Matthew Berger

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Founding engineer with 11 years Rust expertise (pre-1.0 early adopter), including 5+ years in production systems. Built food assembly robotics control suite from zero to production 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
- Achieved complete product delivery in **22 months** securing **$10M+ investment** from Chipotle and Cava
- Transformed team of TypeScript/React developers into proficient Rust systems programmers through hands-on mentorship, establishing architectural patterns, and pair programming
- 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 **1M+ msgs/sec** with **<1ms latency**, zero message loss over **3 years** of constant use
- Designed deterministic layered configuration system enabling unlimited fleet scaling
- 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 with 200k+ total downloads (enum2str, enum2contract, enum2egui, enum2pos, enum2repr)

Hyphen (Culinary Robotics)   Remote
Senior Software Engineer   July 2021 - September 2022

- Diagnosed critical scaling limitations in legacy PLC system preventing growth beyond prototype
- Led technical pivot from $500K PLC system to embedded Rust architecture
- Pioneered RP2040 firmware with Embassy-rs, creating first Rust TMC5160 motor and AS5048A encoder drivers proving Rust could meet real-time control loop requirements
- Built early AWS infrastructure with Pulumi and greengrass IoT

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

- Developed C++/Rust aerospace imaging system (5GB/sec) and simulator saving 3 months on delivery timeline

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

- Resolved critical performance and behavioral defects in a Unity-based casino-gaming platform

Hamilton Company   Reno, NV
Software Engineer   January 2018 - July 2019
Software Engineering Intern   October 2014 - December 2017

- Built safety-critical software for liquid-handling medical robots
- Automated gravimetric analysis QA process, saving **1+ week per robot** across production fleet
- Reduced calibration development from **2 months to 2 weeks** through reusable plugin framework
- Architected diagnostic application for largest OEM customer Illumina (**$2M contract**)

Education

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