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**Faculty of Technology**

**School of Energy & Electronic Engineering**

**Software Engineer for Data Science Application – KTP Associate**

**Subsea Craft Ltd, Portsmouth**

**ZZ007820**

**Information for Candidates**

# THE POST

Please see the attached job description and person specification.

**TERMS OF APPOINTMENT**

Salary of £35,000 per annum, paid into a bank or building society monthly in arrears.

Although an employee of the University of Portsmouth’s, you will be working at Subsea Craft Ltd, Portsmouth

The Appointee will be entitled to join the Local Government Pension Scheme. The scheme's provisions include an index-linked pension with an option to exchange some pension for a lump sum on retirement together with dependants’ benefits. Contributions by the employee are subject to tax relief.

There is a probationary period of six months during which new staff are expected to demonstrate their suitability for the post.

We are strongly dedicated to embedding equality, diversity and inclusion (EDI) within our community. As an [Athena SWAN](https://www.advance-he.ac.uk/equality-charters/athena-swan-charter) and [Race Equality Charter](https://www.port.ac.uk/about-us/structure-and-governance/corporate-governance/equality-and-diversity/race-equality) award holder, a member of [Stonewall](https://www.port.ac.uk/about-us/structure-and-governance/corporate-governance/equality-and-diversity/lgbtq-equality) and a [Disability Confident Employer](https://disabilityconfident.campaign.gov.uk/) we are passionate about creating a welcoming and inclusive environment, regardless of your background. We welcome applications from all talented people. In addition, we want our workforce to be representative of our diverse student population. Please see our [EDI Framework and objectives](https://www.port.ac.uk/about-us/structure-and-governance/corporate-governance/equality-and-diversity).

There is a comprehensive sickness and maternity benefits scheme.

**All interview applicants will be required to bring their passport or full birth certificate and any other 'Right to Work' information to interview where it will be copied and verified.** The successful applicant will not be able to start work until their right to work documentation has been verified.

Please note if you are the successful candidate once the verbal offer of employment has been made and accepted, references will be immediately requested. It is the University’s policy that all employment covering the past three years is referenced. A minimum of two references is required to cover this three year period of employment or study (where there has been no employment). One of your referees must be your current or most recent employer.

The successful candidate will need to bring documentary evidence of their qualifications to Human Resources on taking up their appointment.

If the position has a requirement for Disclosure and Barring Service check (DBS) or Non-Police Personnel Vetting (NPPV), this will be stated in the advert. Further information will be provided once the selection process has been completed.

All applications must be submitted by 23:59 (UK time) on the closing date published.

For information on how to find our campus and the navigation of buildings (including accessibility), please see <https://www.accessable.co.uk/university-of-portsmouth> (click on the Access Guides tab at the top of the page, and then click on "view all access guides".



**UNIVERSITY OF PORTSMOUTH – RECRUITMENT PAPERWORK**

1. **JOB DESCRIPTION**

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| **Job Title:** | Software Engineer for Data Science Application – KTP Associate |
| **Faculty/Centre:** | Faculty of Technology |
| **Department/Service:**  **Location:** | School of Energy and Electronic Engineering  Subsea Craft Ltd - Portsmouth |
| **Position Reference No:** | ZZ007820 |
| **Cost Centre:** | 1126 (67%) / 11626 (33%) |
| **Responsible to:** | Professor Victor Becerra |
| **Responsible for:** | n/a |
| **Effective date of job description:** | November 2022 |

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| **Context of Job:** |
| This two-year post facilitates, leads, and manages a project to implement a Knowledge Transfer Partnership (KTP) between the University of Portsmouth and SubSea Craft Ltd.  A KTP Programme is a three-way collaboration between an Associate, a Company and a University. The Associate undertakes and manages a strategic research and development project for the company while being supported by Academic and Industry supervisors. The programme is co-funded by a government grant and the company.  SubSea Craft (SSC) is a privately-funded SME delivering advanced maritime technology. Their primary product is VICTA, a diver delivery unit, a surface submersible craft designed to operate at speed and capable of rapid transition beneath the surface. |

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| **Purpose of Job:** |
| The objective of this KTP is to develop a predictive maintenance system to facilitate through-life-support for VICTA and other small marine vessels.  The project will involve two KTP associates developing this software tool, responsible for developing the machine learning-based prognostic algorithm and the software that encapsulates the algorithm, respectively. |

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| **Key Responsibilities:** |
| * Undertake market research to identify barriers to innovation and key stakeholders * Undertake SWOT analysis of market competitors * Implement the machine learning algorithm in an embedded system. The algorithm will be developed by the other KTP associate. * Design and develop a PC based prognostic software tool to process the offline sensors’ data using the algorithm delivered by the other KTP associate. * Leading training workshops and writing materials to train staff at Subsea Craft how to use the developed software. * Lead, facilitate and manage the project, including liaising with stakeholders, planning and implementation (including some travel), and release/maintenance of project documentation. * Write academic research papers based on the achievements of the project. * Work with the marketing department to ensure the unique selling points of the software are targeted at key potential customers * Carry out other duties as may be reasonably required by the Local Management Committee of the project. |

