting in a 2-3x performance increase
- Implemented performance benchmarks and made pertinent conclusions based off of data
- Presented findings to CUDA Performance team and broader CUDA team as possible inclusion into production

Product Engineering Intern — June 2021 – August 2021
John Deere

- Developed and presented demos for proof of concepts utilizing Python and AWS for new team of 5 people
- Created CI/CD pipelines deploying code onto AWS services using infrastructure-as-code tools such as Terraform
- Migrated essential licensing encryption servers to new testing environment providing much-needed added security

Full Stack Web Developer Intern — August 2020 – November 2020
Falcn Lab LLC

- Architected a Customer Relationship Management (CRM) providing better organizational tools for working with company clients
- Designed a SQL database schema with careful attention paid to normalization
- Extended Content Management System's (CMS) admin tools to assist company's ability to post new content and articles

Projects

Spotify Playlist Manager — December 2020
Sole Developer

- Created a website that served on average 150 monthly users at its peak, spotifyplaylistmanager.net, that expands Spotify user's abilities to manage and manipulate their playlists
- Implemented the Multiple Playlist Searcher which Spotify implemented similar functionality 3 years later
- Wrote performant code by caching API requests and queuing jobs to sustain high server load and workaround Spotify API limitations

CourseRoad — September 2019 – December 2020
Team Member and Maintainer

- Extended features and improved usability of one of the two widely used MIT websites to plan out academic schedules
- Maintained a large codebase and database with frequent updates to keep in sync with MIT's class catalog
- Implemented petitioning classes giving the user more power to keep track of their progress

Skills

Programming Languages: *C, C++, Typescript, Python, RISC-V Assembly, Bash*
Frameworks: *Node.js, React, Vue.js, Arduino*
Other Tools: *AWS, Drone.io, Terraform, NGINX, Linux, Git, Perforce, PostgreSql, Redis*