

EdwinRice

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SUMMARY

Automation Engineer with four years of experience supporting controls, machine vision, robotics, and validated manufacturing systems in regulated production environments. Programs and troubleshoots **Allen Bradley PLCs**, **Cognex Vision systems**, Fanuc Robots, and automated inspection equipment across high volume medical device operations. Executes IQ, OQ, and PQ activities, develops protocols and work instructions, reviews supplier source code, and prepares traceable engineering records for quality review. Uses Minitab, statistical sampling, and process data to investigate weak yield and improve inspection performance without reducing quality standards. Works closely with manufacturing, quality, validation, suppliers, and technicians to coordinate equipment builds, testing, commissioning, and production releases. Practical knowledge of **FDA 21 CFR 820** and **GMP Medical Device Regulations** supports sound decisions under demanding schedules.

EXPERIENCE

Automation Engineer, Validated Manufacturing Systems October 2024 - Present
ClearPath Device Manufacturing Fort Wayne, IN

Owns controls support for automated assembly and inspection cells producing regulated disposable medical components. Leads programming, troubleshooting, qualification, supplier review, **technical writing**, and cross functional release activities. Connects equipment data with quality decisions and production schedules.

- Maintained **Allen Bradley PLCs**, Cognex recipes, and Fanuc sequences through documented change practices.
- Connected vision rejects with process settings in **Minitab**, restoring stable inspection acceptance.
- Executed IQ, OQ, and PQ testing with deviations, evidence, criteria, and release rationale.
- Reviewed supplier PLC and vision source code, closing alarm gaps before **factory acceptance**.
- Authored protocols, **work instructions**, **engineering studies**, and guides for validated equipment support.
- Coordinated controls changes with quality, validation, manufacturing, vendors, and production technicians.

Controls Engineer, Automated Manufacturing September 2022 - September 2024
Midwest Precision Products Lafayette, IN

Supported automated manufacturing cells with Allen Bradley controls, machine vision, industrial robotics, and qualification activities. Progressed from supervised troubleshooting into independent controls modification, equipment recovery, data analysis, supplier startup, and technician knowledge transfer.

- Supported **Allen Bradley PLCs**, **machine vision**, and robotics across automated manufacturing cells.
- Built PLC logic for sensors, interlocks, alarms, and sequences using controlled backups.
- Tuned Cognex inspections with production samples and structured challenge testing for reliable results.
- Applied Minitab **sampling** analysis to equipment studies and **process monitoring** decisions.
- Contributed IQ, OQ, and PQ evidence packages for regulated **equipment qualification** activities.
- Supported supplier installation, issue tracking, corrective action checks, and technician handoff.

PROJECTS

Automated Inspection Yield Study 📅 2024

Partnered with quality and manufacturing peers on a focused inspection study. Minitab analysis linked image results with process settings, giving shared teams a clearer path for stable acceptance and practical process monitoring.

Supplier Equipment Readiness Review 📅 2023

Built productive supplier relationships through source code review and startup discussions. Findings around alarms, recovery, and documentation helped commissioning teams address risks before production installation.

LEADERSHIP & AWARDS

- Received recognition for restoring stable Cognex inspection performance through data based troubleshooting and practical parameter refinement.
- Recognized by engineering and quality partners for clear qualification records, supplier coordination, and dependable production support.
- Earned positive team feedback for transferring equipment troubleshooting knowledge to technicians during automated cell startup.

EDUCATION

Bachelor's Degree in Electrical Engineering 2022
Purdue University GPA: 4.0 West Lafayette, IN

Coursework: Controls engineering, robotics, machine vision, statistical analysis, systems design

CERTIFICATIONS

- Rockwell Automation PLC Programming Certificate 📅 2023
- Minitab Statistical Analysis for Process Improvement Certificate 📅 2024

TECHNICAL SKILLS

- **PLC Systems:** Allen Bradley PLCs, ladder logic, Rockwell Automation
- **Machine Vision:** Cognex Vision systems, inspection recipes, challenge testing
- **Industrial Robotics:** Fanuc Robots, robot sequences, recovery routines
- **Validation Methods:** IQ, OQ, PQ, equipment qualification
- **Statistical Analysis:** Minitab, sampling methods, process capability
- **Medical Regulations:** FDA 21 CFR 820, GMP Medical Device Regulations, quality practices
- **Technical Documentation:** Protocols, work instructions, engineering studies
- **Controls Engineering:** Sensors, interlocks, alarms, sequence controls
- **Supplier Engineering:** Source code review, factory acceptance, equipment startup
- **Quality Records:** Acceptance criteria, deviations, test evidence
- **Process Monitoring:** Yield analysis, inspection monitoring, production data
- **Project Coordination:** Schedule management, production windows, competing priorities

SKILLS

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|-------------------|---------------------------|------------------------|-------------------------|
| • PLC programming | • IQ OQ PQ | • Source code review | • Supplier coordination |
| • Machine vision | • Process validation | • Statistical sampling | • FDA 21 CFR 820 |
| • Fanuc Robots | • Equipment qualification | • Process monitoring | • GMP Medical Devices |
| • Minitab | • Test Methods | • Technical writing | |

PROFESSIONAL AFFILIATIONS

- Collaborates with manufacturing, quality, validation, and supplier teams through shared technical goals and open project communication.
- Maintains professional relationships across controls and medical device operations, creating dependable channels for issue resolution and knowledge sharing.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST