




TYLER ALAMO PORT

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EDUCATION

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

Jun. 2022

- Studied Computer Science focusing on low-level GPU Programming for parallel algorithm acceleration.
- Taught and developed material for several CS courses including GPU Programming and Rust.

WORK AND EXPERIENCE

Freelance Engineer and Independent Game Developer

October 2024 - Present

- Developed custom software solutions for clients leveraging expertise in Rust, Python, C++, and GPU acceleration.
- Designed and implemented core systems for an independent game called Rummage.

Carl Zeiss AG., Germany, System Software Engineer

March 2023 - March 2024

- Led systems engineering efforts focused on High-Performance Computing (HPC) using GPUs and FPGAs, specializing in CUDA C++, SYCL, and Python for accelerating scientific and potentially AI/ML workloads.
- Managed master's students and interns on projects involving GPU/FPGA programming and system optimization.
- Developed, deployed, and tested FPGA implementations of Pytorch machine learning models for real-time image signal processing pipelines.

Caltech, Lecturer and Teaching Assistant in Computer Science

April 2018 - June 2022

- Taught and developed course material for CS179 (GPU Programming), covering Nvidia CUDA for parallel algorithm implementation.
- Taught Rust programming for the CS11 workshop; reimplemented CS24 (Operating Systems) assignments from C to Rust.
- Taught relational database theory and SQL application development in CS121.

North American Partners in Anesthesia., Software Engineering Intern

Dec 2019 - August 2020

- Automated inter-database validation and data entry/verification using C# and UIPath for healthcare systems (Cactus, National Provider DB).

Tinder Inc., Software Engineering Intern

June 2018 - August 2018

- Developed Prometheus/Grafana extension (Python, Puppet) to trace microservice dependencies and identify root causes of service degradation.

NASA Jet Propulsion Lab, Software Engineering Intern

January 2018 - June 2018

- Accelerated Europa Lander orbital calculations via MATLAB-to-CUDA C++ reimplementations for large-scale parallel simulation/visualization.

Caltech IMSS, IMSS Representative and UGCS Systems Administrator

January 2016 - June 2022

- Administered 150TB storage array and compute resources, ensuring high availability/performance for thousands of users (Linux environment).

DoubleVerify Inc., Bot Fraud Analyst Intern

June 2015 - September 2015

- Analyzed malware network traffic to identify botnet ad fraud patterns; researched evolving botnet tactics (traffic exchanges, YouTube fraud).

KarmaFleet, Director of Technology

January 2015 - September 2016

- Architected/developed Python/Flask/SQLAlchemy/PostgreSQL web app for 4500+ users; implemented DevOps (Docker, CI, monitoring).
- Managed critical infrastructure (VoIP, forums, chat services).

GLO Gaming, Office IT, Director of Technology

January 2012 - September 2014

- Managed IT infrastructure: network security, backups, user support, Salesforce CRM integration.

SKILLS

- Languages: Rust, Python, C/C++, CUDA/SYCL/OpenCL/HIP (GPU Programming), SQL, C#, Java/Kotlin, Javascript, Haskell, OCaml, VHDL, Mathematica.
- Platforms/Technology: Linux (Gentoo, Arch, RHEL/Fedora, Debian/Ubuntu), HPC Environments, FPGAs (Intel, AMD), Docker, Git, Windows, MacOS, BSD.
- Specialties: GPU Computing & Parallelization, Systems Engineering & Administration, DevOps & Infrastructure Management, High-Performance Computing (HPC), AI/Machine Learning (Pytorch), Low-Level Programming, Relational Database Design (SQL, PostgreSQL), Functional Programming, Computer Graphics.