

PROFESSIONAL SUMMARY

Electrical engineer with experience in controls, cryogenic systems, and hands-on laboratory testing. Background includes embedded-style control logic, sensor and actuator integration, wiring harness design, and system diagnostics. Experienced with cryogenic and vacuum systems, PID control concepts, and Python and C/C++ development. Proven ability to troubleshoot complex hardware, analyze test data, and maintain technical documentation.

SKILLS

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| • Wiring Harnesses | • Cryogenic Systems | • Data Acquisition |
| • Python and C++ | • Vacuum Systems | • EM Shielding |
| • PID Controls | • Embedded Controls | • NFPA Standards |

PROFESSIONAL EXPERIENCE

Denver Water – Denver, CO

Engineering Specialist | 03/2025 –Present

- Interpreted electrical instrumentation and controls diagrams to support diagnostics, testing, and system documentation.
- Gathered and analyzed field data to support troubleshooting, performance evaluation, and maintenance planning.
- Supported integration and documentation of sensors and control devices across 35+ facilities.
- Maintained structured technical records, data logs, and configuration documentation.

Silicon STEM Academy – Denver, CO

Director of Operations/Instructor | 05/2022 – 08/2023

- Taught Python programming, robotics, automation, and engineering safety practices.
- Developed hands-on control and diagnostics curricula emphasizing sensors and actuators.
- Managed technical laboratory operations and instructional equipment.

United States Air Force – Multiple Locations

Radiology Technologist | 04/2012 – 14/2018

- Operated and maintained complex electromechanical imaging systems.
- Performed system troubleshooting, quality assurance, and safety compliance checks.
- Delivered technical training to large multidisciplinary teams.

EDUCATION

Bachelor of Science, Electrical Engineering – University of Colorado Denver, 2024

Certificate in Quantum Information Technology

Bachelor of Science, Applied Computer Science – University of Colorado Boulder (In Progress)

CERTIFICATIONS

Engineer in Training (EIT) – Colorado Board of Licensure (#EI.0080365)

PROJECTS

Autonomous Rover – Colorado Space Grant Consortium

- Designed embedded-style motor control and object-avoidance algorithms using Python and C.
- Implemented closed-loop control logic for real-time motor actuation.
- Integrated sensors, actuators, and wiring harnesses into a unified system.
- Developed testing procedures and data-logging methods for performance validation.

Cryostat Instrumentation & Wiring Harness Upgrade

- Upgraded cryostat wiring harness to integrate a fourth silicon diode thermometer while maintaining 4K operation.
- Designed wiring schematics compatible with cryogenic and vacuum constraints.
- Installed and calibrated temperature sensors to improve thermal diagnostics.
- Performed continuity testing and vacuum leak detection on dilution refrigerator and pulse tube systems.