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| **Working Relationships:** |
| The KTP Associate will be employed by the University of Portsmouth (School of Energy and Electronic Engineering) but will be based at Subsea Craft Ltd. The KTP Associate will work closely with the academic team and Subsea Craft Ltd throughout the project.  Key relationships:   * Professor Victor Becerra – Lead Academic (UoP, SENE) * Dr Edward Smart – Knowledge Base Supervisor (UoP, SENE) * Dr Hongjie Ma - Academic Supervisor (UoP, SENE) * Oliver Shepherd – KTP Chairman (SubSea) * Dave Henson – Company Supervisor (SubSea) * Stephen Woodhouse – Regional KTP Adviser   The KTP Associate is expected to form a good working relationship with the first KTP Associate on the project (machine learning algorithm development)  The project will be overseen by a Local Management Committee, which will include the Academic Team and the Company Team |

1. **PERSON SPECIFICATION**

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| **No** | **Attributes** | **Rating** | **Source** |
| **1.** | **Specific Knowledge & Experience** |  |  |
| 1.1 | Comprehensive understanding of the software development process | E | AF, S |
| 1.2 | At least 12 months experience developing software in an industrial or commercial environment | E | AF, S |
| 1.3 | Experience with user interface design | E | AF, S |
| 1.4 | A good understanding of the fundamental principles of data science | D | AF, S |
| 1.5 | Experience with maritime software systems | D | AF, S |
| **2.** | **Skills & Abilities** |  |  |
| 2.1 | Excellent programming skills, ideally in C/C++, Python and Java | E | AF, S |
| 2.2 | Strong written and verbal communication skills | E | AF, S |
| 2.3 | Ability to work effectively both independently and as a member of a team | D | AF, S |
| 2.4 | Ability to communicate complex ideas to technical and non-technical audiences | D | AF, S |
| 2.5 | Project management and time management skills | D | AF, S |
| 2.6 | Able to deliver training to share knowledge and good practice with other company members as required. | D | AF, S |
| 2.7 | Ability to do cross-platform software development (Windows/Linux) | D | AF, S |
| 2.8 | Familiarity with model-based development and automatic code generation tools | D | AF, S |
| **3.** | **Qualifications, Education & Training** |  |  |
| 3.1 | Masters degree in a relevant subject e.g. computer science or software engineering.  Undergraduate degree in computer science, software engineering or other relevant subject (2.1 or above) | E | AF, S |
| 3.2 | PhD in a relevant subject e.g. computer science or software engineering. | D | AF, S |
| **4.** | **Other Requirements** |  |  |
| 4.1 | Aptitude and appetite to deliver excellent software products | E | AF, S |
| 4.2 | Ability to work with a range of partners to develop solutions | E | AF, S |
| 4.3 | Commitment to personal development and continuous professional development (CPD). | E | AF, S |
| 4.4 | High confidence and self-motivation. | E | AF, S |
| 4.5 | Task orientated with a strong focus on delivering results. | E | AF, S |

**Legend**

Rating of attribute: E = essential; D = desirable

Source of evidence: AF = Application Form; S = Selection Programme (including Interview, Test, Presentation)

**JOB HAZARD IDENTIFICATION FORM**

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| **Please tick box(s) if any of the below are likely to be encountered in this role. This is in order to identify potential job related hazards and minimise associated health effects as far as possible. Please use the** [**Job Hazard Information**](http://www.port.ac.uk/departments/services/humanresources/occupationalhealthservice/jobhazardinformation/filetodownload,164407,en.doc) **document in order to do this and give details in the free text space provided.** | | | |
| 1. International travel/Fieldwork | X | 13. Substances to which COSHH regulations apply (including microorganisms, animal allergens, wood dust, chemicals, skin sensitisers and irritants, welding fume) |  |
| 1. Manual Handling (of loads/people) |  | 14. Working at height |  |
| 1. Human tissue/body fluids (e.g. Healthcare settings, First Aiders, Nursery workers, Laboratory workers) |  | 15. Working with sewage, drains, river or canal water |  |
| 1. Genetically Modified Organisms |  | 16. Confined spaces |  |
| 1. Noise > 80 DbA |  | 17. Vibrating tools |  |
| 1. Night Working   (between 2200 hrs and 0600 hrs) |  | 18. Diving |  |
| 1. Display screen equipment | X | 19. Compressed gases |  |
| 1. Repetitive tasks (e.g. pipette use etc) |  | 20. Small print/colour coding |  |
| 1. Ionising radiation/ non-ionising radiation/lasers/UV radiation | | 21. Soil/bio-aerosols |  |
| 10. Asbestos and or lead | | 22. Nanomaterials | |
| 11. Driving on University business: mini- bus (over 9 seats), van, bus, forklift truck, drones only) | | 23. Workplace stressors (e.g. workload, relationships, job role etc) | |
| 12. Food handling | | 24. Other (please specify) | |

**Completed by Line Manager/Supervisor:**

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| **Name (block capitals)** | HONGJIE MA |
| **Date** | November 2022 |
| **Extension number** |  |

Managers should use this form and the information contained in it during induction of new staff to identify any training needs or requirements for referral to Occupational Health (OH).

Should any of this associated information be unavailable please contact OH (Tel: 023 9284 3187) so that appropriate advice can be given.