Mechatronic Engineer

Full Time Opportunity; Alameda, 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 large 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 spun out from UC Berkeley and backed by the U.S. Department of Energy, the U.S. National Science Foundation, the California Energy Commission, and international 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 Mechatronic Engineer to support the R&D of our advanced, zero-emission power generation technology. In this role, your primary responsibility will be the design and integration of highly sophisticated mechatronic systems able to execute complex control algorithms, perform data acquisition tasks and drive high-power heavy-duty equipment (e.g., MW size dynamometers, etc.). In this role, you will face two very distinct environments: an R&D with highly custom demands and an industrial, well standardized, with built-to-last demands. This role demands a team-spirited

individual, able to coordinate and collaborate with a multidisciplinary team (e.g., mechanical design, controls, etc.), and assist on multiple projects simultaneously.

Responsibilities

- Design, model, assemble and troubleshoot mechatronic systems that can perform highly demanding control algorithms
- Specifying requirements for sensors, actuators, and electronic components for optimal system performance (e.g, considering signal noise avoidance, switching rate, power distribution, etc.) and cost-effectiveness
- Design and implementation of control algorithms, GUI, and data logging
- Design and assemble electronic systems and associated components (e.g., wiring harness, instrument panels, custom PCBs) following industry standards
- Assist in the calibration, verification, and validation of sensors and actuators' operation
- Create and maintain documentation (e.g., user manuals, spec sheets, Standard Operating Procedures, harness design sheets)
- Contribute to the generation of innovative ideas and develop project plans

Qualifications

- Ph.D. in Electrical/Mechatronics/Robotics Engineering or similar engineering field from an accredited institution or an MS in a similar field with 5+ years of relevant experience
- Demonstrated experience
    - Designing, building, and debugging real mechatronic systems
    - With Control and Data Acquisition NI LabVIEW software, embedded controllers including FPGA and RT systems
    - With instrumentation systems (NI hardware) and power electronic circuitry (e.g, MOSFETS, drivers, relays)
    - Using industry-standard communication protocols (e.g. CAN, MOD bus)
- Proven ability to operate and thrive in a collaborative as well as an independent, dynamic, fast-paced start-up environment
- Driven and self-directed, enthusiastic contributor with the ability to drive decision-making within small teams
- Effective verbal and written communication skills
- Demonstrated real-world problem-solving skills

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Bonus Qualifications

- Generalist with interest in software, sensors, dynamic systems, real-time control, and automation
- Demonstrated knowledge and experience working with engine testing systems
- Experience with programming languages: Python, Simulink, Arduino, etc.

Employment

Type: Full Time

Location: Alameda, CA.

Condition: Authorized to work in the United States.

Benefits

Competitive salary, stock options, and 401k contribution.

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.

