



System Control Engineer

Full Time Opportunity; Berkeley, CA

About Noble Thermodynamics

Driven by our mission to radically and quickly reduce the world's carbon emissions and accelerate the transition away from fossil fuels, Noble Thermodynamics is bringing to market its breakthrough in power generation technology offering zero-carbon, dispatchable, and affordable power. Our technology is a reciprocating engine with no exhaust!

We seek to grow our team with individuals who share our core values of professional excellence, perseverance, integrity, and team spirit, and who strive to build strong and genuine relationships with their peers. Most importantly, we celebrate diversity, work to achieve equity, and are committed to creating an inclusive environment among our growing team.

Noble Thermodynamics is a cleantech R&D startup rooted in Berkeley, CA backed by the U.S. Department of Energy, the U.S. National Science Foundation, the California Energy Commission, and top tier industry and academic partners. More information can be found at www.noblethermo.com.

Position Summary

Noble Thermodynamics is looking for a passionate and motivated System Control Engineer to support the R&D of our advanced power generation technology. In this role, your primary responsibility will be the development of high-performance controls for reciprocating engine systems including engine-generator, chemical processes, and mass transfer systems. You will also be expected to create, maintain, and effectively use simulations and embeddable models of these systems for performance evaluation. You will be expected to derive high integrity plant and control models that you will validate through simulations and testing. This role demands a team-spirited individual, able to coordinate and collaborate with a multidisciplinary team, and assist on multiple projects simultaneously.

Responsibilities

- Design, simulate, implement, and prove advanced engine and powertrain control strategies and estimators that meet performance targets.
- Implement algorithms and continuous-integration (MIL, SIL, PIL, HIL) tests in coordination with the engineering team.

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- Carefully plan and analyze results from experiments and simulations to identify key dynamic characteristics of the engines and balance of plant.
- Utilize models to explore parameter dependence and sensitivities to stretch the bounds of highly-efficient and powerful engine control.
- Establish, follow, and enforce best practices around developing engine control and data acquisition software and documenting control algorithm.
- Assist in debugging sensors, actuators, and subsystems for noise and disturbances and in their calibration, verification, and validation.
- Contribute to the generation of innovative ideas and develop project plans.

Qualifications

- M.S. degree or higher in Mechanical Engineering or a similar engineering field from an accredited institution with 2-5 years of relevant experience.
- Demonstrated deep knowledge and experience with high-performance engine control algorithms, software (e.g. Labview, ControlDesk), and industry-standard communication protocols (e.g CAN bus).
- Demonstrated experience working with field programmable gate arrays and digital signal processors, and implementing control algorithms in embedded C / python / Labview.
- Demonstrated experience debugging/troubleshooting real control systems.
- Effective verbal and written communication skills.
- Ability to work with a highly abstract design environment which progressively removes uncertainties and builds toward executable components.
- Demonstrated ability to operate and thrive in a collaborative as well as independent, dynamic, fast-paced start-up environment.

Bonus Qualifications

- Generalist with interest in software, sensors, dynamic systems, real-time control, and automation.
- Driven and self-directed, enthusiastic contributor with the ability to drive decision-making within small teams.

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Employment

Type: Full Time

Location: Berkeley, CA.

Condition: Authorized to work in the United States.

Benefits

Competitive salary and stock options.

Health, Vision, and Dental coverage.

Vacation, Holidays, Sick leave, and Parental leave Paid time off.

Disclaimer

Noble Thermodynamic Systems, Inc. is an Equal Opportunity Employer and does not discriminate on the basis or perception of race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status or any other consideration made unlawful by federal, state, or local laws.

It is company policy to perform background checks and review candidate references. In compliance with federal law, all persons hired will be required to verify identity and eligibility to work in the United States and to complete the required employment eligibility verification form upon hire. Noble Thermodynamic Systems, Inc. participates in the E-Verify Program.