

PERSON SPECIFICATION

COMPANY: Protex (UK) Systems Limited

ADDRESS: Wellington House, Wellington Court, Preston Farm Business Park, Stockton on Tees, TS18 3TA

POST: KTP Associate (Software Engineer)

ESSENTIAL:

- A Master's degree (or equivalent industrial experience) in Mechanical Engineering, Computational Engineering, Applied Mathematics, Computer Science, or a closely related discipline
- Strong experience in computational modelling and optimisation (e.g. genetic algorithms, numerical optimisation)
- Strong programming skills in Python/MATLAB for developing simulation, optimisation, and AI-driven tools
- Experience in data processing, numerical methods, and building modular software workflows is required.
- Ability to translate engineering requirements into computational models, validate outputs against performance criteria, and interpret results within practical engineering contexts.
- Strong analytical, documentation, and communication skills
- Self-motivated, methodical, adaptable, and capable of independent working within a structured project environment.
- Excellent written and verbal communication; able to explain complex technical concepts to non-specialists, adapting communication to meet recipient needs
- Ability to work across multidisciplinary academic and industrial teams.
- Demonstrate a commitment to the University's Vision, Mission and Values and to work within the University and Protex (UK) Systems Limited's policies and procedures

DESIRABLE:

- PhD in Mechanical Engineering, Computational Engineering, Computer Science, or relevant discipline
- Experience with AI or data-driven optimisation methods
- Familiarity with 3D/spatial data processing or engineering system modelling
- Experience in software development practices, including modular design, API development, or integration of computational tools
- Exposure to user interface development (e.g. web-based or GUI tools) for engineering applications
- Familiarity with performance optimisation techniques (e.g. parallel computing or C++), and high-performance computing / C++ for performance-critical components

N.B. You must outline your experience, skills and/or knowledge relevant to the above essential and desirable criteria in the 'Additional Information' section of your online job application.

- Exposure to industrial or safety-critical engineering environments
- Experience developing AI-driven report generation systems that automatically produce structured reports from data, analyses, and key outputs using standardised organisational templates.
- Experience in computer vision and image processing, including floor plan analysis, object detection, image segmentation, feature extraction, edge detection, pattern recognition, and AI-driven scene understanding.
- Ability to facilitate workshops/training

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