



American Lightweight Materials
Manufacturing Innovation Institute

Position: Engineer, Advanced Manufacturing
Department: Manufacturing Engineering
Reporting To: Manager, Advanced Manufacturing Operations
Job Location:

LIFT ALMMII Headquarters
1400 Rosa Parks Blvd
Detroit, MI 48216

Scope of Work & Purpose:

We are seeking an experienced Electrical Engineer to support development of custom electronics and monitoring tools and programs for data analysis and processing. The Advanced Manufacturing Engineer will be a member of the LIFT Manufacturing Engineering team in a hands-on environment to support delivery against key technical programs and objectives, leveraging a variety of traditional and advanced manufacturing tools and technologies. They will also interface with the LIFT Digital Engineering team and Program Management Office (PMO) as program requirements dictate, exchanging data and measurements, as well as executing activities informed by the virtual team and PMO.

KEY RESPONSIBILITIES & DUTIES

- Support the creation and implementation of an industrial network of sensors and equipment
- Collaborate with LIFT Digital Engineering team to ensure all necessary process data is captured, processed, and provided to the project team
- Design and develop new solutions for sensors and circuit/integration solutions for sensors, monitoring, and feedback from equipment
- Design and develop IoT equipment from concept through production and programming and support implementation
- Support project teams for quoting, proposals and white papers, documentation and reporting, and communicate status of work to project teams
- Physical ability to occasionally lift heavy equipment, bend, move, carry materials, get up and down from the floor frequently, and stand for long periods

PREFERRED QUALIFICATIONS AND COMPETENCIES:

- **Education:** Bachelor's and graduate degrees in Electrical Engineering, Computer Science, or Software Engineering or in related fields with significant relevant experience. At least one degree must be in Electrical Engineering.
- **Experience:** Minimum 5 years of experience, 10+ years preferred.
- **Technical Knowledge:** Significant experience in one or more programming languages and hardware platforms such as G-code, Python, Arduino, Raspberry Pi, etc. Experience with circuit design, layout, board population (DIP and SMT), oscilloscopes, function generators, etc. A healthy understanding of best practices for managing measurement bias and an understanding of Nyquist sampling, aliasing, and various types of noise (shot, flicker, bit, etc...). Experience ideating, planning, and executing technical work in an R&D manufacturing environment, experience with thermal imaging technology, and experience with additive manufacturing (specifically LPBF) is beneficial.
- **Safety & Compliance:** Ability to work safely with multi-disciplinary teams while adhering to all regulatory requirements.
- **Communication and Problem-Solving:** Strong communication skills are vital for success in this role. Candidates should also possess excellent problem-solving abilities to troubleshoot issues and implement effective solutions in a dynamic manufacturing environment.

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313-309-9003



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- **Adaptability and Resilience:** The manufacturing industry can be subject to fluctuations in demand, technological advancements, and regulatory changes. A good candidate should be adaptable and resilient, capable of managing change to maintain competitiveness and sustainability.

About LIFT:

LIFT, operated by the American Lightweight Materials Manufacturing Innovation Institute (ALMMII), is a nonprofit, public-private partnership, national advanced manufacturing innovation institute. As the national advanced materials manufacturing innovation institute, LIFT is an accelerator convening and connecting government, industry and academia in the fields of advanced materials, manufacturing processes, systems engineering and talent development to enhance America's manufacturing competitiveness, national economy and national security.