

Joseph Sheehan

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I am an Electrical and Computer Engineer with 13 years of experience in Industrial Automation, in addition to roles in Process Control, Digital Circuit design, Embedded Firmware development, and Test Instrumentation. I care deeply about leaving a positive impact on the world and pushing humanity towards a more sustainable and more enlightened future.

Experience

AUGUST 2021 – MAY 2024

Principal Automation and Controls Engineer / Heliogen / Long Beach, CA (Hybrid)

Responsible for the electrical and software architecture that underpinned Heliogen's first heliostat production lines. Designed and deployed automated equipment for installing heliostats in the field. Authored many of the hardware and software standards that drove the Automation and Controls department. Mentored and held cross-training sessions for engineers throughout the company.

DECEMBER 2020 – AUGUST 2021

Automation and Controls Engineer / RDY / Los Angeles, CA

Founding member of RDY, a mobile ordering platform for independent cafes across the US. I was tasked with design, validation, production, and integration of a proprietary hardware platform into our mobile application. Responsible for PCB design, firmware development in C++, and mobile development in React Native.

JANUARY 2014 – DECEMBER 2020

Sr. Automation and Controls Engineer / SpaceX / Hawthorne, CA

As an early hire to a nascent Automation and Controls department, I was tasked with creating a blank slate standard for Automated Machinery Design while simultaneously retrofitting existing production equipment for more reliable and less labor-intensive operation. I became a specialist in Electrical Control Panel design, following the UL 508A standard, and mentored dozens of other engineers across many departments on the subject. My control systems tackled everything from rocket handling and transport to weld operations, non-destructive testing, proof testing, and automated assembly cells.

FEBRUARY 2013 – DECEMBER 2013

Controls Engineer / Flow Pro Products / Bolingbrook, IL

Electrical control panel design and programming for both single machine-tool and facility-scale coolant filtration systems.

JANUARY 2012 – FEBRUARY 2013

Staff Engineer / TGER Technologies / Bolingbrook, IL

Founding member, tasked with developing control system for a novel and mobile Waste-to-Energy Biorefinery for the U.S. Army Material Command. Also acted as Project Manager - responsible for client reporting, scheduling, and asset management.

JANUARY 2011 – JANUARY 2012

Staff Consultant / Packer Engineering / Naperville, IL

Lead Hardware and Software developer for R&D Dept. Architect for all three generations of Packer Biomass Gasifier technology. Also served as a field instrumentation specialist, designing and performing various tests and demonstrations critical to pending litigation.

Education

AUGUST 2011

Bachelor of Science in Computer Engineering / University of Illinois, Urbana-Champaign

Skills

TECHNOLOGY PLATFORMS

Beckhoff TwinCAT • Indusoft • Allen Bradley RS Logix • Siemens TIA Portal

EPlan Electric + Pro Panel • Autodesk Fusion 360 + Eagle CAD • Siemens NX • SolidWorks

PROGRAMMING LANGUAGES

All IEC 61131-3 Languages (ST Preferred) • C/C++ • JavaScript • TypeScript • Java • Python