




# TYLER ALAMO PORT

 [github.com/tyler274](https://github.com/tyler274)

 [linkedin.com/in/tyler-port-9a795455](https://www.linkedin.com/in/tyler-port-9a795455)

 [tp@dabney.moe](mailto:tp@dabney.moe)

 +1 (516) 776-7470

## EDUCATION

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**California Inst. of Technology [Caltech], *B.S. in Computer Science:***

*Jun. 2022*

- Studied Computer Science with a focus on low level GPU Programming for parallelizing and accelerating a variety of algorithms. Taught and composed material for several courses.

## WORK AND EXPERIENCE

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**Carl Zeiss AG., Germany, *System Software Engineer***

*March 2023 -*

- Systems Engineering regarding Graphics Processing Units (GPUs) and Field Programmable Gate Arrays (FPGAs), and management of masters students and interns.
- Worked on various projects making use of High Performance Compute in CUDA C++, SYCL, OpenCL, and Python.
- Deployed and tested FPGA implementations of Pytorch models for image signals processing.

**Caltech, *Lecturer and Teaching Assistant in Computer Science***

*April 2018 - June 2022*

- Translated and reimplemented assignments for CS24 (Operating Systems) from C to Rust.
- Lectured, held office hours, developed material, and graded Nvidia CUDA assignments for CS179 GPU Programming.
- Taught relational database theory and use with Structured Query Language (SQL) in CS121.
- Taught Rust programming for the CS11 Rust language workshop.

**North American Partners in Anesthesia., *Software Engineering Intern***

*Dec 2019 - August 2020*

- Automated inter-database information validation between Cactus and the National Provider Database, automated data entry and verification tasks with C# and UIPath, and worked on integration with legacy healthcare data systems.

**Tinder Inc., *Software Engineering Intern***

*June 2018 - August 2018*

- Researched and implemented an extension of Prometheus and Grafana, using Python and Puppet, that walked the graph of microservice dependencies to determine what services were degraded based on a dependency.

**NASA Jet Propulsion Lab, *Software Engineering Intern***

*January 2018 - June 2018*

- Worked on trajectory finding and visualization for the Europa Lander mission, reimplemented orbital calculations from MatLab to CUDA C++ for parallelization.

**Caltech IMSS, *IMSS Representative and Systems Administrator***

*January 2016 - June 2022*

- Worked on trajectory finding and visualization for the Europa Lander mission.

**DoubleVerify Inc., *Bot Fraud Analyst Intern***

*June 2015 - September 2015*

- Infected machines with malware and analyzed the collected network traffic for evidence of botnet based ad fraud.
- Researched botnet forums for new developments in the field, especially the prevalence of voluntary botnets known as traffic exchanges, and YouTube based revenue generation.

**KarmaFleet, *Director of Technology***

*January 2015 - September 2016*

- Used Python, Flask, SQLAlchemy, and PostgreSQL to develop a web application for managing 4500+ users.
- Implemented containerized deployment, continuous integration, and robust authentication and monitoring systems.
- Managed voice over IP, forums, chat, and other services for the corporation.

**GLO Gaming, *Office IT, Director of Technology***

*January 2012 - September 2014*

- Managed the IT infrastructure, including extension of Salesforce CRM integrations, backups, networking, security, and user support.

## SKILLS

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- Languages: Rust, Python, C/C++, CUDA/SYCL/OpenCL/HIP, C#, Haskell, VHDL, OCaml, Javascript, SQL, Java/Kotlin, Mathematica.
- Platforms/Technology: Linux (Gentoo, Arch, RHEL/Fedora, Debian/Ubuntu), Windows, MacOS, BSD, FPGA (Intel, AMD, Lattice), Git, Docker.
- Specialties: GPU programming, functional programming, computer graphics, relational database design and management, graph theory, systems administration, DevOps.