HolosGen™

Electrical Design Engineer

HolosGen LLC is a technology development firm focused on integrated microreactor technologies. Our teams of specialized engineers, technicians, and machinists work together to execute the design, simulation, manufacturing, and testing of electrical, mechanical, and thermo-hydraulic products in the field of advanced energy systems.

We are currently looking to hire a highly motivated and well-prepared Electrical Design Engineer to join our team. Authorization to work for any US employer is a pre-condition of employment.

Job Description

The role of Electrical Design Engineer is a great opportunity for an entrepreneurial, self-motivated individual who thrives in a fast-paced, creative environment.

The position entails working with a multidisciplinary team as part of a new product development cycle, which includes developing concepts and taking them from initial design and prototyping through commercialization. The candidate will be required to work closely with fellow engineers, technicians, and machinists to design, build, test, and troubleshoot hardware and software for high-speed turbomachinery applications, including power electronics, motor control, battery charging, data acquisition, and control subsystems.

Job Duties and Responsibilities

- Design high-speed motor drive power electronics, including fault isolation, control electronics, power stages, magnetics, filters, and thermal solutions.
- Perform circuit design and prototyping on subsystems ranging from low power sensor units to high voltage distribution and battery storage systems.
- Program data acquisition and control systems on PLCs and National Instruments cDAQ devices with LabVIEW or similar engineering tools.
- Program embedded (C/C++) applications and device drivers (CAN, SPI, UART, I2C) for interfacing with remote sensors and/or control units.
- Perform analysis and develop computational models using MATLAB, Simulink, or similar engineering software.
- Work with senior and fellow engineers in the US and abroad to develop alternatives and options for further development of projects and products.
- Support product sourcing, selection, and purchasing as required by the design process.
- Provide technical and engineering support for day-to-day processing, product development, and process improvements.
- Assure system and product quality by designing testing methods, testing finished product and system capabilities, and confirming fabrication, assembly, and installation processes.
- Prepare product reports by collecting, analyzing, and summarizing information and trends.
- Participate in technical reviews of requirements, specifications, designs, and codes.

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Skills and Qualifications

- Knowledge of advanced synchronous and asynchronous electromechanical machinery, power electronics, control systems, power distribution, and/or electrical energy storage devices.
- Experience with PCB design, schematic capture and layout, component selection, and analog and digital logic design.
- Knowledge of C/C++, LabVIEW, Qt, Java, MATLAB, and/or Simulink with programming experience.
- Knowledge of common embedded communication protocols such as CAN, SPI, UART, and I2C.
- Bachelor of Science or Engineering degree in Electrical Engineering or related field.
- Hands on experience with electrical systems, including wiring harness and connector fabrication, soldering components, and electrical enclosure assembly.
- Willingness to take on non-traditional tasks, roles, responsibilities, and challenges needed to accomplish company goals and objectives.

Candidate Selection Process

Candidates will be evaluated and selected based on their professional abilities and personal attributes demonstrated during the following stages of the selection process:

- Not to exceed 45 minutes PowerPoint presentation (PDF or other format will be fine) given by candidates on one of their previous non-confidential engineering design projects. This could be a professional or personal project. Candidates should be prepared to discuss the reasoning of the design on a technical level and show their experience in problem solving.
- 20 to 30 minute interviews with selected team members.

This selection process will end with an interview with the company's Project Manager to jointly analyze and discuss the results of the candidates' performance and assess their potential for employment with the company.