

Biomedical Systems & Artificial Intelligence

Developer (Knowledge Transfer Partnership Associate)

School of Computing and Engineering, and Heales Medical



Brief summary of the role

Role title:	Biomedical Systems & AI Developer (KTP Associate)
Grade:	8
Faculty or Directorate:	Faculty of Management, Sciences & Engineering
Service or Department:	School of Computing and Engineering
Location:	University of Bradford, and Heales Medical
Reports to:	Prof Rami Qahwaji (University) & Mr Eamonn Swanton (Heales Managing Director)
Responsible for:	N/A
Work pattern:	Travel between the University and Heales Medical sites

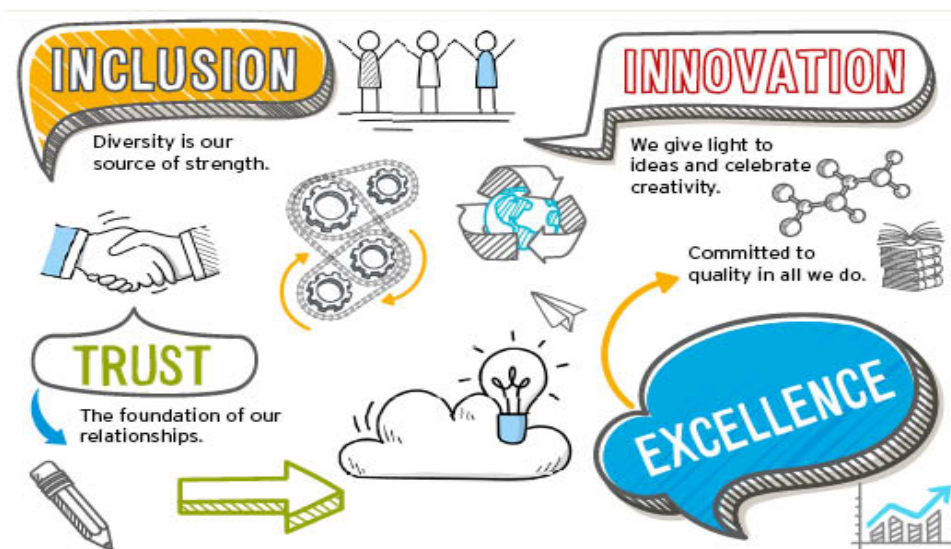
About the University of Bradford

Values

At the University of Bradford, we are guided by our core values of Excellence, Trust, Innovation, and Inclusion. These values shape our approach and our commitment to making diversity, equity, and inclusion part of everything we do – from how we build our curriculum to how we build our workforce. It is the responsibility of every employee to uphold the university values.

Equality, Diversity, and Inclusion (EDI)

At the University of Bradford, we are guided by our core values of Excellence, Trust,



Innovation, and Inclusion. These values shape our approach and our commitment to making diversity, equity, and inclusion at the heart of everything we do.

We foster a work environment that's inclusive as well as diverse, where staff can be themselves and have the support and adjustments to be successful within their role.

We are dedicated to promoting equality and inclusivity throughout the university and have established several networks where individuals can find support and safe places fostering a sense of belonging and acceptance. We are committed to several equality charters such as Athena Swan, Race Equality Charter, Disability Confident and Stonewall University Champions Programme..

Health, safety, and wellbeing

Health and Safety is a partnership between employee and employer each having responsibilities, as such all employees of the University have a statutory duty of care for their own personal safety and that of others who may be affected by their acts or omissions.

It is the responsibility of all employees that they fulfil a proactive role towards the management of risk in all of their actions. This entails the risk assessment of all situations, the taking of appropriate actions and reporting of all incidents, near misses and hazards.

Managers should note they have a duty of care towards any staff they manage; academic staff also have a duty of care towards students.

All colleagues will need to ensure you are familiar with any relevant Health and Safety policies and procedures, seeking advice from the Central University Health and Safety team as appropriate.

We are registered members of the University Mental Health Charter. This visibly demonstrates our commitment to achieving cultural change in student and staff mental health and wellbeing across the whole university, whilst supporting the vision of our People Strategy to create a culture and environment of transformational diversity, inclusion and social mobility, creating a place where our values come to life and are evident in our approach.

Information governance

Employees have a responsibility for the information and records (including student, health, financial and administrative records) that are gathered or used as part of their work undertaken for the University.

An employee must consult their manager if they have any doubts about the appropriate handling of the information and records with which they work.

All employees must always adhere to data protection legislation and the University's policies and procedures in relation to information governance and information security.

Employees will be required, when and where appropriate to the role, to comply with the processing of requests under the Freedom of Information Act 2000.

Criminal record disclosures and working with vulnerable groups

Depending on the defined nature of your work and specialist area of expertise, the University may obtain a standard or enhanced disclosure through the Disclosure and Barring Service (DBS) under the Rehabilitation of Offenders Act 1974.

All employees of the University who have contact with children, young people, vulnerable adults, service users and their families must familiarise themselves, be aware of their responsibilities and adhere to the University's policy and Safeguarding Vulnerable Groups Act 2006.

The University is committed to protect and safeguard children, young people and Vulnerable Adults.

Suitable applicants will not be refused positions because of criminal record information or other information declared, where it has no bearing on the role (for which you are applying) and no risks have been identified against the duties you would be expected to perform as part of that role.

About Knowledge Transfer Partnerships

A Knowledge Transfer Partnership (KTP) is a three-way project between a company, a university and a recently qualified graduate or post-graduate (known as an Associate), which enables the transfer of knowledge, technology and skills to which the company currently has no access. Supported by the University, KTP Associates manages strategic projects within the company.

A KTP can help graduates to enhance their career prospects by providing them with an opportunity to develop managerial and technical skills, manage a challenging project, which allows them to use their degree, and is central to an organisation's strategic development and long-term growth. Through this project, the KTP Associate plays a key role in managing and implementing strategic development in an organisation and transferring knowledge between it and the University.

Whilst the Associate owns the KTP project, they are supported by experienced staff from the company and the University. They are also assigned a KTP Adviser, who supports them in maintaining good working relationships within the Partnership and in planning their professional development in broad terms. KTP projects have a dedicated budget for training, which allows Associates to develop their personal and professional skills. All KTP Associates are also automatically registered in the KTP Diploma in Management Program, which provides a valuable degree-level qualification (recognised by industry) from the Chartered Management Institute.

Main Purpose

Heales Medical and the School of Computing and Engineering are collaborating to develop an innovative AI-enabled health surveillance platform to improve the efficiency, accessibility, and scalability of occupational health assessments. The project will create a unique low-cost, lightweight, and sustainable integrated hardware/software solution, known as HealesScreen, that allows non-clinical staff with minimal training to undertake a range of health surveillance measurements.

The solution will combine multiple assessment tools with AI-powered automated evaluation, enabling secure upload of data into Heales Medical's Occupational Health system for review by clinical staff. By reducing the need for specialist practitioners to travel with multiple pieces of equipment, the project

will lower operational costs, minimise environmental impact, and increase the use of local resources. The technology will also improve access to occupational health services for employers while increasing efficiency and profitability for Heales Medical.

The successful applicant will be embedded within a multi-talented team of specialists. The Knowledge Base (the University of Bradford team) includes experts in AI, health technologies, system integration, software development, data management, and cyber security. They have a strong and ongoing track record of nationally and internationally funded research, as well as substantial experience in delivering successful KTP projects.

This is an excellent opportunity for a highly motivated and capable individual to accelerate their career by joining Heales Medical. At the end of the project, the KTP Associate may be offered the opportunity to join the company in a long-term technical role and may also have the opportunity for equity participation.

You should have a Level 6 qualification (Bachelor's degree) in Science, Engineering, Computing or related discipline, together with a Level 7 qualification (Master's degree) in Biomedical Engineering, Artificial Intelligence, Computer Science or related discipline, or substantial equivalent professional experience. The successful candidate should have experience working with real-world user data, including data collection, filtering, feature extraction, data quality assessment, and secure storage and transmission. Experience in software development, API integration, database systems, user-centred design, AI or machine learning, and cyber security would be highly desirable. Knowledge of hardware prototyping, microcontrollers, wireless communication technologies, and the development of medical or health-related devices would be advantageous.

You should have strong organisational and project management skills, with the ability to plan activities, manage competing priorities, maintain technical documentation, and deliver work to agreed deadlines. Experience in preparing technical reports, presentations, user manuals, and project documentation is important.

The post holder must be an enthusiastic, self-motivated, and adaptable individual who can work effectively in an interdisciplinary environment with academic, technical, and clinical teams. You should be reliable, well organised, and capable of working independently as well as collaboratively in a fast-paced innovation environment. A willingness to learn new skills, solve complex problems creatively, and communicate effectively with a range of stakeholders are essential attributes for this role.

Starting salary is up to £41,064 per annum, depending on qualifications and experience, for a 36-month fixed-term contract. The post holder will also have a personal training allowance of £6,000 over the 36 months and access to all University facilities and training.

We welcome international candidates to apply.

Heales Medical

Heales Medical is a UK-wide provider of occupational health and psychological health services, offering solutions such as pre-employment screening, health surveillance, management referrals, vaccinations, musculoskeletal treatments, and counselling services, including CBT and psychotherapy. The company supports clients across the NHS, public sector, education, and private industries through its in-house digital management system, which enables online referrals, case tracking, and report access. Heales Medical is focused on strengthening its technological capabilities through AI, expanding specialist psychological services such as EMDR, and developing the HealesScreen platform to deliver more affordable, sustainable, and scalable health assessment solutions.

University of Bradford

The **School of Computing and Engineering** delivers an exciting mix of core engineering disciplines and creative technologies that complement each other in terms of delivering innovative solutions with high sector impact to the challenges posed by industry, the environment, and health and well-being agendas, and providing students with a wide range of expertise and opportunities that individuals can tailor to their particular strengths. The Faculty comprises three historic and well-established Schools with an excellent pedigree in national and international research.

The School has a long history of being at the forefront of new developments in the fields of Biomedical systems development, software engineering, image/signal processing and AI. The school has renowned research strengths, with academics actively engaged in developing areas of research that have an increasing contribution to and impact on various large and small-scale industries and health and well-being sectors. All the teaching programmes are designed in collaboration with research activities and industrial partners, enabling the students to be at the forefront of advances in technology and up-to-date knowledge.

Main Duties and Responsibilities

1. Plan and undertake the research, development, testing, and implementation activities required to deliver the HealesScreen project objectives.
2. Develop and maintain detailed project plans, Gantt charts, risk assessments, product roadmaps, and a knowledge archive to support effective project delivery.
3. Conduct literature reviews and market research into existing health surveillance hardware and software solutions, particularly for spirometry and audiometry, to identify gaps, opportunities, and best practices.
4. Gather and document user and stakeholder requirements for the HealesScreen platform, including the production of User Requirement Specification (URS) documents for spirometer and audiometer solutions.
5. Design, develop, and test low-cost, sustainable hardware prototypes for spirometry and audiometry, including the selection of sensors, microcontrollers, materials, enclosures, power systems, and wireless communication technologies.
6. Investigate and implement signal processing, filtering, calibration, and feature extraction techniques for prototype-generated health data.
7. Develop secure methods for on-device data storage, encryption, authentication, and data transmission in compliance with GDPR, medical device standards, and cybersecurity best practices.
8. Develop user-guided software systems that enable non-clinical personnel to carry out health surveillance tests accurately and safely, including step-by-step instructions, error handling, and real-time feedback.
9. Create and maintain technical documentation, including source code comments, API documentation, user manuals, system architecture documentation, Bills of Materials, testing protocols, and compliance records.
10. Integrate the developed hardware and software systems with the Heales Management System to enable secure, centralised storage and review of occupational health data.

11. Develop and implement benchmarking and testing strategies to assess the performance, usability, accuracy, reliability, and security of the prototypes and integrated system.
12. Work with historical and newly collected health surveillance data to support data analysis, feature engineering, and the development of AI and automation capabilities within the Heales platform.
13. Support the preparation of documentation and evidence required for future CE marking and Medical Device Regulation (MDR) compliance, including risk management and usability engineering documentation.
14. Deliver presentations, demonstrations, technical reports, and progress updates to Heales Medical, the University of Bradford, the Local Management Committee, and other project stakeholders.
15. Organise and deliver training sessions for Heales staff to support the transfer and embedding of technical knowledge within the business.
16. Disseminate project outcomes through internal presentations, external events, conference papers, journal publications, case studies, and project meetings where appropriate.
17. Work independently and collaboratively with academic supervisors, clinical teams, IT teams, compliance staff, product development staff, and external stakeholders to ensure successful project delivery.
18. Build and maintain effective working relationships with internal and external stakeholders to support knowledge transfer, product development, and future collaborations.
19. Analyse project findings, identify areas for improvement, and generate innovative ideas to improve the functionality, usability, sustainability, and commercial value of the HealesScreen solution.
20. Undertake any other duties commensurate with the grade and nature of the post as required to support the successful delivery of the project.

This document outlines the duties required at the current time to indicate the level of responsibility. It is not a comprehensive or exhaustive list and will change in line with the needs of the project. The successful candidate should have a flexible approach and be willing to undertake duties which may vary depending on project requirements, including other reasonable requests as directed by University management and/or Heales Medical, provided these do not change the general character or level of responsibility of the role.

University of Bradford

Values

We will be an organisation that embodies our values in everything we do. These values are:

Excellence is at the heart of everything we do

Trust is the foundation of our relationships, underpinned by integrity in everything we do

We give invention light and celebrate creativity and **innovation**

Inclusion - diversity is a source of strength and must be understood, valued, supported and leveraged

Embedding these values across the University will shape our culture and drive our performance.

It is the responsibility of every employee to uphold the University's values.

Equality, Diversity and Inclusion (EDI)

The University of Bradford is widely recognised as an Equality, Diversity and Inclusion (EDI) leading institution. Our EDI vision is to bring about and be recognised as an exemplar of transformational diversity, inclusion and social mobility and emphasise the critical role of leadership in embedding intersectional EDI in order to make our diversity count and deliver impact.

It is the responsibility of every employee to act in ways that support equality, diversity and inclusivity and to work within the spirit and detail of the law, including the Equality Act 2010 and the Human Rights Act 1998.

The University provides a range of services and employment opportunities for a diverse population. Employees will treat all students and colleagues with dignity and respect, irrespective of their background.

Employees are responsible for ensuring the University develops a culture that promotes equality, values diversity and supports inclusivity. This responsibility includes services and functions the University provides and commissions to students, colleagues, partners in other organisations, visitors and members of the public.

Training

Employees must complete any training that is identified as mandatory for their role. Training should be accessed locally by agreement with line managers and through the University's People and Organisational Development Service. Mandatory training must be completed on commencement of the role, without delay.

Health, Safety and Wellbeing

Health and Safety is a partnership between employee and employer, each having responsibilities; as such, all employees of the University have a statutory duty of care for their own personal safety and that of others who may be affected by their acts or omissions. It is also the responsibility of all employees to fulfil a proactive role towards the management of risk in all of their actions. This entails the risk assessment of all situations, the taking of appropriate actions and reporting of all incidents, near misses and hazards.

All employees have a duty to report any practice that they consider compromises standards of health and safety and risk. The Code of Practice on Public Interest Disclosure (Whistleblowing) details the process and advises on the protection from unfair treatment for an individual who raises such concerns.

