



Job Description

Job Title:	Director of Robotics
Department / Location:	Engineering
Reports to (Job Title):	GM of Innovations
Prepared by:	Tim Renton
Date of Submission:	March 2025
HR Contact:	Nicole Gianvito

About Us

RedZone Robotics provides innovative and customized asset management solutions for underground infrastructure by delivering data-driven insights utilizing advanced robotics platforms, leveraging AI predictive tools and software to empower industry experts in making proactive decisions. RedZone Robotics believes that what lies underground directly affects the communities that live above. Our process, from inspection to data delivery, is guided by the belief we all deserve a safe place to live, work, play, and grow old.

If you are interested in a friendly, cooperative, and exciting corporate environment where you will be continually challenged and opportunities abound, RedZone Robotics is the place for you!

Learn more about us at www.redzone.com.

General Job Function

As Director of Robotics, you will work with RedZone engineering teams to define, build, and execute strategic system development programs focused on building robots and payloads aligned with the company's vision of the future.

The successful candidate will evidence a passion for delivering adaptive and creative solutions to industry specific challenges by staying up to date with best practices and emerging trends in robotic system design. This individual will thrive in an environment that requires strong problem-solving skills and independent self-direction, coupled with an aptitude for team collaboration and open communication. The ideal candidate will be able to advocate for system improvements to company leadership and work closely with the Engineering teams to address issues before they reach our valued customers. They will also have experience in a fast-paced and innovative environment where needs and requirements can change rapidly.

Duties and Responsibilities (in order of priority)

- Develop new technology concepts with strategic impact focused on robotics, autonomy, robotic perception, mobile manipulation, and human-robot interaction
- Lead projects, relationship building, and the development of new autonomous and robotic systems technology
- Provide technical guidance, lead and manage a team of robotic engineers
- Actively participate in design, architecture, and development efforts
- Engage with internal and external thought leaders across the technology stack to drive new concepts and applications





Job Description

<ul style="list-style-type: none"> • Work well in cross-functional teams as well as independently
<ul style="list-style-type: none"> • Interact and communicate with non-technical users
<ul style="list-style-type: none"> • Perform other duties as assigned

Education and Qualifications	
Education Level (Degree, Area of Study) – Minimum Requirement:	Bachelor's degree in Robotics, Robotic Systems, or related engineering degree
Years of Experience (if applicable):	10+ years' experience
Additional Experience:	
Professional Certifications:	C, C++, Python, Robotic Operation System

Skills and Competencies	
Computer and data management	<ul style="list-style-type: none"> • Desired MS in Robotics, Robotics, Systems, or related engineering degree • Experience related to systems architecture, design, and system integration • Experience with machine perception, computer vision, and machine learning • Experience with concepts such as Test Driven Development and Clean Architecture are a plus • Experience mapping out requirements • Experience producing system documentation • Experience in industrial robotics
Communications	<ul style="list-style-type: none"> • Strong communication skills (written and verbal), ability to deliver message concisely and effectively • Strong propensity to listen and ask the right questions of customers and the organization • Being aware of others' reactions and understanding why they react as they do • Demonstrate strong proficiency in emotional intelligence – being able to maintain composure and communicate with tact in challenging situations





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Teamwork & Collaboration	<ul style="list-style-type: none"> Ability to build and maintain interpersonal relationships, and influence at all levels of an organization Ability to develop constructive and cooperative working relationships with others and maintain them over time Ability to proactively reach outside the primary area of responsibility to solve conflicts or issues Capability to partner with company leaders to understand & drive overall cross-functional and business needs Experience working on an Agile development team is a plus
Complex Problem Solving	<ul style="list-style-type: none"> Learn quickly, adapt easily to changing technology/circumstances, and apply change management skills appropriately Use creative planning and resource management skills to meet complex schedule, skills mix, cost, and personnel issues Support high peak resource demands proactively without compromising quality The ability to tell when something is wrong or is likely to go wrong Analyzing information and evaluating results to choose the best solution and solve problems Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts Ability to manage multiple tasks and prioritize work accordingly Self-motivated and proactive Demonstrated creative and critical thinking capabilities

Essential Functions

Check One

Supervision

<input type="checkbox"/>	No Supervisory Responsibility
<input type="checkbox"/>	Team Leader (does not hire/fire or conduct PFP)
<input type="checkbox"/>	Supervisor – Supervises small crew
<input type="checkbox"/>	Manager
<input checked="" type="checkbox"/>	Director and above

Check One

Direction

<input checked="" type="checkbox"/>	Works independently
<input type="checkbox"/>	Under general guidance
<input type="checkbox"/>	Under frequent direct guidance

Check One

Independent Judgment / Level of Discretion

<input type="checkbox"/>	Little to none – constantly follows procedures and guidelines
<input type="checkbox"/>	Moderate – follows rules with some discretion
<input checked="" type="checkbox"/>	Significant creative – within general guidelines





Job Description

Physical & Work Environment Requirements

This section covers any Americans with Disabilities Act requirements to perform the job. If the job requires lifting, bending, working with various equipment (including office) or any other physical demands, it should be noted in this section.

General Working Hours/Shift:

Hours of Work per Day: 8

Shifts: 1

Environments consisting of:

- Office environments
- Percent of time indoors – 95%

Work activity consisting of:

- Percent of time outdoors – 5%
- Work up to 8 hours per day – on average 8 hours, on average 5 days/week
- Work with others
- Work alone
- Stand up to 1 hour – on average 1 hour
- Sit up to 8 hours – on average 7 hours
- Lift up to 15 lbs.
- Use of hands for basic hand and power tools and handheld computer and telephone equipment

Work Materials Used/Protective Equipment Needed

Work Materials Used: Computer, telephone

Work postures consisting of:

- | | | | |
|------------|------------|-------------|------------|
| • Lifting | • Bending | • Crouching | • Reaching |
| • Sitting | • Carrying | • Driving | • Speaking |
| • Standing | • Pushing | • Climbing | • Hearing |
| • Walking | • Pulling | • Kneeling | • Seeing |





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Physical Requirements

Lifting	Occasionally (1-33%)
Sitting	Constantly (67-100%)
Standing	Occasionally (1-33%)
Walking	Occasionally (1-33%)
Bending	Occasionally (1-33%)
Carry	Occasionally (1-33%)
Pushing	Occasionally (1-33%)
Pulling	Occasionally (1-33%)
Crouching	Occasionally (1-33%)

Balancing	Not Applicable
Driving	Occasionally (1-33%)
Crawling	Not Applicable
Climbing	Occasionally (1-33%)
Kneeling	Occasionally (1-33%)
Reaching	Occasionally (1-33%)
Speaking	Frequently (34-66%)
Hearing	Frequently (34-66%)
Seeing	Constantly (67-100%)

Physical Tasks

Task Description	Typical Weight	Maximum Weight	Typical Distance	Frequency
Personal luggage	10 lbs.		Up to 50 yards	Rarely
Materials and Information	10 lbs.		Up to 50 yards	Occasionally
Laptop	4 lbs.		Up to 50 yards	Frequently

Travel Requirements

Overall frequency of travel: **Less than 10%**

Local travel (driving): **Less than 10%**

In-country travel (flying): **Less than 10%**

International (flying): **Less than 10%**

