M. EVAN WILDENHAIN

Software Engineer

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WORK EXPERIENCE

Google **New York, NY**

Senior Software Engineer, Fuchsia Networking May 2023 - Present

- Fuchsia is a new open source microkernel-inspired operating system running on tens of millions of smart home devices.
- Migrated Fuchsia's ABI-compatible implementation of the Linux userspace API to run against a new Rust networking stack. Led effort of team of 8 to discover and fix numerous feature gaps and bugs to enable running Android's userspace, network policy layers, and applications unmodified against Fuchsia instead of Linux.
- Rewrote the netstack's route table implementation to allow route management to be federated between Fuchsia and Android for the same device.
- Designed and implemented a DHCP client in async Rust. This component is critical for IPv4 connectivity and has run on hardware for over a year with no significant field issues.

Software Engineer, Fuchsia Networking June 2021 - May 2023

- Designed and implemented CI/CQ support for IxANVL network conformance testing (adapting proprietary ANVL binaries to Fuchsia infrastructure with complex virtual networking, host-target communication, and test result monitoring). Runs thousands of RFC-statement-level test cases every 3 hours, guaranteeing conformance for protocols such as IP, UDP, TCP, NDP, etc.
- Optimized the memory usage of Fuchsia's legacy Go network stack by 11% by profiling and fixing various space leaks.

Software Engineer, Google Shopping Web August 2019 - June 2021

- Designed, implemented, and launched framework for taking features built on a greenfield web stack and serving them on the much-higher-traffic legacy Search web stack, rescuing a stalled over-a-year-long migration.

Facebook **Various**

Software Engineering Intern Summer 2018, Summer 2017

- Rewrote reader for widely-used columnar storage format from Java into C++, benchmarked as improving file read times by as much as 50%.
- Rewrote frontend router for 50 React recruiting tools to speed up pageloads and simplify authentication.

EDUCATION

Princeton University **Princeton, New Jersey**

Bachelor of Science in Engineering in Computer Science Sep 2015 – Jun 2019

- **Honors**: *summa cum laude*, Phi Beta Kappa, Sigma Xi, 3.95 GPA
- **Courses**: Networks, Distributed Systems, Compilers, Graphics, Information Security, Functional Programming, Convex Optimization, Neural Networks, Probability and Stochastic Systems, Algorithmic Game Theory, Advanced Algorithm Design, Graph Theory

RESEARCH PUBLICATIONS

Selling to Multiple No-Regret Buyers 2023

Presented at Web and Internet Economics: 19th International Conference (WINE 2023)

- Invents and proves optimality of an auction mechanism for extracting maximum revenue from multiple independently and identically distributed buyers who each use a no-regret learning algorithm to bid over time.

SKILLS

- Languages: Rust, Go, C++, Java, TypeScript, JavaScript, HTML/CSS, Bash, jq, Python, Haskell
- Domains: networking, operating systems, zerocopy, async, type-level programming, functional programming, web

SIDE PROJECTS

Sockball: A 2D WebRTC Car Soccer Game 2025

- An online peer-to-peer multiplayer car soccer game, implemented with Godot.

Collideoscope: A Kaleidoscopic Infinite Runner 2019

- Physics-y infinite runner down the length of a kaleidoscope, implemented with ThreeJS.