Employees are required to co-operate with management to enable the University to meet its own legal duties and to report any circumstances that may compromise the health, safety and welfare of those affected by the University's undertakings.

Managers should note they have a duty of care towards any staff they manage; academic staff also have a duty of care towards students. As part of this, you will need to ensure you are familiar with any relevant Health and Safety policies and procedures, seeking advice from the Central University Health and Safety team as appropriate.

Information Governance

Employees have a responsibility for the information and records (including student, health, financial and administrative records) that are gathered or used as part of their work undertaken for the University. This may be in paper, electronic or other formats. An employee must consult their manager if they have any doubts about the appropriate handling of the information and records with which they work.

This means that employees are required to uphold the confidentiality of all data, information and records and to ensure they are recorded to appropriate data standards and the relevant electronic system or manual filing system in order to maintain their accessibility and integrity.

To support these requirements, all employees must adhere to data protection legislation and the University's policies and procedures in relation to information governance and information security at all times.

Additionally, employees will be required, when and where appropriate to the role, to comply with the processing of requests under the Freedom of Information Act 2000.

All employees will be given the necessary training to enable them to adhere to these requirements.

Criminal Record Disclosures and Working with Vulnerable Groups: This is critical for this role. Enhanced disclosure will be required as the candidate will be working with access to sensitive medical patient data.

Depending on the defined nature of your work and specialist area of expertise, your role may be exempt from the provisions normally afforded to individuals under the Rehabilitation of Offenders Act 1974. In these circumstances, the University may obtain a standard or enhanced disclosure through the Disclosure and Barring Service (DBS) under the Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975 (as amended) and, in certain circumstances, the Police Act 1997.

Suitable applicants will not be refused positions because of criminal record information or other information declared, where it has no bearing on the role (for which you are applying) and no risks have been identified against the duties you would be expected to perform as part of that role.

During the course of your employment, you must notify your line manager if you are charged with a criminal offence (excluding motoring fixed-penalty convictions). Failure to notify the University of a criminal conviction could lead to withdrawal of a job offer where employment has not commenced or disciplinary action for employees in post. All employees of the University who have contact with children, vulnerable adults, service users and their families must familiarise themselves, be aware of their responsibilities and adhere to the University's policy and policies and the Safeguarding Vulnerable Groups Act 2006. Where appropriate, employees will be given the necessary training to enable them to adhere to these requirements.

University Policies and Procedures

The University operates a range of policies, procedures and formal guidance (available on the University intranet and ServiceNow). All employees must observe and adhere to the provisions outlined in these documents as mandatory to their role.

Post Specification

Job Title: Biomedical Systems & AI Developer (KTP Associate)

Faculty / Directorate: Faculty of Management, Sciences & Engineering

School / Division: School of Computing and Engineering

	essential	desirable
Qualifications	• First degree in science or an engineering-related field. • Master's degree in Biomedical Engineering, AI, Computer Science, or a related field.	• PhD in applied AI, biomedical engineering, computer science, or a related field.
Experience, Skills and Knowledge	• Experience and Strong software skills in software systems development and deployment. • Knowledge, experience, deep understanding and application of conventional software development and engineering methods • Experience in AI and machine learning, with a proven track record (publications, working with clinical or industrial partners, etc). • Experience in building internal/external research relationships to develop knowledge and understanding. • Clear written and oral communication skills with the ability to communicate the project outputs effectively to mixed groups with diverse levels of understanding. • Ability to manage time and to work to strict and often conflicting deadlines. • Experience in undertaking research and development activities within a team.	• Experience in medical hardware development. • Experience in 3D printing and design • Strong experience in Signal processing

	essential	desirable
Personal Attributes	• An attitude to self-learning and creative problem-solving • Willingness to engage with and contribute to divisional activity at all levels. • Understanding of the University's commitment to Equality and Diversity. • Committed to continuing personal/professional development.	

