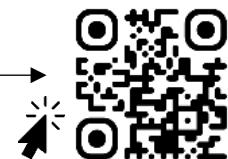# BRYCE WALKER

BRYCEWALKER@MINES.EDU | (720) 436-1674

LINKEDIN.COM/IN/BRYCE-A-WALKER | GITHUB.COM/BRYCEWALKERDEV | BRYCEWALKER.DEV

PORTFOLIO

EDUCATION

COLORADO SCHOOL OF MINES — **GOLDEN, CO**
B.S. Electrical Engineering | Minor in Computer Engineering — 3.6 GPA, Dean's List
Relevant Courses: Advanced Digital Design, Circuits, Computer Organization, Data Structures and Algorithms, Signals I and II

ENGINEERING EXPERIENCE

SECOND ORDER EFFECTS — **EL SEGUNDO, CA**
Electrical Engineering Intern — **May 2025 – August 2025**
- Designed spaceflight hardware, schematics and PCBs in Altium Designer, including those for a satellite flight computer and power distribution unit. Utilized specialized knowledge to complete design work ahead of schedule leading to the securing of additional contracts.
- Supported bring-up and hardware debugging of spaceflight systems, requiring deep Linux kernel and hardware knowledge.
- Provided key information in customer design reviews on the subsystems owned and supported.
- Designed UVM testbench in System Verilog for FPGA video pipeline; authored UVM driver and monitor in adherence to sensor datasheets.
- Developed custom application specific Yocto Linux kernel, owning the development of FPGA over-the-air update kernel drivers.

MINES FORMULA SAE — **GOLDEN, CO**
Lead Electrical Engineer — **March 2025 – Present**
Electrical Engineer — August 2024 – Mar 2025
- Directed development of Mines Formula's first industry-standard automotive harness and distributed STM32 CAN data/control architecture.
- Transformed team structure and introduced project planning methods rapidly accelerating 2026 vehicle timeline.
- Developing educational lectures and projects to introduce the next generation of engineers to circuit and PCB design.
- Coordinated stakeholder design reviews and ensured hardware/software integration through robust technical requirements.
- Spearheaded bring up efforts on competition critical analog PCBs requiring SMD rework and creative hardware hacking.
- Designed PCBs in Altium Designer including a custom M.2 telemetry module and real-time vehicle dashboard providing critical real-time vehicle statistics to drivers and engineers.

SURGICAL COATINGS, LLC — **LITTLETON, CO**
Project Engineer — **May 2024 – December 2024**
Engineer I — June 2021 – May 2024
- Architected electrical/control systems for next generation production line boosting production capacity by 270%.
- Selected and managed subcontractors, project budgets, item boards, Gantt Charts, success metrics, execution plans and oversee implementation to ensure timely completion within budget constraints.
- Replaced mission-critical LabVIEW hardware and software with custom embedded solutions written in Rust and C, increasing production line uptime to 99% and contributing to a 23% gross profit increase for a flagship product.
- Conducted extensive mechanical design work on the "next generation" automated production line including chain-on-rail drive components, a welded steel frame, and automated gantry ensuring precision and efficiency.
- Developed technical breakthroughs under NDA with patents pending, including an innovation that improved core function by 253% when compared to competitors, opening access to a market projected to reach $118.4 million by 2030.

PROJECT EXPERIENCE

FPGA OSCILLOSCOPE AND FUNCTION GENERATOR — **2025**
- Worked with a team to develop and design a digital Oscilloscope and two channel Function Generator, implemented on a Xilinx Zynq development board. One of two teams to hit all functional requirements by deadline.
- Gateware written in VHDL utilizing conventional test benches in the Vivado IDE. O'scope TUI written in C targeting bare metal.

CUSTOM UAVS — **2014 – PRESENT**
- Designed and piloted drones with real-time HD video/telemetry links, black-box logging, and tuning.
- Careful selection and integration of electrical and mechanical components to maximize performance based on flight criteria.

HABITLAB — **2023**
- Built AI-assisted habit tracking tool in Rust, Python and web stack; integrated LLM for user insights.
- Presented at the Mines innovation fair.

STONESCOPE — **2023**
- Built CLI in C++ with custom Touchstone parser and lightweight plotting library for RF engineers.
- Saw use in industry for quickly plotting large files.

TECHNICAL SKILLS

- Hardware & Design: Altium Designer, SPICE, PCB Layout, FPGA Digital Design (Verilog/VHDL/System Verilog), Vivado, Quartus, Radiant, SolidWorks, Automation Systems, PCB Bring up
- Programming: C, C++, Rust, Python, Assembly (RISC-V), Embedded RTOS, Embedded Linux, Yocto
- Other: Project Leadership, Technical Writing, Rapid Prototyping, SMD Rework, Soldering, MS Office Products