Job Description and Person Specification

Job title: AI Solutions Developer (KTP Associate)

Faculty: Faculty of Arts & Sciences

Reference: EHA2608-1024

Grade & Salary: Grade 8. Points for grade: 31-35.
£39105 - £43878 per annum.

Contract Type: Full Time, Fixed Term for 30 months

Location: SME Water, (Unit 10 The Workshops, Marcus Street, Birkenhead, England, CH41 1EU).

Additional Info: A typical working week at SME Water is a total of 37.5 hours (7.5 hours each day). Each employee is entitled to 33 days holiday in each complete calendar year, inclusive of public holidays.

About the Role

The post of AI Solutions Developer offers an exciting opportunity to work on a groundbreaking product development project in the field of AI data science, with a highly respected academic team and an innovative and successful company in the UK water engineering and data management sector.

The project will develop an AI-driven, intelligent management platform for the monitoring of water pressure across UK water company networks. The project will design, develop and embed capabilities to launch a new machine learning model which rapidly collects, analyses and reports high frequency water pressure data against multiple defined parameters.; improve knowledge flows between internal teams and external customers and suppliers; and improve business decision making through advanced analytics.

While transient pressure sensors are increasingly prevalent in the UK, the corresponding data is not widely analysed, presenting opportunities for water companies. SME Water provides comprehensive solutions that align with industry needs.

Establishing a service offering based on machine learning requires a step change in knowledge within SME Water and adopting such solutions will deliver transformation for the UK water sector.

Edge Hill's Computer Science Department is a thriving, international community of students and staff, committed to teaching and research excellence, professional practice, interdisciplinary collaborations and partnerships. The research centres in the department are primarily focused on smart data analytics and visualisation, disruptive technologies and smart applications, cyber security, autonomous systems and robotics, telecommunications, computer vision, augmented and virtual reality.

The company partner on this project, where this post will be based, is SME Water Ltd. www.sme-water.co.uk. SME Water is a leading engineering and data analysis partner for UK water companies, delivering contemporary network solutions to the UK clean water industry. The company combines its extensive subject knowledge of water distribution network management with modern analysis and data science techniques to work across the UK water industry to deliver complex projects.

Knowledge Transfer Partnerships (KTPs) www.ktp-uk.org/graduates.

KTPs are collaborative projects between industry and academia which seek to transfer knowledge and research for the development of new products and services. The KTP Associate, which is this post, works within the company partner to lead the development of the project, under the co-supervision of the academic team and the company's specialists.

For the Associate, KTPs enhance your career by providing an opportunity to lead a challenging project central to a business's strategic development and long-term growth. The teams at the university and the business provide you with full support. KTPs offer a generous development budget to augment the Associate's technical and management skills.

Innovate UK also facilitates excellent opportunities for the ~800 KTP Associates around the UK to network and share their experiences.

About You

The successful applicant will have academic and/or professional experience in statistical techniques for data mining, predictive modelling, and machine learning. A strong first degree and an MSc in a relevant Computer Science discipline is essential.

Successful applicants must demonstrate in-depth knowledge of application development using a recognized object-oriented language and web application development, plus a strong understanding of information and cyber security.

Applicants must also demonstrate knowledge and experience of accessible user experience design.

The successful applicant will be able to critically analyse literature, with an ability to assess trends and evaluate risks and opportunities. They must have strong interpersonal and communication skills for regular liaison with project stakeholders, be highly organised, and able to work to strict deadlines.

About Us

Edge Hill University is an ambitious institution, based on an attractive, award-winning 160-acre campus in Lancashire, close to Liverpool and Manchester. The University aspires to combine excellent research of reach and significance with a world-class student experience.

Edge Hill University was named Modern University of the Year in the Times and Sunday Times Good University Guide 2022 and shortlisted for the overall UK University of the Year award. With this award the University was called 'one of the shining stars of the modern university sector.' The award has come closely after Edge Hill was awarded University of the Year in the Educate North Awards 2020/21.

Edge Hill University appears in the Times Higher Global Rankings (801-1000) and has previously held the coveted UK University of the Year title, awarded by Times Higher Education in 2014/2015.

Other recent successes include a Global Teaching Excellence Spotlight Award (2018) from Advance HE in association with Times Higher Education, being ranked in the top 10 for teaching by the Times/Sunday Times Good University Guide 2017, top in the North West for student experience (Time Higher Education 2017), and top in the UK for student accommodation in the 2017 WhatUni Awards.

Edge Hill University has achieved both Athena Swan Bronze and the European Commission's 'HR Excellence in Research Award' (first awarded 2018 and reawarded 2021), which acknowledges alignment with the principles of the European Charter for Researchers and Code of Conduct for researcher recruitment. The process incorporates both the QAA Code of Practice for Research Degree Programmes and the Concordat to Support the Career Development of Researchers.

