



## Job Description:

<b>Job vacancy:</b>	Machine Learning Engineer
<b>Reporting to:</b>	Robotics Team Lead
<b>Location:</b>	Bristol & Bath Science Park
<b>Annual Salary:</b>	Subject to applicant experience
<b>Package:</b>	27 days annual leave 4 x salary life assurance Group Personal Pension Scheme Group Private Medical Insurance Health Care Cash Plan



## Overview:

The Centre for Modelling & Simulation (CFMS) is a growing, independent digital engineering Research and Technology Organisation (RTO) providing technical expertise to help organisations create cutting edge solutions by pioneering new approaches to product development and enabling innovation services.

Working with commercial and research organisations of all sizes, CFMS has a full portfolio of digital innovation capabilities, including design and analysis services, consultancy, and IT infrastructure, CFMS uses digital innovation across the cyber-physical landscape (including a new Robotics/AI/Computer Vision capability) to help develop more effective engineering solutions across industrial sectors critical to the UK economy.

As a commercially focused organisation we reinvest profits from commercial activity into the continued development of our people, facilities, and research capability.

## About the role:

The Machine Learning Engineer's role will be to develop and implement machine learning models for various robotic, aerospace and energy network applications working on a mix of real and synthetic data. The role will support different types of use cases ranging from image classification on embedded systems to cloud based analysis solutions. In this role, you will support the design and implementation of a whole pipeline for model training, validation, and from cloud to edge based robotic deployments. This will be applied in a range of exciting and first of a kind applications in several sectors including space exploration, industrial inspection and aerospace.

## Key Responsibilities:

- Research, develop and implement algorithms to perform image and video classification, and semantic and instance segmentation
- Take ownership of developed ML products for commercialisation
- Support the development of pipeline for rapid dispatching ML models onto edge based applications for robotic deployments
- Work with robotic engineers and the wider teams including modelling and simulation to identify means for augmenting data (or operations) for improved performance
- Work with front end developers to build tools which allow uploading custom data and labelling it, as well as displaying various metrics illustrating the quality of dataset and trained model
- Work on vision-based inspection systems for aerospace industry
- Support model deployment onto CFMS data centre
- Maintain awareness of new and emerging machine learning technologies
- Provide support and advice to the wider technical team
- Presentation of results at national conferences and trade shows



## Experience:

- Minimum 2-3 years of experience of developing and implementing machine learning models for industrial or research applications post graduation in vision based applications
- Preferably a post-graduate degree in a relevant discipline such as machine (including deep) learning, computer vision, computer science, mathematics or robotics
- Being able to demonstrate technical leadership is nice to have

## Skills, Knowledge and Competencies:

- Strong mathematical background, including a knowledge of the underlying mathematics of machine learning techniques
- Experience of applying a range of machine learning techniques, such as classification and regression
- Experience with a range of Deep/Machine Learning toolsets and development frameworks including PyTorch
- Proficient in programming in Python and C++. Knowledge of edge based deployment (e.g. Nvidia Jetson) and parallelisation techniques (e.g. MPI or CUDA) would be highly desirable
- Awareness of developing web servers
- Awareness of using docker containers
- Awareness of ROS, ROS2, or similar frameworks
- Working knowledge of software development techniques including version control, unit testing, documentation and continuous integration/continuous deployment
- Experience of working within multidisciplinary teams to implement machine learning models using a wide range of data types and formats
- Experience of dealing with competing stakeholders, both internal and external
- Strong verbal and written communication skills, including presenting complex topics to a wide range of audiences

## How to Apply:

Email your CV and covering letter to [careers@cfms.org.uk](mailto:careers@cfms.org.uk). If you would like further information on the role please contact us on the email above or call **0117 906 1100**.

Applicants must be eligible to work in the UK.

**Direct applications only - no agencies.**