#### **Daniel Reardon**

Waxhaw, NC

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# Summary

Control Systems Engineer with 20+ years of experience in industrial automation, specializing in Allen-Bradley PLC (ControlLogix, GuardLogix) programming, HMI development (FactoryTalk View ME, AVEVA/Wonderware), and real-time system integration. Proficient in robot control (Staubli, Fanuc), motion systems, remote I/O, safety PLCs, and vision inspection (Keyence, Cognex). Strong background in commissioning, field support, and troubleshooting of complex custom machinery. Cross-functional collaborator with mechanical and electrical engineers, focused on developing robust, scalable automation solutions that exceed performance and cycle time targets.

# **Objectives**

Seeking a technically challenging role where I can apply my experience in programming, robotics, and system integration. I'm drawn to positions that value creative problem-solving, deep understanding and hands-on collaboration across engineering disciplines. A dynamic environment with room to wear multiple hats and contribute meaningfully to complex systems is ideal.

# Work Experience

# **Controls Software Designer**

Eclipse Automation, Rock Hill, SC

11/2023 - 7/2025

- Programmed and tested Allen-Bradley CompactLogix and GuardLogix PLC systems using Eclipse Automation standards with custom code extensions for complex machine functionality.
- Integrated and configured a variety of automation components, including remote I/O, barcode readers, PowerFlex VFDs, Kinettix servo drives, and industrial camera systems.
- Integrated and updated HMI applications using AVEVA Edge Studio and FactoryTalk View ME to provide clear, operator-friendly interfaces.
- Programmed Staubli SCARA robots in VAL3 for precision micro-assembly tasks, optimizing performance well below target cycle times.
- Authored Excel VBA scripts to support configuration workflows and streamline development.
- Participated in cross-disciplinary collaboration with mechanical engineers, electrical designers, and machinists to improve tooling and develop custom calibration tools for small part manipulation.
- Performed network configuration and I/O validation, ensuring seamless system communication and robust fault recovery during commissioning.

# **Controls Engineer**

Dynamic Design Solutions - , Charlotte, NC

9/2021 - 11/2023

- Designed, programmed, and commissioned custom PLC-controlled production machines, primarily using Allen-Bradley CompactLogix PLCs in Studio 5000.
- Conducted safety reviews of new machine designs, identifying hazards and collaborating with mechanical engineers to implement effective mitigation strategies.

- Configured remote I/O modules, sensors, and networked components, updating electrical schematics and contributing to detailed IO layouts.
- Developed modular control logic and sequenced operations based on machine design and product tracking requirements, ensuring flexibility and maintainability.
- Programmed HMI interfaces using C-More panels and integrated Keyence and Cognex vision systems for inspection and verification.
- Programmed and tested Fanuc robots, contributing to multi-axis pick-and-place and material handling applications.
- Managed full commissioning lifecycle including Factory Acceptance Testing (FAT), on-site validation, and post-installation support.
- Authored technical documentation and user manuals to support handover and training for operators and maintenance teams.

# **Control System Engineer**

George T. Hall - , Las Vegas, NV

7/2013 - 8/2021

- Designed, programmed, and commissioned PLC-based control systems, with a focus on Allen-Bradley (ControlLogix, PLC-5, MicroLogix) and Modicon/Schneider Electric platforms, primarily for municipal water supply, waste water management and correctional facility control.
- Developed and integrated distributed SCADA systems using AVEVA/Wonderware System Platform, delivering secure, scalable control environments for process automation.
- Commissioned distributed control systems with analog/digital I/O over Ethernet and Modbus protocols, including radio and fiber-optic linked remote I/O.
- Provided direct customer interaction throughout projects managing on-site work schedules and customer expectations, interpreting requirements, and maintaining strong relationships.
- Performed loop checks, network testing, and instrument calibration for factory and field acceptance testing.
- Mentored junior technicians, sharing best practices for instrument testing, documentation, and communication with the client and main office.
- Delivered responsive on-site troubleshooting and long-term support for automated systems in a variety of industrial environments.

## Maintenance Shift Lead / Automation Specialist

Gentex Optics, Dudley, MA

2/2012 - 6/2013

- Lead a 4-man maintenance team, keeping production machinery in working order and promptly responding to downtime incidents.
- Supported installation and integration of automated inspection and sorting systems using Mitsubishi SCARA and 6-axis robots, servo systems, and machine vision cells.
- Worked with linear servo-driven MagneMotion conveyor systems for part transport and positioning.
- Maintained and calibrated injection molding and auxiliary equipment, using CMMS, electrical, and mechanical diagnostics.
- Assisted the safety team by identifying risks and implementing practical mitigation strategies.
- Troubleshot system failures using PLC analysis, relay logic, and CMMS records to identify root causes and reduce downtime.

