

DAVID RODRIGUEZ

CONTROLS ENGINEER

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SUMMARY

- **Controls, automation, and software engineering professional with 7+ years of experience** developing, integrating, and supporting complex technical systems across federal, defense, and industrial environments.
- Technical experience in **PLC programming, Ignition SCADA/HMI, OPC UA, Python, SQL databases**, industrial networking, and system integration within modern industrial automation architectures.
- Strong background in **software development, system integration, troubleshooting, and testing**, with experience translating complex technical requirements into reliable, production-ready solutions.

EDUCATION

2019

Rowan University

Bachelors Degree
in Computing and Informatics

SKILLS

Controls & Automation

- PLC Programming & Control Logic
- Ignition SCADA / HMI
- OPC UA
- Allen-Bradley ControlLogix and Fairmount Automation tools
- Industrial Ethernet & Network Configuration
- MQTT & Industrial Messaging
- Alarm, Fault, & Process Monitoring Logic

Systems & Engineering

- System Integration & Troubleshooting
- Python, Java, & JavaScript
- SQL & Database Management
- OpenPLC and Studio 5000
- Structured Text & Ladder Logic
- System Testing & Validation
- CI/CD & DevOps Practices

Engineering Delivery

- Requirements Gathering & Analysis
- Technical Documentation
- Agile, Scrum, & SAFe
- Sprint Planning & Reviews
- Cross-Functional Collaboration
- Stakeholder Coordination

WORK EXPERIENCE

Kai Solutions Inc

Controls Engineer

JULY '26 - PRESENT

- Modernize **Navy industrial control systems** on AS39 and AS40 ships by **developing and integrating a virtualized controls architecture** spanning PLC automation, Ignition SCADA/HMI, industrial networking, communications, and data acquisition.
- **Integrate Ignition SCADA with PLC environments using OPC UA**, configuring and validating communications with **Python applications and PostgreSQL databases** to support centralized process monitoring and industrial data acquisition.
- Support PLC and SCADA system architecture involving **Allen-Bradley ControlLogix L83, Studio 5000, and Ignition**, evaluating interoperability across distributed virtualized environments and existing Navy control-system infrastructure.
- **Develop reusable PLC control logic using Structured Text** for analog signal processing, equipment faults, and process monitoring, **supporting integration with Ignition SCADA**.

ASRC Federal

Software Engineer & Technical Product Owner

NOV '23 - JULY '25

- Successfully delivered and maintained the **API for the USDA's Conservation Desktop platform supporting a national user base of 1,000+ users** within an Agile environment.
- Led performance improvement initiatives for core API services, **building new API functionality, continuously removing tech debt, and significantly improving reliability and usability** for our end users.
- **Served as the primary client-facing technical liaison**, collaborating with software engineers, QA teams, and stakeholders to translate requirements into actionable user stories and deliver high-priority software features

JP Morgan Chase

Software Engineer

JULY '19 - JULY '23

- **Spearheaded the development and successful launch** of the Analyst Workbench platform, a groundbreaking, cloud-based solution that **revolutionized data and analytics processes** for over 200 analysts.
- Engineered scalable applications using **React, JavaScript, Java, REST APIs, SQL, Git, CI/CD, and test-driven development**, building production-ready front-end and backend functionality in a large enterprise environment.
- Collaborated with **engineers, architects, QA, and business stakeholders** throughout the software development lifecycle, including **development, code reviews, testing, CI/CD, deployment, and production support**.

ASRC Federal

Data Engineer - Research Project

JAN '19 - JUNE '19

- Developed an **end-to-end machine learning solution** to classify aircraft from radar data, achieving **96% accuracy** through rigorous data processing and model optimization to meet complex technical requirements.
- Acted as a **technical advisor to stakeholders**, translating complex model insights into **actionable findings** that drove operational decision-making and project success.