

Alex R. Mendoza

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Professional Summary

Detail-oriented electrical engineer with 6+ years of experience designing, testing, and implementing power and control systems for manufacturing and commercial facilities. Adept at translating complex requirements into reliable circuit and PCB designs, optimizing energy efficiency, and collaborating cross-functionally with mechanical and software engineers to deliver high-performance products on schedule.

Core Skills

- Circuit & PCB Design (Altium, KiCad)
 - Power Systems Analysis (ETAP, SKM PowerTools)
 - PLC Programming & Industrial Automation (Allen-Bradley, Siemens)
 - Embedded Systems (C, C++, Python)
 - CAD Tools (AutoCAD Electrical, SolidWorks Electrical)
 - Compliance & Safety Standards (NEC, UL, IEC)
 - Data Acquisition & Signal Processing
 - Project Management & Cross-Functional Collaboration
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Professional Experience**Electrical Design Engineer****Bluegrass Automation & Controls – Lexington, KY**

Jan 2021 – Present

- Lead engineer on the redesign of a 480V power distribution system for a \$12M manufacturing plant expansion, improving system reliability by 35%.
- Designed and validated printed circuit boards for custom automation controllers, cutting assembly costs by 18%.

- Integrated PLCs and HMIs for conveyor and robotic systems, reducing downtime by 25%.
- Collaborated with mechanical and software engineers to deliver an automated material-handling system under budget and 3 weeks ahead of schedule.

Electrical Engineer

BrightVolt Energy Systems – Louisville, KY

Jun 2018 – Dec 2020

- Modeled and simulated battery management systems for commercial energy storage products using MATLAB/Simulink.
- Developed embedded firmware for power regulation and safety monitoring, achieving UL 1973 certification on first submission.
- Conducted field failure analysis and implemented design improvements, decreasing warranty returns by 22%.

Electrical Engineering Intern

GE Appliances – Louisville, KY

Jan 2017 – May 2018

- Assisted with electrical testing and validation of appliance control boards.
- Supported EMC/EMI compliance testing and generated detailed reports for design teams.
- Streamlined test bench setup, reducing testing cycle time by 15%.

Education

Bachelor of Science in Electrical Engineering

University of Kentucky – Lexington, KY

Graduated: May 2018

Certifications

- EIT (Engineer in Training), Kentucky
- OSHA 30-Hour Electrical Safety Training
- Certified LabVIEW Associate Developer (CLAD)