

## Senior Research Software Engineer

Centre for Digital Innovations in Health & Social Care



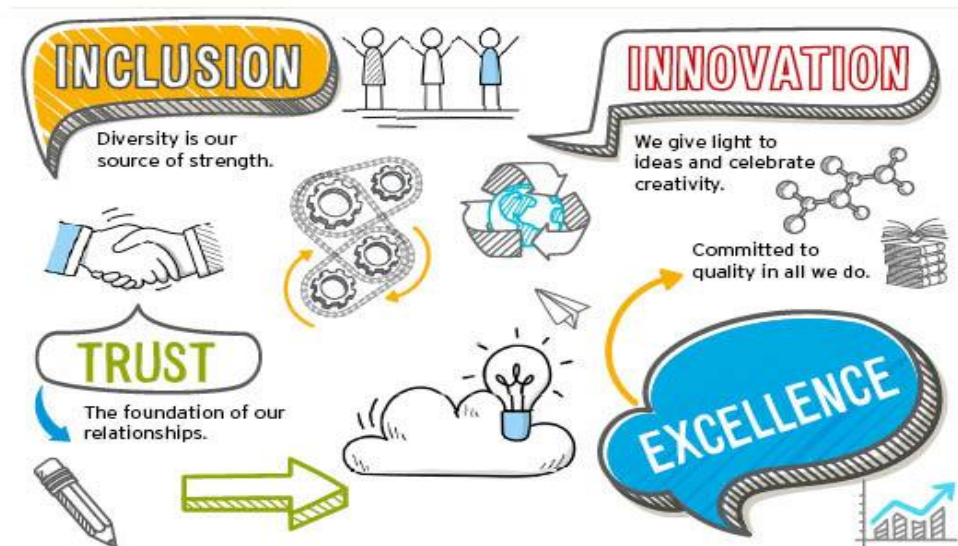
## Brief summary of the role

Role title:	Senior Research Software Engineer
Grade:	9
Faculty or Directorate:	Faculty of Health Studies
Service or Department:	Centre for Digital Innovations in Health & Social Care
Location:	Hybrid – at least two days per week on-site (Main Campus/Wolfson Centre for Applied Health Research) or fully office based if preferred
Reports to:	Professor Rebecca Randell
Responsible for:	
Work pattern:	Full time standard hours or flexible working (e.g. compressed hours) if preferred; willing to consider job share

## 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)

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.

## Role holder: essential and desirable attributes

### Qualifications

<b>Essential</b>	<ul style="list-style-type: none"> <li>• Honours degree or equivalent professional qualification, or proven track record of extensive and substantial experience in a series of progressively more demanding and relevant roles</li> <li>• Substantial experience in a similar role</li> </ul>
<b>Desirable</b>	<ul style="list-style-type: none"> <li>• Significant software engineering component at degree level or PhD in a relevant subject</li> <li>• Formal qualifications or completion of assessed training in software development and/or project management</li> </ul>

### Experience, skills, and knowledge

<b>Essential</b>	<ul style="list-style-type: none"> <li>• Evidence of experience of working with individuals and small teams to develop software to an agreed specification and deadline</li> <li>• A proven ability to work well as part of a multidisciplinary team</li> <li>• Experience supporting colleagues with complex software requirements</li> <li>• A demonstrable knowledge of the present computing landscape relevant to research, trends, platforms, approaches used</li> </ul>
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	<ul style="list-style-type: none"> <li>• Demonstrable knowledge of software development and analysis processes, tools, and techniques</li> <li>• An understanding of DevOps practices, including continuous integration and continuous deployment (CI/CD) pipelines</li> <li>• Broad knowledge of programming with deeper knowledge in one or more modern programming languages</li> <li>• An understanding of data security, privacy, and regulatory requirements</li> <li>• An understanding of ethical issues related to AI and machine learning and potential societal impact</li> <li>• Experience of developing and maintaining web applications</li> <li>• Experience with version control in git with platforms like GitHub or GitLab</li> <li>• Evidence of excellent project management skills, including ability to use project or task management tools to keep track of multiple ongoing projects</li> <li>• Experience of contributing to proposal development</li> </ul>
<b>Desirable</b>	<ul style="list-style-type: none"> <li>• Experience of working in digital health, Higher Education or a health or social care organisation</li> <li>• Experience as a researcher</li> <li>• Experience with data science, machine learning, or information visualization</li> </ul>

