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MAKSIM SORIN

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EMPLOYMENT

Embedded Software Engineer **LiveWire EV** **Jan 2022 - Present**

- Developed optimized cooling loop control algorithms in C using lookup tables that **reduced EV charging times by 25%. 104 Minutes -> 78 Minutes**
- Developed sensor offset nulling module which **removes up to 10v of sensor error** and has built in fault detection
- Developed **rate of charge calculation** and broadcasted onto the instrument via CAN. A critical feature for customers and a feature used internally to verify and debug charging issues.
- Resolved and **eliminated 50+ compiler warnings and hundreds of MISRA C coding standard violations** from our code base ensuring code safety and quality.
- Developed advanced fault detection algorithms such as identifying half cycle operation in a power factor correction (PFC) circuit
- System on Chip throughput analysis to identify bottlenecks within the code that caused overrun errors using iSystem. I **removed certain blocking calls and reduced throughput by 40% (16ns -> 9ns)**
- Developed data binning feature which stores and **monitors all charger activity for the life of the vehicle**

Electrical Engineering Co-Op **Harley-Davidson** **May 2021 – December 2021**

- Transferred and managed an entire product requirement document from Word to a requirements management program (Helix ALM)
- Developed a mini hardware in the loop (HiL) system to simulate engine circuit behavior.
- Created requirements for the Harley-Davidson “Quick Shift” feature which enabled clutch-less smooth shifting without damaging transmission parts

EDUCATION

San Jose, California **San Jose State University** **June 2024 – Present**
Master of Science in Machine Learning and AI (current student)

Milwaukee, Wisconsin **University of Wisconsin- Milwaukee** **June 2018 – Dec 2021**
Bachelor of Science in Electrical Engineering

TECHNICAL EXPERIENCE

Personal Projects (ALL projects go in-depth on Max-Sorin.com with code uploaded to GitHub)

- **Digital Clutch Slipper** |*C++, Swift, BLE, Arduino, XCode*| Developed a Bluetooth IOS app in XCode that communicates with Arduino to control and tune a clutch slipper valve from the cabin of the vehicle. Hardware and software all designed from the bottom up by me.
- **Max-Sorin.com** |*HTML, CSS, JS, Django, Bootstrap*| My personal website deployed with Heroku and built with Django, CSS, Bootstrap, and other modern technologies to showcase my projects in more detail
- **Capacitive Bird Bath** |*C++, Arduino*| Automatic birdbath that turns on via capacitive touch (from my bird)

Languages and Technologies

- Python, C++, C, HTML, CSS, Swift/Objective C, JavaScript, MATLAB
- Django, Bluetooth low energy, ISO 26262, MISRA compliance, Heroku, model-based coding, CAN, ATI and Vector Tools, Git