

Controls Algorithm Development Engineer

At ClearFlame Engine Technologies, we are breaking the bond between the diesel engine and diesel fuel. Altering a traditional engine to burn plant-based, low-carbon liquid fuels—ClearFlame engines maintain the same rugged performance of a diesel engine at a much lower cost, while providing a 45% reduction in carbon emissions. We are on a mission to free global economies from a need for petroleum-based fuels in hard-to-electrify applications, including heavy-duty trucking, power generation, and other off-highway markets.

We have big ambitions, but we can't do it alone. We need talented, passionate individuals to help make our vision a reality. Solving the world's problems will require a diverse range of ideas, and we understand that those ideas will come from a diverse range of thought-leaders. Whether you bring decades of experience or passion for the cause and fresh new ideas, we value the unique contributions your skill set, and experiences could bring to our team.

About the Position

Summary

We are seeking creative, highly motivated, agile problem solvers with great attention to detail. This individual will develop controls and diagnostics strategies in support of engineering efforts on ClearFlame's products. This position will work with team members from cross functional areas including R&D, business units, engineering, marketing, production planning, and operations. The ideal candidate has experience in the automotive or heavy-duty trucking industry, is experienced working with agile methodologies, has a can-do attitude, and is comfortable working in a fast-paced environment.

Essential Duties and Responsibilities

- Design, implement, and test controls and diagnostics subsystem that:
 - Ensure compliance with safety and government regulations while adhering to ClearFlames Engines' best practices
 - Meet higher level physics-based requirements with efficient designs using modeling, simulation, data collection, and analysis.
- Calibrate existing algorithms for various hardware configurations and real-world applications.
- Support vehicle and customer issues related to controls and calibration
- Help build tools, libraries, and training material to enable capability growth and support learning of the team
- Document and communicate algorithms with block-diagrams, pseudo-code, code, etc. so that others can build from your work

Education and Experience Requirements

- BS in Mechanical, Aeronautical, or Chemical Engineering

- Working knowledge of compression-ignition engine performance.
- Experience or course work in thermodynamics, fluid dynamics, and heat transfer.
- Basic understanding of feedback controller operation.
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Preferred Skills and Experience:

- MS in Engineering with focus on algorithm development and calibration for propulsion system controls.
- Embedded controls development experience
- Experience with model-based controls development
- Strong fundamentals in controls or either mechanical or Thermo-Fluid systems especially as it pertains to IC engines
- Strong familiarity with internal combustion (ideally diesel) engines
- Embedded controls development experience

Physical Requirements

- Prolonged periods of sitting at a desk and working on computer
- Must be able to lift 25 lb. unassisted at times
- Travel as required to Geneva, IL and other locations
- Position location is at the lab facility in Columbus, IN.

Equal Opportunity Employer:

ClearFlame is an Equal Opportunity Employer. Employment decisions are made without regard to race, color, religion, national origin, gender, sexual orientation, gender identity, age, physical or mental disability, genetic factors, military/veteran status or other characteristics protected by law.