

Austin T. Berg

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Professional Experience:

Blue Origin, Electrical/Electronics Engineer – Systems Lead

August 2025 – Present

Engineered, improved, maintained, and operated Ground Support Equipment (GSE) launch systems for the key purpose of extreme reliability and robustness. System owner, operator and SME on the Heavy-Lift Vehicle Hold-Downs, Instrumentation Data Acquisition (DAQ) systems and Ground PLC Hardware.

- **Heavy-lift Vehicle Hold-Down Upgrade Overhaul** (November 2025 – March 2026)
 - Designed and implemented controls overhaul to radically upgrade inherent/remote reliability, integrating passive diode-ORing and remote-reset ECBs to ensure fully redundant, remotely recoverable control power with hard-wired mission-critical hardware mode, preventing e-stop logic.
 - Hardened communication robustness and signal integrity to withstand harsh launch environments, mitigating high-EMI communication loss through root-cause analysis of flight-critical anomalies.

Leidos, Electrical Engineer

May 2024 – August 2025

Engineered advanced protection and controls (P&C) with a focus on breaker relay schemes, fault analysis, and protective device settings to improve reliability and safety, while conducting design reviews and system modeling to ensure integration of control circuits in compliance with industry standards.

- **Transmission & Distribution Substation P&C + SCADA Upgrade** (May 2024 – December 2024)
 - Collaborated with department director in a major (\$10M+) substation upgrade, focusing on the complete replacement of transmission breaker relays and associated controls, ensuring seamless integration and reliability with an improvement in compliance with ANSI and IEEE standards.
 - Led main design on 161 kV transmission breakers' relaying protection and controls, main capacitor bank protection and controls, CVT junction box replacements, replaced equipment removals, and SCADA telecommunications upgrade, totaling over 150+ electrical schematics designed and drafted.

Universal Orlando Resort, Controls, Ride & Show

January 2022 – May 2024

Maintained and optimized complex control systems for theme park rides and shows, including electrical (NFPA 70E), mechanical, hydraulic, and pneumatic components, ensuring safe and efficient operation through routine diagnostics, technical repairs, and compliance exceeding industry standards.

- **Roller Coaster PLC Simulator** (July 2023 – January 2024)
 - Conceptualized and launched development of a roller coaster simulator device for training new technicians on programmable logic controllers (PLCs), ride trend data collection, and sensor applications/testing, resulting in over a 50% reduction in PLC diagnosis time for participants.
 - Led the design, construction, and weekly progress reports of the simulator by installing, wiring, and testing and programming motors, solenoids, Human-Machine Interfaces (HMIs), PLCs, relays, and sensors, while completing work order documentation to ensure alignment with strategic goals.

Skills

Design: Robust Automation, Rapid Prototyping, 3D Printing/Additive Manufacturing, Troubleshooting

Testing: Instrumentation, Digital Multi-Meters, Megohmmeter, Oscilloscope & Frequency Analysis

- **Programs:**
 - Languages: C/C++, Python, Java, MATLAB, Assembly, G-Code, Ladder Logic/ST/FBD/ IEC 61131-3.
 - CAD, PCB and Circuit Design: AutoCAD, Solidworks, Fusion 360, LTSpice, Revu Bluebeam.
 - PLCs: Rockwell Automation Suite, Siemens Suite (TIA Portal), Beckhoff TwinCAT (EtherCAT)
 - Software: Inductive Automation Ignition, Git/Github, Windows/Linux, Microsoft Office Suite.

Education:

University of Central Florida, Orlando, FL
Bachelor of Science, Electrical Engineering

Certifications and Credentials:

Active DBIDS Credential; ITAR Compliant

TWIC Credential; Active

Mechatronics & Automation - SSC, Sanford, FL