Joseph Roscoe Isola

Automation Engineer | Embedded Systems Engineer

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Professional Summary

Automation & Embedded Systems Engineer with a track record of architecting and delivering specialty industrial control solutions - most notably turnkey PVD coating chamber systems that trimmed daily operational overhead by six hours. I thrive in complex problem space, from root-cause analysis and rapid prototyping to production and optimization. Skilled at SCADA/PLC development, electrical cabinet design, and embedded firmware that meet demanding aerospace quality and safety standards (AS9100D). Seeking a collaborative, growth-oriented engineering environment.

Work Experience

Acree Technologies — **Automation Engineer**
Concord, CA — 05/2024 - Current

- Produced turnkey automation for two PVD coating chambers (total run time ~14 hours a day), reducing operator involvement by 5-6 hours daily.
- Engineered all PLC programming, SCADA integration, and electrical cabinet design for systems that process aerospace components for clients such as Chromalloy, SpaceX, and Raytheon.
- Authored comprehensive system documentation and operator manuals, streamlining usability while ensuring compliance with ISO aerospace standards for safety and data integrity.

Acree Technologies — **Automation Intern**
Concord, CA — 05/2023 - 05/2024

- Initiated automation development of the first PVD coating chamber as a senior-year intern; hired full-time and promoted to Automation Engineer in Summer 2024

Projects

Embedded PID Loop for Mass Flow in R&D System — **Acree Technologies**
Concord, CA — 07/2025 - 08/2025

- Developed a C++ PID loop on Arduino Mega R3 with MCP4921 DAC (SPI) and TI MAX232N for RS-232 feedback control of oxygen flow.
- Built a Python Tkinter/Matplotlib GUI for live plotting, parameter tuning, and CSV logging, cutting manual monitoring by ~1 hr/day.

Cathodic Arc Deposition Chamber — **Acree Technologies**
Concord, CA — 01/2025 - 07/2025

- Designed and implemented a turnkey automated system for cathodic-arc deposition, leveraging Python scripting within Ignition SCADA to orchestrate Allen-Bradley PLC control and data logging.
- Automated and integrated control of eight power supplies, four pressure sensors, mass-flow controllers, heaters, pumps, pneumatic valves, rotary actuators, a motor, thermocouple monitoring, and gate-valve operations.

Education

University of Nevada, Reno 2024
B.S. in Computer Science and Engineering (CSE)

Skills

- C++
- Python
- Java
- Ladder Logic
- PLC
- SCADA
- Allen Bradley
- Automation Direct
- Ignition
- PLC Circuit Design
- Microcontrollers
- Arduino
- Visual Basic
- Microsoft Office
- RS-232
- Servo Motors
- Analog IO