Duties and Responsibilities

1. To play a leading role in the delivery of the KTP, working with all stakeholders to ensure efficiency and success.

2. To develop the full system and user requirements for the proposed solution.

3. To design the architecture and the components of the solution.

4. To develop and integrate the necessary components of the system using an agile, test-driven development approach.

5. To work closely with the academic and company teams to address technical and/or research challenges arising from the project.

6. To produce full detailed documentation of the system at key points throughout the project.

7. Preparation and delivery of resources and training materials for relevant user levels.

8. To assist in the writing of academic output to support the findings of the project.

9. To adhere to the project management, administrative and other compliance protocols required for the KTP.

10. The successful candidate may be required to travel to client sites around the UK throughout the project.

11. To work openly and cooperatively with all colleagues, proactively resolving issues and challenges, contributing to identifying continuous improvements

12. To act as an ambassador for the Department and the company at all times.

13. To undertake any other duties deemed appropriate by the Head of Department or KTP Academic Supervisor.

In addition to the above all Edge Hill University staff are required to: adhere to all University policies and procedures; demonstrate excellent customer care; undertake appropriate learning and development; actively participate in performance review; encourage equality, diversity and inclusion; respect confidentiality; act in a sustainable manner; and proactively consider accessibility.

Person Specification

Please note that applications will be assessed against the Person Specification using the following criteria, therefore, applicants should provide evidence of their ability to meet all criteria. Where a supporting statement is indicated you will be asked to provide a statement of how you meet this criterion within the application form.

Qualifications

Criteria	Essential or Desirable Criteria	Method of Assessment
Good bachelor's degree in a relevant computer science related subject	Essential	Application
Good higher degree (relevant professional experience will be considered in place of a higher degree)	Essential	Application
Relevant professional technical qualifications	Desirable	Application

Knowledge and Experience

Criteria	Essential or Desirable Criteria	Method of Assessment
Demonstrable knowledge of machine learning and predictive modelling	Essential	Application, Supporting Statement & Interview
Demonstrable knowledge of statistical techniques for data mining	Essential	Application, Supporting Statement & Interview
Demonstrable knowledge of application development using an object-oriented language	Essential	Application & Interview
Demonstrable knowledge in the development of database systems.	Essential	Application & Interview
Demonstrable knowledge in information and cyber security considerations for cloud services	Desirable	Application & Interview
Demonstrable knowledge of unit testing, functional testing and testing frameworks	Essential	Application & Interview

Abilities and Skills

Criteria	Essential or Desirable Criteria	Method of Assessment
Strong interpersonal and communication skills. Particularly communicating complex conceptual ideas or complex information to both technical and non-technical stakeholders, with an ability to influence key decision-making	Essential	Application, Supporting Statement, Interview & Presentation
Strong project management skills, being highly organised, maintaining attention to detail, and able to prioritise workload to meet deadlines	Essential	Application, Supporting Statement & Interview
Ability to think critically to proactively identify and resolve problems, recommending appropriate options for courses of action	Essential	Application, Supporting Statement & Interview
Ability to build an effective team environment, securing consensus and cooperation, and working flexibly when required	Essential	Application & Interview

Candidate Guidance and How to Apply

Join our team at Edge Hill University! We're looking for talented individuals to join our dedicated and supportive community and make a difference to our students. At Edge Hill we value the benefits a rich and diverse workforce brings and welcome applications from all sections of society.

Have any questions?

For informal enquiries about this vacancy, please contact Marcello Trovati, Professor in Computer Science at Marcello.Trovati@edgehill.ac.uk.

Ready To apply:

1. Go to our jobsite - https://jobs.edgehill.ac.uk/Vacancies.aspx

2. Find the role you wish to apply for.

3. Click the **"Apply Online"** button on the job advert and follow the easy steps to prepare and submit your application.

Key points:

- **Closing date:** Please refer to the advert for the closing date for this vacancy. Vacancies automatically close at 23:59pm [GMT]. Please note, that the University may on occasion close a post early if vacancies attract high

volumes of applications; we therefore encourage you to prepare and submit your application in good time.

- **Next steps:** We'll contact you by email, usually within two weeks, to let you know if you have been shortlisted.

- **Shortlisting**: Information you provide on your application will be assessed against the person specification for this role. We encourage you to clearly show how you meet the requirements presented in the person specification. We encourage use of specific examples of your experience, knowledge and skills within your supporting statement(s).

- **Pre-employment checks:** Following offer, successful candidates will need to provide original proof of identity, qualifications and professional memberships, and evidence their right to work in the UK. You will also complete a pre-employment health questionnaire to support Edge Hill University make appropriate adjustments to support you in the role.

- **References:** You will be asked to provide details of two referees on your application form. References will be collected following issue of an offer of employment. Guidance on how to select your referees is provided on the form. The University may ask you for alternative or additional referees to cover your previous three years of employment during pre-employment clearances.

- **Start date:** A start date will be arranged after pre-employment checks are completed.