Matthew Berger

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Founding engineer with 11 years Rust expertise (pre-1.0 early adopter), 5+ years in production systems who built food assembly robotics from zero in 22 months, securing $10M+ investment from Chipotle and Cava.

Work Experience

Hyphen (Culinary Robotics) — Remote
Staff Software Engineer (Founding Engineer) — September 2022 - Present

- Founded food assembly robotics controls suite as first engineer, driving technical pivot from PLC to Rust architecture and achieving complete product delivery in 22 months securing **$10M+ investment** from Chipotle and Cava
- Engineered full technology stack from bare-metal firmware (RP2040/Embassy) to distributed robotics control system and cloud infrastructure, including custom Yocto Linux distribution
- Built core async message broker coordinating distributed processes on industrial PC with direct networking to embedded boards, handling **10K+ msgs/sec** with **<1ms latency**, zero message loss over **3 years** of constant use
- Transformed team of web developers into proficient Rust systems programmers through hands-on mentorship, architectural documentation, and pair programming
- Designed deterministic layered configuration system enabling fleet scaling from single prototype to **thousands of machines** across multiple enterprise customers
- Created Hyphen Explorer tool achieving **100% adoption** across all software engineers, ops technicians, and culinary operators for real-time IPC visualization, debugging, and system control
- Published open-source Rust crates (enum2contract, enum2egui, enum2str, enum2pos, enum2repr) extending language capabilities for robotics

Hyphen (Culinary Robotics) — United States
Senior Software Engineer — July 2021 - September 2022

- Diagnosed critical scaling limitations in legacy PLC system preventing growth beyond prototype
- Led architectural pivot to embedded Rust, convincing C-suite to abandon **$500K** PLC investment
- Prototyped RP2040 firmware with Embassy-rs
- Built AWS infrastructure with Pulumi while transitioning company to new technical direction

Sierra Nevada Corporation — Englewood, CO
Software Engineer III — May 2020 - July 2021

- Developed aerospace imaging software processing **5GB/sec** pixel data during flight operations
- Built Rust simulator for unavailable hardware, saving **3 months** on project timeline

Scientific Games — Reno, NV
Software Engineer — July 2019 - May 2020

- Resolved performance defects improving frame rates by **40%** in Unity-based casino platform

Hamilton Company — Reno, NV
Software Engineer — January 2018 - July 2019

- Built safety-critical software for liquid-handling medical robots • **FDA compliance achieved**
- Reduced calibration development from **2 months to 2 weeks** through reusable plugin framework
- Decreased environment setup from **8 hours to 5 minutes** with automated bootstrapper
- Architected diagnostic application for largest OEM customer (**$2M contract**)

Hamilton Company — Reno, NV
Software Engineering Intern — October 2014 - December 2017

- Automated quality testing, saving **40 hours/robot** through gravimetric analysis automation

- Developed tools saving **20+ hours weekly** across 15-person development team

Technical Skills

Languages: Rust (10+ years, pre-1.0 early adopter), C++, TypeScript, Python, C# • **Systems:** Distributed Systems, Real-time Control, Embedded Linux, Message Brokers • **Tools:** AWS, Docker, Kubernetes, Yocto Linux, GitHub Actions

Education

University of Nevada, Reno   BS Computer Science & Engineering, Minor in Mathematics, 2017