Education

Beloit College, Beloit, WI – BA in Computer Science (August 2016 – May 2020), summa cum laude Focus on computational models, algorithm analysis, and engineering practices. Other coursework included creative writing, rhetoric, philosophy, and sociology.

Experience

Fastly, Inc., Remote – Software Engineer, Sr. Software Engineer

- Designed deployment and protocol migration processes for a >1000-node distributed caching system.
- Improved Time to First Byte, latency, and throughput of our caching solution by up to 400%.
- Used async Rust to reduce fleetwide memory usage of our caching solution during restoration by 50%.
- Onboarded and mentored two other engineers, significantly decreasing their time to productivity.
- Collaborated with other teams, rapidly ramping up to contribute to other codebases when necessary.

CancerIQ, Inc., Chicago, IL – Software Engineer

- Developed clinical medical software in a mixed monolith/microservice environment.
- Designed and implemented a flexible, performant multi-language cancer risk analysis system. •
- Integrated and reimplemented legacy Ruby, C, and R codebases into a high-quality Rust web service.

Freifunk, Remote – Systems Software Engineer, Contract

- Developed a greenfield telecommunications project in collaboration with a global remote team.
- Designed and built a testing framework for eventually consistent systems using the Rust language. ٠
- ٠ Designed and built ergonomic and easy-to-use APIs using Rust's powerful static type system.

CancerIQ, Inc., Chicago, IL – Software Engineering Intern

Beloit College, Beloit, WI – Volunteer Full Stack Developer

- Developed front-end, back-end, and database components of the Open Energy Dashboard in TypeScript.
- Built and tested a high-capacity API for data transfer between measurement devices and PostgreSQL.
- Refactored a large React.js codebase to significantly improve developer productivity and performance.

güdTech, Inc., San Diego, CA – Software Engineering Intern

- Built developer productivity tooling for a team of engineers working in a service oriented architecture.
- Implemented command line tools using Go, working with the internals of Docker and Docker Compose.
- ٠ Worked with senior engineers to orchestrate onboarding and automated testing of microservices.

Skills

- Programming languages: Rust, Ruby, Python 3, JavaScript, TypeScript, Go, C
- Technologies: Tokio, PostgreSQL, Express.js, Rocket.rs, Nginx, React.js, Flask, Ruby on Rails
- Engineering: test-driven development, advanced version control workflows, code review techniques
- ٠ General skills: rapid learning, knowledge management, time management, binary reverse engineering
- I have used Linux on the desktop for over a decade, and use NixOS servers to self-host various services.
- I am passionate about high quality documentation and empathy in teaching and expository materials.
- I am a licensed General-class amateur ("ham") radio operator.

Publications and Recognition

Programming Rust, 2nd Edition – A textbook on the Rust programming language. O'Reilly, 2021 **Featured on Hackaday** – for my Linux x86_64 binary reverse engineering tutorials. **Conwell-Huffer Endowed Prize in Mathematics** – For excellence in mathematics at Beloit College.

May 2019 – June 2020

May 2018 – August 2018

September 2017 – May 2019

May 2017 – August 2017

December 2021– Present

August 2020– December 2021