



## Czero, Inc.

### Job Opening – Senior Controls Engineer

Posting#: 2023-001

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**Date of posting:** February 17<sup>th</sup>, 2023

**Location:** Fort Collins, Colorado 80524

**Residency Requirement:** U.S. Citizen or Permanent Resident (Green Card)

**Time commitment:** Full Time

**Travel requirements:** Possible occasional travel for onsite work with clients

**Reporting structure:** Reports to Lead Controls Engineer

**Salary Range:** \$125,000 – \$170,000

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#### JOB DESCRIPTION

Czero is looking for an experienced senior level Controls Engineer with deep expertise in developing control systems for complex machines. The ideal candidate will have hands-on experience developing advanced real-time control algorithms for a wide range of targets such as PLCs, HIL systems, and rapid-prototyping controllers. Engineers in this role will work as part of an agile, highly collaborative R&D team that design and develop prototype systems in advanced automotive, clean tech, oil and gas, aerospace, and other industries.

At Czero we work on a wide variety of projects for the Department of Energy, Department of Defense, Universities, and companies of all sizes, innovating new, and further developing existing mechanical, electromechanical, and electrohydraulic systems and subsystems and the associated controls. We specialize in the engineering, design and development of first and second stage prototype systems, using our skills to deliver innovative and efficient solutions to our customers. In a given day, our projects may include powertrain systems, clean energy, mobile and industrial hydraulics, large scale system integration, and packaging of precision laboratory instrumentation, to name a few. If you join us, you will be part of a highly collaborative team that brings their best to every project.

#### QUALIFICATIONS

##### Education

Minimum of Master's degree in mechanical or electrical engineering with specialization in controls

## Experience required

Minimum of 5+ years of experience developing controls systems with the ability to lead teams if needed.

## Essential for this position

- Expertise in all areas of controls design including algorithm design, software development, hardware selection, and system integration.
- Experienced using HIL systems and MIL design practices as part of the controls development process.
- Desire and ability to support/preform/lead commissioning, debug, and testing of complex electrical and mechanical systems, located in the lab or the field.
- Deep knowledge in developing controls algorithms in; IEC61131-3, C/C++, MATLAB/Simulink,
- Experienced in developing PLC based controls solutions (preferably Beckhoff)
- Ability to apply skills to modeling, simulation, code development, and implementation in the test cell and laboratory.
- Knowledge of industrial and automotive communication protocols a must; Modbus, CAN, TCP/IP, etc.
- Proven experience leading complex projects with challenging timelines
- Strong verbal and written communication and interpersonal skills.
- A passionate interest, shared with everyone on the Czero team, in developing profitable innovations that make a positive global impact.
- Commitment to Czero's goals and a desire for continuous improvement.
- Knowledge of object-oriented software design practices

## Representative tasks

- Work with clients and other stakeholders to define system objectives and specifications.
- Work with client and internal team to evaluate multiple system architectures and choose the best solution for a particular application.
- Develop new concepts and designs to solve challenging R&D projects.
- Develop control solutions for diverse devices, machines and applications that incorporate various control strategies.
- Select and implement controls hardware (rapid prototyping systems, data acquisition, etc.) and software platforms to support desired architecture.
- Develop and test algorithms to meet system objectives.
- Model systems to determine expected performance.
- Apply established tools for software documentation, adherence to requirements, version control, and meeting system objectives for performance and quality.
- Hands-on testing, validation, and implementation of control systems in laboratory environments and in the field.
- Lead projects and interface with client
- Mentor junior engineers
- Interface with potential clients and help prepare proposals.

## Additional consideration given to those with experience in these areas

- Clean tech, automotive, oil and gas, aerospace or heavy industrial.
- Development of new hybrid architectures and intelligent control systems to update traditional technologies for higher performance and greater efficiency.

- Experience in machine learning and artificial intelligence.

### **The right fit for our team**

Beyond technical ability, we're looking for someone who is smart, creative, innovative, hardworking, and able to handle multiple projects at a time. Everyone at Czero has an innate desire to learn and broaden their knowledge base and engineering skills and enjoys a tough challenge. Additionally, we have a true team environment, so it's crucial that you can collaborate effectively with diverse team members.

If you join our extended team, you will find Czero an interesting, challenging, and rewarding place to work. Your contributions will make a significant impact on high-profile projects that are positive for our clients, the environment, and the economy.

### **Benefits**

Czero offers a flexible and collaborative workplace with competitive salary and a generous benefits package, including:

- Employer sponsored health insurance.
- Employer paid long term disability
- 401k retirement plan with employer match.
- Flexible, work schedule
- Paid time off, accumulating from your first day.
- Annual discretionary bonus and salary adjustments.
- Family leave

### **HOW TO APPLY**

Please email a PDF of your cover letter and résumé to [careers@czero-solutions.com](mailto:careers@czero-solutions.com)

### **ABOUT CZERO**

An established, fast-growing mechanical engineering firm located in Fort Collins, Colorado, Czero specializes in early-stage R&D in the areas of cleantech, automotive, commercial vehicles and oil and gas. Our team takes on wide-ranging engineering challenges for both private and public sector clients, developing new technologies and delivering high quality proof-of-concept prototype systems. We are passionate about the environment, and our work centers on scalable, cost-effective solutions to increase energy efficiency, improve energy storage and delivery, and decrease harmful emissions. Czero has a strong network of partner companies, suppliers, and university collaboration partners, including the Colorado State University often working with university researchers on cutting edge technology development. If you join our team, you will find Czero an interesting, challenging, and rewarding place to work. Your contributions will make a significant impact on high-profile projects that are positive for our clients, the environment, and the economy.

We celebrate employment equity and diversity. We encourage applications from all qualified individuals and do not discriminate based on disability, race, ethnicity, religion, gender, sexual orientation, age, veteran status or any other basis protected under federal, state, provincial or local laws. Czero is an equal opportunity employer.

### **RECRUITERS**

Please do not contact us regarding this or other positions at Czero; we already have an established

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relationship with a great recruiting team. Thanks!