

Company Description

Harsco is recognized for technical leadership and worldwide experience in virtually all major aspects of railway track maintenance. We enable railroads to operate at peak efficiency over smooth, precisely aligned track that increases railway safety while reducing fuel consumption and other key operating costs. Our broad array of equipment and services support every type of railway operator, from major national and international railway systems, to short lines and high-speed urban transit networks.

Job Description

We are looking for a driven team member to contribute to the development of our technology product serving in area of automating railway track equipment and improving safety of the railroad operation.

This presents an exceptional opportunity to enhance professional expertise and contribute to a specialized team. As an AI Machine Learning Engineer, the individual in this role typically works full-time, focusing on designing and developing scalable solutions using AI tools and machine learning models. The primary responsibilities include addressing various neural network-related challenges in the railroad and transportation sectors. This involves leveraging big data computation and storage tools to create prototypes and datasets, conducting model training and evaluations, integrating solutions, performing bench tests and onsite tests, tuning, and monitoring. Proficiency in languages such as C and C++ is required, along with software development for Linux platforms. Successful execution of responsibilities is expected to open up significant career opportunities within Harsco Rail.

Team get to work on popular products that serve major railroads across the globe. Engineers here are designing products that make a meaningful impact in the railroad industry. We use cutting edge technology to design & develop next generation railroad equipment & digital devices. Watch some of our manned/unmanned track equipment & technology products in action at www.harscorail.com & <https://www.protrantechology.com/>

Your responsibilities

- Design and develop real time AI – Neural Network solutions for railway maintenance equipment. Implementing appropriate ML algorithms.

- Write clean, documented code following best practices.

- Develop and implement communication protocols.

- Work independently and collaboratively with a motivated team.

- Generate requirements and design documentation.

- Plan for, design, and deliver testing, and tested products into the QA process.

- Apply communication and problem-solving skills to solve software issues related to the design, development, deployment, testing, and operation of systems.

- Meet deadlines to ensure projects are completed within acceptable time and cost targets.

Willingness and ability to travel up to 15% of time.
Other duties may apply as required.

Qualifications

Education

Master's / Bachelor's degree in Software Engineering or similar experience.

Experience

3+ years of experience in developing CNN, R-CNN type neural network for computer vision tasks.

3+ years of experience in Software development using C++/Python language.

Experience with Supervised and Semi-Supervised Learning, Deep Learning, Support Vector Machines, Linear and Logistic Regression.

Working knowledge of AI Framework such as TensorFlow, Café, PyTorch, Keras, Darknet and OpenCV.

Working knowledge of AI edge devices such as NVIDIA Jetson / Nano / Orin.

Knowledge of the Linux Operating System.

What Makes You Stand Out – Preferred Experience & Skill

Experience using statistical computer languages (R, Python, SQL etc.) to manipulate data and draw insights from large data sets.

Experience working with and creating data architectures.

Knowledge of a variety of machine learning techniques (semantic segmentation, clustering, decision tree learning, artificial neural networks, etc.) and their real-world advantages/drawbacks.

Knowledge of advanced statistical techniques and concepts (regression, properties of distributions, statistical tests, and proper usage, etc.) and experience with applications.

Experience with edge computing & controlling devices (On-device deployment in C/C++ or similar) for real time application.

Experience with optimizing neural networks to perform well on low-power mobile platforms (e.g. pruning, distillation, quantization).

Essential Functions

Able to follow directions, detail-oriented, patient, and quality focused.

The ability to attend work predictably and regularly.

The ability to deal politely and professionally with team members and colleagues.

The ability to manage several tasks at once.

The ability to use a computer to communicate, create, and access information.

Available to work overtime as needed.

What you'll Get

At Harsco Rail, You Are Empowered To Create a Career That Will Take You To Where You Want To Go While Working In An Inclusive Team Environment. Here, You'll Enjoy The Freedom To Explore New Projects, The Support To Think Outside The Box And The Advanced Tools And Technology That Foster Innovation And Achievement. Additionally, We Offer a Comprehensive Reward Package To Help You Get Started On Your New Career Path, Including

Flexible work arrangements (Hybrid work schedule)

Highly competitive base pay and performance bonuses

Paid time off

Sign in bonus & Relocations assistance

Savings & Retirement benefits (401K)

Healthcare benefits – Health insurance, Contribution to HSA & Various Wellness program (Onsite Clinic)

Employee Assistance Programs

Tuition assistance

Fitness subsidies and on-site gyms at Columbia location

Visa Sponsorship is available for this position (Individual who are in US with legal work permit)

Additional Information

We provide equal employment opportunities (EEO) to all employees and applicants for employment without regard to race, color, religion, sex, national origin, age, disability, veteran status or genetics. This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation and training.

If you have a difficulty applying for any job posted on Harsco Rail's website because a disability prevents you from using the online system, Harsco Rail offers the following alternate application procedure: Contact Shannon Godby at 803-822-7589 and Harsco Rail will arrange for an alternate method of applying and will consider your application together with all other applications received for the job. Please call only for disability application. All your information will be kept confidential according to EEO guidelines.