Tyler J. Ferrara

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PROFILES
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OBJECTIVE

Software Engineer seeking applied research in operating system architecture and development.

EDUCATION

Worcester Polytechnic Institute (WPI), Worcester, MA   March 2022
Bachelor of Science in Computer Science

TECHNICAL SKILLS

Programming Languages: Golang, Javascript, Rust, Kotlin, Java, Python, C, C++, Bash, SQL, HTML/CSS

Technologies: Android, Kubernetes, Docker, Bazel, Make, GDB, QEMU, NeoVim, Unix, Node, React, Git, Mercurial

RELEVANT COURSEWORK

Object-Oriented Analysis and Design, Computer Networks, Database Systems, Systems Programing Concepts, Algorithms, Software Engineering, Operating Systems, Network Security Engineering, Mobile Computing, Artificial Intelligence, Distributed Computer Systems, Machine Learning

WORK EXPERIENCE

Software Engineering Intern @ Google, *Boulder, CO*   May 2022 – Current
- Develop and maintain testing infrastructure for third-party devices via sourcing devices vulnerable to privilege escalation. This enables our team to develop & address bugs on hardware otherwise locked out of Google's 1P tools.
- Design and implement support for Android U s Predictive Back feature within Drive & Viewer apps. Establishing a test plan, gathering usage metrics & creating a roll-out schedule to deploy to millions of users.
- Contribute to and maintain back-end APIs responsible for syncing content between device & cloud.

Software Engineering Intern @ Google, *Remote*   May 2021 – August 2021
- Engaging with Kubernetes SIG-Release in public bi-weekly discussions on future & current developments.
- Presented & submitted design reviews on reducing build maintenance for a container image promotion tool.
- Conducting code-reviews, as a contributor & reviewer, for PRs within a variety of open-source k8s projects.

Software Engineering Intern @ Dropbox, *San Francisco, CA*   May 2020 – August 2020
- Designed a new authorization system reliant on 2FA for users to allow/deny account modifications.
- Built, secured, and tested a web service that dispatches and resolves account modification requests.
- Documented new architecture & approved the 2FA verification template with the legal team.

Software Engineering Intern @ Google, *Seattle, WA*   January 2020 – April 2020
- Designed and implemented a Kubernetes deployment architecture for an existing GCloud service.
- Shared a detailed design document of the new pipeline, including future work and cost analysis.
- Abstracted setup infrastructure behind a simple CLI for a streamlined installation process.

Software Engineering Intern @ Solvus Global, *Worcester, MA*   May 2028 – October 2018
- Designed Machine Learning Interface for Cold Spray Industry data collection application.
- Lead Developer in Agile Design Sprint with South Dakota partners in Additive Manufacturing.
- Built and managed PostgreSQL Database (AWS) with authentication for multiple user groups.

PROJECTS

Open Source Contributions, *Ethereum Foundation & Chainlink*   July 2019
- Contributed to Go-Ethereum and Chainlink code-bases following protocols for Pull Requests.
- Fixed Continuous Integration Tests, updated documentation, and upgraded critical dependencies.
- Collaborated with lead developers in discussing design decisions and management of the project.

Augmented Reality Path-Finding, *Software Engineering WPI*   September 2018
- Implemented Augmented Reality floor map using ARKit2.0 to guide users through indoor space.
- Coordinated developers, tracked issues, and planned sprints as the lead software engineer.
- Constructed facial recognition, virtual map, room scheduler, and efficient path-finding algorithm.

Server-Side Rendering Starter Kit (React), *Independent Project*   October 2017
- Unopinionated project starter for hackathons, and feature speed-reliant web applications.
- Quicker time to interactive (TTI), viewability increase, and decreased client browser computation.
- Enhanced SEO for search engines that do not support web scraping of JS rendered applications.