

## Software Engineer

**Key Interests:** Rust, Swift, WebGPU, CRDTs, Edge Computing, Solana, Deep Learning, NeuroSymbolic AI, Compilers, Programming Language Design, Haskell, Dependent Type Systems, Lisp, Formal Code Verification, ML Compilation.

I am a product driven software engineer and founder with 7+ years of experience building all kinds of systems. I started my career designing hardware and writing C code, however most of my career has been full-stack dev, particularly in TypeScript/React. I am capable of picking up new systems quickly. My current side projects include machine learning on WebGPU and writing a graphics programming language in Rust. I am looking for an early stage startup or scale up where I can have substantial impact on the direction of tech and product. **I thrive when given a hard challenge. I am eager to prove myself and surround myself with people smarter and more capable than I.**

## Experience

### Anytype • Software Engineer

October 2022 - May 2023 (laid off) • Berlin (Remote)

Anytype is a Web3 Notion-like app with >160,000 users and >3k stars on github. It's peer 2 peer, open source, offline-first and e2e encrypted. I helped push through to public launch, developing the desktop app and browser extension. I was the lead developer for the widgets and onboarding systems. I also supported end users on the forum, fixed bugs and promoted refactoring to improve code quality.

TypeScript•React•Electron•Go•IPFS•CRDT•gRPC

### career break ➡

I took a year off to convert a school bus into a camper and develop handy skills, as well as ski all over North America and get certified as a wilderness first responder. I built a CNC machine to produce a unique modular furniture system. I built an advanced solar off-grid electrical and automation system, plumbing, etc.

### Qualio • Full Stack / Devops Engineer

September 2020 - August 2021 • San Francisco (Remote)

Qualio is a QA platform for Life Sciences / Pharma. I helped develop the customer migration and onboarding system eliminating any manual labor required from the engineering team. I helped transition our spaghetti monolith to our microservice architecture, implementing a deployment pipeline to achieve high availability and scaling OKRs.

Python•Typescript•React•Node•AWS•Lambda•Docker•CloudFormation

### Huckleberry AI • co-founder / CTO (seed stage)

January 2019 - Now • Waterloo (Hybrid)

I raised ~150k in funding for our Canadian PropTech startup and took 3 products from idea to paying customers. Products include ping.buzz (b2b SaaS) + huckleberry.app and web extension (b2c). When I initially joined, we turned around an outsourced project into an in-house success. I managed a small dev team + 12 co-op students from Waterloo. I designed our serverless, hexagonal, functional DDD architecture and built our data pipeline to process market feed data. We overcame many challenges, however gained minimal traction.

TypeScript•Node•React•Native•Postgres•Redis•AWS

### **RCO Ventures** • Contractor / Consultant

April 2017 - September 2020 • Waterloo (Remote)

I started a contracting firm, hiring 3 employees and serving 30+ startup clients. My projects included web/mobile applications, data processing, devops and digital transformation initiatives. Some highlights include a healthcare billing app with a OCR system for equina.io, web/mobile app development for Toggl, MowGoSnowGo, ConstructionHub, a gig economy collaboration with Gigit x World Massage Conference, data mining for a class action lawsuit and a productized dataset of all lawyers in Canada with 10+ customers. During this time I also organized volunteers for ETHWaterloo Hackathons and meetups at AI conferences like NeurIPS.

Python•Node•TypeScript•Angular•React•Electron•Rust•Ruby on Rails•Golang•C#•Netlify•Vercel•AWS•Mongo•Postgres•Redis•RabbitMQ•Wordpress•NextJS•Gatsby•Shopify•Docker•Kubernetes•GraphQL.

### **Emrys Analytics** • Director of Analytics

September 2016 - March 2017 • Waterloo (Hybrid)

I co-led the development of risk models and our underwriting application along with the CEO, insuring 84 healthcare institutions against cyber attacks / data breaches in the United States. We developed a desktop application and an underwriting engine written in Rust/Python. I built an ETL pipeline to aggregate and clean datasets. I applied models including k-means clustering and monte carlo. I also co-authored a paper on autonomous vehicle insurance data for Ford. Python•TypeScript•Rust•Electron•Postgres•AWS

### **Diebold Nixdorf** • Software Architecture R&D Internship

May 2016 - August 2016 • London

Diebold Nixdorf makes banking systems and hardware. I helped develop a redis authorization middleware to support ATMs/Banking Machines. I built proofs of concept and conducted experiments to validate decision making. I explored emerging tech like, web rtc, websockets, http/2 and support vector machines for anomalous state detection. C#•TypeScript•Angular•Redis

### **DELTA Fi (ΔFi)** • Founder / Hardware Designer

May 2013 - May 2016 • London

At 17 I launched a hardware synthesizer startup and obtained a grant. I built various synthesizers and designed an innovative system called OPAH: a hardware platform running PureData DSP patches on an embedded linux system with analog expansion cards. I designed AVR32 and AVR8 based PCBs, etching my own circuit boards and fabricating them overseas. I also wrote bill-of-materials optimization scripts and marketing material.

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## **Education**

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### **Western University** / Comp. Sci. and Mathematics B.Sc.

2014 - 2016, Canada