

# Richard Sterling Jackson

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## SUMMARY

Software-Driven Controls & Integration Engineer with a strong foundation in Computer Science and interdisciplinary expertise in Earth & Space Exploration. Experienced in software quality assurance, full-stack development, and system design. Skilled in C++, Java, Python, modern web frameworks, and working knowledge in Programmable Logic Controllers, focused on delivering scalable solutions.

## EDUCATION

**B.S. Computer Science | B.S. Earth & Space Exploration: Geological and Planetary Sciences**

Arizona State University, Tempe, AZ

December 2024 | GPA: 3.67

## TECHNICAL SKILLS

**Programming Languages:** Java, JavaScript, Python, C, C++, C#, Assembly, MATLAB, Android, SQL

**Front-End:** HTML, CSS, React, Vue.js, Angular, Next.js, Vite / **Back-End:** Node.js, Express, PHP, C#, Python

**Tools & Platforms:** Visual Studio, Visual Studio Code, IntelliJ IDEA, JetBrains, Oracle, Eclipse, NetBeans, Google Cloud Platform, PostgreSQL, Azure, Linux/Unix, GDB, ROS, Bash, Git, GitHub

**Networking, Controls, & Automation:** PLC Programming and Troubleshooting, VFD Configuration and Integration, SCADA Networks and Systems, Sensor Calibration, Control Panel Wiring, Industrial Protocols, PoE Integration, Network Design and Switch Placement, Real-time Data Routing

**Other Skills & Working Knowledge:** Full Stack Development, Web Services, Object Oriented Design, Unit Testing, End-to-End Testing, JSON, SOAP, RESTful API, Machine Learning, Autonomous Systems, Information Assurance, Cyber Security, Agile Methodology, Analytical Thinking, and Problem Solving

## PROFESSIONAL EXPERIENCE

**Engineering Solutions Company | Water Quality and Maintenance Engineer**

06/2025 – present

Renton, WA | Water Treatment

- **Water Quality Assurance:** Conduct diagnostic testing of water quality and treatment systems to ensure regulatory compliance across key parameters including turbidity, pH, and UV disinfection efficacy.
- **Mechanical Systems Maintenance:** Oversee the operation, repair, and preventive maintenance of chlorine gas and lime injection systems, UV reactors, and other critical disinfection and dosing equipment.
- **Design & Fabrication:** Retrofit custom machinery to improve testing, cleaning, and distribution processes.
- **Compliance:** Maintain detailed records of water quality metrics, equipment performance, and maintenance.

**The Boeing Company: NASA Space Station (CO-OP) | Quality Assurance Engineer**

05/2005 – 01/2007

Houston, TX | Johnson Space Center | **Summer 2005, Summer 2006, Fall 2006**

- Analyzed and tested flight code and ISS system components, ensuring mission success.
- Trained in Risk Management and Quality Assurance adhering to CMMI Level 5 standards.
- Contributed to the Boeing/NASA Y-Prize competition, designing an innovative docking mechanism.
- Developed check-in/checkout system in Visual Basic .Net for the NASA Media Library

**Arizona State University, Tempe, AZ: Research Assistant**

08/2018 – 05/2019

**Arizona State University, Tempe, AZ: Undergraduate Engineering Teaching Assistant**

08/2019 – 12/2019

## ACADEMIC PROJECTS

**MusMe App by TwinsMusic | ASU Capstone**

2021

- Collaborated with a development team that programmed and maintained a music application website.
- Programmed and developed the front-end and back-end using Node.JS, React, and Express.

**FURI | Fulton Schools Undergraduate Research Initiative**

2018 – 2019

- Researched and designed a supercapacitor for energy harvesting, working under the guidance of an Electrical Engineering professor in a Research Lab.

**Hack-A-Thon Student Check-in System Project**

2018

- Collaborated with a 6-person team to develop a student check-in system using GC-Python.

**Autonomous Vehicle Design and Implementation**

2017

- Designed and programmed an autonomous vehicle with a 5-person team, utilizing MATLAB and waterfall methodology.

## INDUSTRY ORGANIZATION EXPERIENCE

**Software Developers Association**

2016 – 2021

**NASA Space Grant Robotic | Electrical & Computer Engineering Team**

2016 – 2018