MATTHEW BERGER

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Founding engineer who architected and scaled robotics platform from concept to enterprise deployment. 5+ years production Rust expertise across embedded systems and distributed infrastructure. Transformed company technical direction from PLCs to modern architecture, securing major enterprise investments.

WORK EXPERIENCE

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

- Founded robotics platform as first engineer • Led pivot from PLC to Rust • **22 months to production**
- Achieved complete product delivery securing **$10M+ investment** from Chipotle and Cava
- Built core async message broker: **10K+ msgs/sec** • **Zero message loss over 3 years** • **<1ms latency**
- Transformed **8-person web team** into proficient Rust systems programmers through mentorship and documentation
- Designed deterministic config system enabling scaling from **1 to 1000+ robots** across enterprise deployments
- Engineered full stack from bare-metal firmware (RP2040/Embassy) to cloud infrastructure on custom Yocto Linux
- Created Hyphen Explorer used daily by all engineers and operators • **100% team adoption**
- Prevented 10+ critical failures through predictive architecture (connection pooling, event-driven telemetry, config diffing)
- Published open-source Rust crates (enum2contract, enum2egui, enum2str) with **1000+ downloads**
- Established CI/CD pipeline reducing deployment time from hours to **<20 minutes**

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, 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