Kelly Mautz

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EXECUTIVE SUMMARY

Highly skilled and results-oriented engineer with 8+ years of experience in controls software development, automation, and electrical engineering. Proven ability to modernize control systems, develop robust software features, and optimize processes. Seeking to leverage expertise in web-based HMI development, PLC communication, and Python scripting to contribute to innovative software engineering projects. Demonstrated aptitude for UI/UX design, agile methodologies, and continuous improvement, including successfully automating testing and resolving complex bugs.

WORK EXPERIENCE

Controls Software Engineer — Milacron, Afton, OH   10/2022 to 7/2025

- Modernised an older control system with a new web-based HMI system using Javascript/HTML/CSS in TwinCAT Visual Studio shell communicating via ADS with Beckhoff or B&R PLC hardware in efforts to increase vendor independence and shorten lead times
- Became point person for icon design, UI/UX and graphic design through creating over 30 icons
- Developed features with custom control classes in a TwinCAT framework project, enhancing system functionality and reusability across projects
- Selected as one of 15 engineers to evaluate AI coding tools (GitHub Copilot, TabNine), providing key feedback that influenced adoption
- Initiated and developed Python scripts to automate language localization testing, reducing manual testing time by over 75%
- Using comprehensive root cause analysis, identified and resolved over 30 bugs in my first year
- Gained experience in DevOps, agile methodology, sprint planning, strategizing, and team backlog forecasting techniques, including leading at least 15% of sprint meetings

Electrical Engineer — Milacron, Afton, OH   1/2021 to 10/2022

- Onboarded three new electrical engineers with personally drawn up training documentation
- Designed electrical wiring diagrams for plastic extrusion machines using Engineering Base and AutoCAD Electrical
- Cooperated with the mechanical team to design a system that worked best for the customer with only one warranty claim in two years

Electrical Engineer — Takatsu Manufacturing, Independence, KY   7/2020 to 1/2021

- Improved and optimized electrical schematics using AutoCAD and Toyota CAD software
- Interacted effectively with customers to resolve issues and communicate changes
- Trained in the basics of Toyopuc PLC ladder diagram programming and Yaskawa robot programming

Electrical Engineer — Belcan, Lexington, KY   6/2014 to 8/2016

- Prepared control panel assemblies, wiring harnesses, and schematics for critical aerospace and heavy machinery applications (helicopters, cranes) with CATIA V5, CADRA, AutoCAD, and SolidWorks platforms
- Collaborated effectively with cross-functional teams to develop innovative system designs and significantly enhance the clarity and maintainability of existing engineering documentation
- Installed and verified functionality of electrical components and integrated systems in prototype machines, ensuring operational integrity and performance

Electrical Engineer I — Intertek, Lexington, Kentucky   5/2013 to 5/2014

- Executed comprehensive compliance testing on consumer electronic devices (smartphones, routers) against stringent US cellular carrier industry standards, ensuring product quality and adherence to specifications
- Conducted detailed RF (Radio Frequency) testing across various bandwidths (2G, 3G, 4G LTE, WiFi), involving precise data collection and analysis to validate device performance
- Developed and documented clear operating procedures, enhancing future new hire onboarding and standardizing testing methodologies

Associate Electrical Engineer — customKYnetics, Versailles, Kentucky   5/2012 to 8/2012

- Responsible for troubleshooting and repair of a prototype Neuro-Muscular Electrical Stimulation (NMES) chair for spinal injury patient rehabilitation
- Designed and created new electrical cables and circuits for the medical device, ensuring functionality
- Assisted with risk assessment and documentation for a rehabilitation technology project

EDUCATION
Bachelor of Science, Electrical Engineering — University of Kentucky, Lexington, KY   2009 - 2013

PROJECTS

- Cloud-based Recommendation Engine: Full-stack project using Python, SQL, and AWS (RDS, Lambda/API Gateway, S3)
- Portfolio Website: Site composed with Vite+React to showcase my projects and resume

SKILLS

Javascript	Code Debugging	Git Version Control
Typescript	HMI Design	Agile
HTML/CSS	UI / UX	DevOps
React	PLC Programming	Root Cause Analysis
Python	Structured Text	Automated Testing
AI Analysis	Sequential Function Chart	Project Management
SQL	Ladder Diagram	Forecasting and Planning
AWS	Electrical Wire Diagrams	Training and Onboarding
C, C++, C#	Prototype Development	Work Instruction Development