Grant Allen, MS

2000 Joslyn Place, Boulder, CO 80304 ● Cell: 608-217-4113 ● Email: n.grant.allen@gmail.com

Mechanical Engineer

Mechanical and Automation Engineer , looking to transition full-time into a software or automation engineering field, offering 2-3 years industry experience in R&D for industrial engine controls, test-cells, and MS work related to experimental engine testing. Proven ability to design, prototype, instrument, code, and debug complex electro-mechanical systems from low-level coding/design to system-level architecture and automation software. Proficient user of CAD programs and simulation software for system, thermal, and flow analysis. Extensive all-around shop and fabrication experience.

PROFESSIONAL EXPERIENCE

Mechanical Engineer – Intermountain Electronics –10/2016 to Present

- Mechanically designed portable, automated steel building solutions for Power, Oil and Gas, Solar, and Mining industries.
- Managed customer relations in fast-paced manufacturing environment to deliver state-of-the-art automated solutions.
- Developed internal software tools using VBA for mechanical analysis and automated BOM generation.

Mechanical Engineer II - Engine Controls R&D engineer – Woodward Inc. 01/2014 to 10/2016

- Recruited to validate prototype concepts for one of the largest independent industrial engine controls companies in the U.S. Provided rapid controls prototyping and validation testing for large range of electro-mechanical devices, including solenoid natural gas injectors, BLDC actuated valves, high-voltage PWM drivers and FPGA controllers.
- Coordinated diverse R&D engineering team to configure customer engine systems for new technology demonstrations, calibration and hardware/software validation testing.
- Experimentally evaluated control architectures by fabricating test-fixtures and coding automated lab software (LabVIEW) for analysis and testing.
- Developed controls testing platform utilizing Matlab/Simulink languages to generate C/C++ code for NI Veristand and Motohawk environments.

Graduate Researcher - Advanced Diesel Combustion Researcher – UW-Madison Engine Research Center - 05/18/2012 to 01/01/2015

- Built and configured state-of-the-art engine research test-cell at UW-Madison. Engine architecture was a single cylinder Caterpillar heavy-duty diesel engine.
- Designed and fabricated complex rotating mechanical assemblies, high temperature air handling systems, high-pressure hydraulic/diesel systems, and vibration mitigation systems.
- Architected and programmed full software suite of LabVIEW engine controls and high-speed data acquisition software.

COMPUTER SKILLS

NI/LabVIEW Experience: cDAQ, cRIO, PXI, SCXI, Real-Time and FPGA development, NI Veristand, NI TestStand
NI/LabVIEW Certifications: CLAD (not current)
Operating Systems: Windows, Linux
Control Programming Languages: MATLAB, Simulink,
Web-based Programming Languages: Python, PHP, HTML, CSS
Web-based tools and framework: Github, Grunt, Bootstrap
General Programming Languages: C/C++, VBA, JAVA
Simulation: GT Power, EES Thermal Analysis Suite,
CAD: SolidWorks, Solid Edge, Creo, NX,

HANDS-ON SKILLS

Precision metalworking (CNC mill, lathe, MIG/TIG welding)
Extensive experience within shop environment (hand tools, power tools, 3-D printers, laser/waterjet cutters etc.)
Familiarity with variety of instrumentation and automation equipment (pressure/flow/temperature sensing, electrical drives and VFDs, high-speed electrical testing and acquisition)

EDUCATION

Currently pursuing online Nanodegree through Udacity.com
Full Stack Web Developer, expected 8/1/2017.

University of Wisconsin, Madison, WI
Master of Science, Mechanical Engineer degree, 12/2014, GPA 3.29

University of Wisconsin, Madison, WI
BS, Mechanical Engineering, 12/2012, GPA 3.76

University of Wisconsin, Madison, WI
Certificate (minor), Computer Science

AFFILIATIONS

American Society of Mechanical Engineers (ASME)