SAM MUSSO

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EMPLOYMENT

Consulting Software Engineer

Lunar Outpost

Winter 2023

Stargate Mission Control (Languages: TypeScript, Python, Rust)

- Designed and developed a fault tolerant ground station and Robotics as a Service Platform (Stargate).
- Stargate ensures delivery of both lunar & terrestrial originated telemetry and reliable command dispatch.
- Stargate is built on AWS using a combination of serverless (Lambda) and containerized (K8s) microservices.
- Microfrontend architecture using ReactJS, GraphQL and REST.
- Built a navigational frontend (Atlas) to visualize the location of the lunar rover and its surroundings using streamed telemetry and in-situ landing photogrammetry. [CesiumJS, ArcGIS]
- Built a telemetry visualization & command dispatch frontend (Pilot) for the lunar rover.

Software Engineer 2

Amazon, Inc.

Fall 2019 - Winter 2023

Amazon.com (Languages: Java, Python, Kotlin, JavaScript, TypeScript)

- MicroServices development in Kotlin, Python, and Java on AWS with a focus on low DevOps overhead infra.
- Full-stack redesign of the cell phone trade-in workflow resulting in 100+% increase in trade-ins.
- Designed and developed key portions of team's retail chat service yielding positive conversions.

Senior Software Engineer

TAIT

Spring 2017 – Fall 2019

iQ And Navigator (*Languages: C++, TypeScript, Python*)

- Design and implemented a Command & Control UI for use in the Entertainment Automation industry.
- Leveraged Qt with a multi-threaded C++ backend and a ReactJS frontend to achieve 60fps.
- System is used to run 100% of the shows at the Royal Opera House in London and NY Met Opera.

Software Engineer

Alpine Labs

Fall 2015 - Spring 2017

Pulse Camera Controller (*Languages: C++, TypeScript, Python*)

- Led firmware and bootloader development efforts in delivering Kickstarter's most funded photography gadget to that date.
- Hybrid mobile app development for iOS / Android using Cordova, AngularJS, and Ionic.
- Delivered 65000+ units to 100+ countries with an engineering team of 4.

Software Engineer in Test

Netronome Systems, Inc.

Feb 2014 - Spring 2015

Network Flow Processing (Languages: C++, Python and C)

• QA new releases of our linux drivers, libraries, and utility apps for a suite of Network Accelerating ASICs.

Software Developer Co-op

ANSYS, Inc.

Spring 2011 – Dec 2012

DesignModeler CAD (Languages: C++, Python)

- C++ Software Developer Intern on the DesignModeler team for ANSYS Workbench.
- Improved the speed of the load and save operations by 800% leveraging multi-processing (SMP).

EDUCATION

Pittsburgh, PA

University of Pittsburgh

Fall 2009 – Dec 2013

- B.S.E. in Computer Engineering, Dec 2013. In-major GPA: 3.4.
- Coursework: Operating Systems; Databases; Algorithms; Programming Languages; Comp. Architecture; Engineering Entrepreneurship.

LANGUAGES AND TECHNOLOGIES

- TypeScript; Python; C++; C; Java; Kotlin; SQL; JS; JSON; HTML; CSS; Bash;
- AWS; Docker; Kubernetes; Terraform; Jenkins; Git; Jira; Linux; MacOS; Windows;
- Scrum; Agile; TDD; BDD; CI/CD; Microservices; Serverless; REST; GraphQL;
- VS Code; Visual Studio; Eclipse; XCode; Vim; IntelliJ; Android Studio;