

EVAN JURAS, P.E.

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HARDWARE DEVELOPMENT ENGINEER

Professional hardware engineer who loves applying creativity to solve challenging problems. Designer of mission critical mixed-signal embedded devices, with hands-on lab experience in prototyping and testing. Driven to deliver quality end products in a fast-paced environment.

TECHNICAL EXPERIENCE

MKS Instruments **Electronics Engineer** **Apr 2019 – Aug 2020**

Developed and produced precision optical measurement and test equipment

- Designed high-accuracy analog measurement boards, performed schematic entry and PCB layout in Altium
- Provided PCBA fabrication packages to contract manufacturers for build, assembly, and testing of boards
- Supported on-site manufacturing by troubleshooting build issues

Synapse Product Development **Electrical Engineer** **Feb 2018 – Mar 2019**

Contributed to design and manufacturing of cutting-edge, high volume consumer electronic devices

- Designed test fixture for automated validation of high-speed video processing motherboard, captured full 12-page schematic and assisted with PCB layout in Altium
- Supported late-phase development of battery-powered wearable product by resolving high risk issues such as MCU flash memory corruption, poor Bluetooth antenna performance, and manufacturing defects
- Developed specifications and test plans for vaguely defined product requirements

Schweitzer Engineering Laboratories **Hardware Engineer** **May 2012 – Jan 2018**

Developed industrial-rated hardware for mission critical Smart Grid products used by electric utilities.

- Designed and tested high-speed digital interfaces including DDR3, I2C, SPI, USB, and Ethernet
- Designed and tested analog input chains, including front-end conditioning, filter design, and ADC selection
- Conducted tolerance and corner-case analyses to guarantee performance of all designs from -40°C to 85°C
- Engaged with component vendors to specify custom parts, reduce BOM costs by finding economical part alternatives, and perform on-site quality audits at manufacturing facilities
- Maintained legacy products by finding part alternates for end-of-life components

Major role: Test Lead, SEL-651RA product development

- Start-to-finish design of new product, including hardware specification, circuit design, schematic entry, PCB layout support, prototype tests, and manufacturing support
 - Researched regulatory standards and wrote product test plans to obtain FCC and CE marks, led team of technicians to execute testing
 - Implemented rigorous design techniques to pass IEEE and IEC electromagnetic compatibility tests such as ESD, RF emissions/immunity, and electrical surge
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TECHNICAL SKILLS

Lab: Soldering, prototyping, general lab equipment (oscilloscopes, logic analyzers, signal generators, spectrum analyzers, VNAs), high-speed signal measurement techniques

Software/OSes: Altium and Mentor Graphics ECAD suites (library management, schematic entry, layout), Cadence and LTSpice simulation tools, MATLAB, Mathcad, Windows, Linux

Programming: Python, C/C++, VHDL/RTL, OpenCV, TensorFlow

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EDUCATION

M.S. in Electrical Engineering

Washington State University

Received May 2016 (Attended while working full time)

Pullman, WA

Cumulative GPA: **3.73/4.0**

Thesis: "A Low Input Voltage Energy Harvesting Charge Pump with Load-Adaptive Pumping Frequency"

- Developed novel low-voltage DC-DC power supply IC targeted at IoT applications
- Performed complete silicon layout of design, including LVS/DRC checks and post-layout simulations

B.S. in Electrical Engineering

Montana Tech

Received May 2012

Butte, MT

Cumulative GPA: **3.97/4.0**