Personal attributes

<p><b>Essential</b></p>	<ul style="list-style-type: none"> <li>• Good communicator, with strong written and oral communication skills</li> <li>• Commitment to engage with and contribute to the aims and objectives of the University</li> <li>• Understanding of the University’s commitment to Equality and Diversity</li> <li>• Inquisitive, with a desire and ability to learn new things and a track record of continually updating skills</li> <li>• Takes personal responsibility for delivering programmes of work</li> </ul>
<p><b>Desirable</b></p>	<ul style="list-style-type: none"> <li>• A commitment to improving the delivery of health and social care</li> </ul>



## Main purpose of the role

Thanks to Expanding Excellence in England funding, the University of Bradford's Centre for Digital Innovations in Health & Social Care is embarking on an exciting programme of rapid growth. We are seeking a Senior Research Software Engineer who wishes to be part of a dynamic research team and play a pivotal role in delivering the Centre's flagship research programmes.

Our Centre is multidisciplinary, undertaking high quality co-created applied research that (i) informs the design and implementation of new technologies in national and international health and care systems; and (ii) explores the impact of such technologies on patients, service users, carers, and health and social care professionals. Employing theory-driven approaches for design and evaluation, the Centre's research offers an understanding of the contextual factors that impact the success of an innovation, informing both future technology design and its implementation. Research in the Centre is mixed method, combining qualitative data that delivers deep insight with the quantitative data that caters to the needs of policymakers.

This is an indefinite position. Applicants should possess an honours degree or equivalent professional qualification, or have a proven track record of extensive and substantial experience in a series of progressively more demanding and relevant roles. Experience of working in digital health, health education, and/or a health or social care organisation is desirable.

## Main duties and responsibilities

*Note: The list below may vary to include other reasonable requests (as directed by university management) which do not change the general character of the job or the level of responsibility entailed*

### Research

1. Participate in the development of external research funding proposals within the Centre, contributing ideas, providing guidance on feasibility and the time and resources required to develop, test, and implement the proposed technology, and identifying the risks to be managed;
2. Work collaboratively with Centre staff and university research computing support colleagues to deliver projects that have a strong computational component, including writing software, configuring systems, and providing advice;
3. Identify and integrate emerging technologies (e.g., AI, machine learning) into research projects, ensuring that the Centre's work remains cutting-edge and innovative;



4. Implement and oversee DevOps practices, including continuous integration and continuous deployment (CI/CD) pipelines, to streamline software development, testing, and deployment processes;
5. Ensure that all software developed complies with data security, privacy, and regulatory requirements, particularly in sensitive fields like digital health;
6. Develop metrics and methods to assess the impact of the software and tools developed, both within the Centre and in the broader research community;
7. Integrate ethical considerations into software development, particularly in areas such as AI and machine learning, ensuring that software is developed responsibly and with consideration for its societal impact;
8. Build and maintain relationships with researchers beyond the Centre, seeking opportunities to contribute to funded research;
9. Build relationships with IT and Research Services colleagues in the research computing domain;
10. Maintain an awareness of technical developments, tools, and trends in digital health, including attending seminars and conferences, and share this knowledge with Centre staff;
11. Model and disseminate to Centre staff best practices in the development of sustainable research software;
12. Document all work using required standards, methods and tools, including prototyping tools where appropriate;
13. Contribute to writing internationally leading academic outputs in the highest quality journals.

#### Teaching

14. Support Centre PhD students in the development, testing, and implementation of software, ensuring that you take an inclusive and accessible approach;
15. Develop and deliver training and coaching to Centre staff to increase knowledge and skills at all stages of the software development cycle, expanding delivery to the wider University where appropriate.

#### Knowledge Exchange and Business & Community Engagement

16. Contribute to the development and delivery of CPD training for NHS staff in digital roles and those working in digital health companies;
17. Help build active communities amongst NHS staff in digital roles and those working in digital health companies, by contributing to seminars and networking events, encouraging the adoption of best practice, and sharing knowledge and expertise;
18. Contribute to bidding for and delivering external consultancy where software development may be required;
19. Build relationships with digital health companies, offering consultancy services where there is an alignment of needs and skills.

## General

20. Meet PDR objectives and maintain a personal development plan, utilising the Performance Development Review Scheme;
21. Liaise and engage with external professional networks within the software engineering sector, such as the national RSE network and the Software Sustainability Institute, to keep informed of the latest developments and sector initiatives;
22. Contribute to the financial sustainability of the Centre, Faculty and wider University including identifying efficiencies, optimising resources and making savings;
23. Contribute to strategic and operational planning within the Centre, Faculty and wider University;
24. Demonstrate commitment to integrating and embedding equality, diversity and inclusion into core research and teaching practices to support the EDI Strategy.
25. As a university citizen supporting key student events throughout the year such as Open days, clearing, enrolment, and Graduation. (Essential for all roles)