Michael Ulicny

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About

I am looking to work on challenging and difficult problems with a team of brilliant engineers that I can also learn from. My interests for how things work cover many facets of engineering, but I am particularly fascinated by space, automotive, robotics, artificial intelligence, energy, and the technology that has advanced these areas over the last decade.

Experience

AND Technology

Team Lead, Solutions Engineering – 2023 to Present

- Designed a full battery test system with AutoCAD Electrical for a customer's production end of line, requiring quick engineered solutions and sourcing components to meet numerous undefined requirements. This system integrates EtherCAT, CAN, Safety-PLC, Battery Cyclers, Hi-Pot testing, and power measurement. It additionally includes a calibration checkout cart to provide annual NIST calibration for guaranteed accuracy throughout the machine's life.
- Took responsibility for managing AND's HIL (Hardware In the Loop) product line after the previous lead's departure. This resulted in continuing support for these products and continued sales to multiple customers across the United States.
- Provided a Simulink solution to a customer that we failed to correctly upgrade a system on, resulting in an additional ~$50k order and additional hardware updates that fixed all previous issues and provided a robust system with additional desired customer functionality.
- Commissioned and supported an initial one week Simulink upgrade over four months, until a fully working solution was provided that resulted in the customer purchasing an additional 3 system upgrades.
- Managed team progress and plans for improvement, and coordinating with project managers to delegate resources to projects.

Hardware Engineer – 2020 to 2023

- Experience with Altium designing and developing custom embedded hardware for data acquisition systems. Communication protocols included PCIe, I2C, CAN, SPI, JTAG, Ethernet, HDMI, RS-232/485, and USB. Data acquisition involved digital-to-analog, analog-to-digital, PWMs and Encoder, UDP, and digital signals.
- Experience debugging and validating analog and digital systems using oscilloscopes, logic analyzers, multimeters, thermal-cameras, and FPGA Integrated Logic Analyzers.
- Wrote VHDL test bench automation scripts to reduce simulation time and better validate FPGA designs.
- Project lead for combustion analysis product, which I produced a reworked design within 2 months that allowed the prototype testing and FPGA design to continue. This has driven a successful sales order over $2-million in late 2025.
- Solved a complex issue of cross compatibility between Intel's iASL compiler and custom AMI BIOS firmware for a new product, preventing a major Linux kernel conflict across the company.
- Researched and prototyped a working implementation of IEEE 802.1 for time sensitive networking on Xilinx Zynq 7000 SoM.
- Provided detailed and thorough reviews of complex embedded designs that combined processors, FPGAs, networking, communication interfaces, and numerous power systems, reducing future issues and time debugging.
- Developed a Jenkins and TCL build pipeline for Vivado on a custom built server to fully automate nightly builds and simulations on FPGA designs. This reduced build times by more than half, which further allowed for faster iteration on designs.

Accurate Transformers, LLC

Engineering Technician – 2017 to 2020

- Construction and technical knowledge of company products.
- Constructed and validated all company products from components to shipment.
- Coordinated inventory needs of all equipment and supplies to keep up with large bulk orders. Assembled, debugged, modified, tested, and calibrated analog and digital systems.
- Diagnosed warranty returns and repaired broken and non-functioning equipment

William Beaumont Hospital (Royal Oak, MI)

Registrar – 2015 to 2018

- Verification of medical records and patient information.
- Held responsibility for private information, insurance claims, and medical paperwork.
- Care of patient's basic needs and requests with regards to sensitive situations and events.

Education

Wayne State University
Bachelor of Science in Electrical Engineering – 2012 to 2019