# **Technical Support Representative**

Sealed Air Inc, Ayer, MA

3/2010 - 2/2012

- Developed technical training materials and conducted in-person classes on packaging machinery for field service teams and end users.
- Provided phone-based technical support and diagnostics for electromechanical systems, assisting customers and field techs in real time.
- Supported installations, upgrades, and retrofits at customer sites across North America.
- Collaborated with engineering teams to relay field feedback and propose product improvements.

## **Electro-Mechanical Technician**

Schott Solar, Billerica, MA

10/2008 - 7/2009

- Maintained and modified a range of solar panel production machinery and instrumentation systems.
- Diagnosed and repaired machine faults using electrical schematics, PLC logic, and mechanical inspection.
- Supported engineering teams during equipment upgrades and production line improvements.

## **Lead Automation Technician**

SynQor, BoxBoro, MA

1/2008 - 9/2008

- Led an automation support team and trained junior technicians on troubleshooting best practices.
- Supported robotic pick-and-place systems used in automated PCB assembly and testing.
- Investigated production faults using SQL-based quality tracking systems and implemented corrective actions.

# **Electronics Automation Specialist**

Sonoco Inc., Devens, MA

4/1999 - 1/2008 and 11/2009 - 3/2010

- Maintained and troubleshot a wide array of automated packaging and converting equipment, including PLC-based controls and machine vision systems.
- Provided instrumentation support and repair services on electromechanical systems across three shifts.
- Returned as a contractor during plant shutdown/relocation to provide senior-level support during off-shift coverage.

### Skills

### **Technical Skills**

## **PLC & Control Systems**

- Allen-Bradley ControlLogix, GuardLogix, MicroLogix, SLC 500, PLC-5
- Schneider / Modicon (Control Expert / Unity Pro)
- Safety PLCs: Keyence, Allen-Bradley GuardLogix

#### HMI / SCADA

- FactoryTalk View ME, C-More, AVEVA / Wonderware System Platform
- Alarm handling, tag structures, operator usability

#### Robotics

- Staubli Robot programming in VAL3
- Fanuc Robots (Pendant operations)
- Adept V+ Programming

#### **Vision Systems**

- Keyence, Cognex, DVT, CVIM
- Integrated vision inspection and product verification

#### **Motion Control & Drives**

- PowerFlex VFDs, Kinettix servo drives
- MagneMotion linear servo systems

## **Networking & Communication**

- Ethernet/IP, Modbus, DH+, serial protocols
- Remote I/O (hardwired, fiber, radio-linked)
- TCP/IP networking, router/firewall configuration

## **Programming & Scripting**

- Ladder Logic, Structured Text
- Shell scripting (\*NIX), Python, and Perl
- JavaScript, VBA (intermediate, self-taught)
- limited experience with C/C++

### Cybersecurity & System Hardening

- Air gapping, attack surface reduction, allow/block-listing
- Firewalls, access control, and security-focused OT design

#### **OS & Platforms**

- Windows, Linux administration (server and embedded)
- \*NIX tools: systemd, OpenSSH, Apache2, dpkg

## Soft Skills & Strengths

- Cross-disciplinary collaboration (ME, EE, software, machinists)
- Technical documentation and operator manual writing
- Fast learner, systems thinker, problem solver
- Calm under pressure especially during commissioning and field troubleshooting
- Willing mentor and hands-on team contributor

### Education

# Springfield Technical Community College — Springfield, MA

- Associate in Applied Science, Electrical-Robotics Program
- Focused coursework in PLCs, robotics, and control systems

# Smith Vocational High School — Northampton, MA

• Honors Graduate, Electrical Program

### University of Massachusetts, Lowell — Lowell, MA

- Continuing Education
- Coursework in C/C++ programming, shell scripting, and UNIX/Linux system operations

# **Certifications & Technical Training**

- Staubli VAL3 Programming Staubli Robotics
- Fanuc HandlingTool Operation and Programming Fanuc America
- Wonderware System Platform 2014 & 2017 AVEVA/Wonderware

# Self-Directed Learning

- Currently teaching myself the <u>Ignition SCADA</u> system from Inductive Automation®, a highly scalable, cross platform data management and control software suite.
- Regularly pursue new skills through technically focused books (O'Reilly and PACKT publishing, etc.), online resources, and hands-on experimentation
- Recent topics include Python scripting (for Excel), IT & OT cybersecurity practices (Security Now podcast, Hacker News, etc.), and Ethernet network configuration.

## References

## Phil Datz

Controls Engineering Manager at Eclipse Automation Cell: (803) 833-2162 <a href="mailto:phd86osu@qmail.com">phd86osu@qmail.com</a>

### **Alexander Freeze**

Former Supervisor at Dynamic Design Solutions Cell: 704-202-0631 afreeze3@gmal.com

## James Nguyen

Former Mechanical Engineer Manager - Dynamic Design Solutions Cell: 919-412-0115 Jvnguyen14@gmail.com

### **Chad Smith**

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