

**Job Title:** Research Software Engineer  
**Grade:** 7  
**Salary:** £34,804 to £40,322 per annum  
**Department:** Genetics and Genome Biology  
**Hours/Contract:** Full-time fixed term contract until 31 August 2022  
**Reference:** 2022

## Role Purpose

You will work on internationally collaborative projects in the University's "Health Data research UK (HDR-UK)" facility, within the Brookes research team. You will take a leading role in shaping the technological and research activities of the group, in line with agreed general goals, by taking forward sub-projects sometimes on your own, and also as part of inter-group teams and international consortia. This will include providing guidance and support to other members of the Brookes team and the wider HDR-UK members. You will be involved in EU-wide informatics infrastructure projects and global-scale standards development work centred on genomics data and rare disease challenges.

## Main Duties and Responsibilities

Innovate, build and deploy modular informatics solutions for sensitive health data management, patient data discovery, big data transformation, and data visualisation, via web/programmatic APIs and researcher-focussed user interfaces.

Lead on using advanced database technologies (e.g, SQL and noSQL ) and pseudonymisation/anonymisation approaches (e.g., differential privacy, homomorphic encryption) to exploit linked health and research data sets in federated settings.

Provide general informatics training and support, and contribute to biology/genetics based research by supporting other HDR-UK staff to extract/process data and establish modern bioinformatics tools/processes.

Write up project progress for dissemination amongst the research team and to the broader international community, via project reports, scientific publications, and presentation and participation in UK and international workshops and conferences.

Meet requirements for post-recruitment education in terms of continued professional development, and seek out and undertake additional training as appropriate.

## Internal and External Relationships

Supervision and advice will be provided by senior members of the Brookes bioinformatics and data science group.

Close collaboration with other bio-medical researchers, health scientists, maths and computer scientists in the University of Leicester, in particular those involved in HDR-UK activities and the Leicester Biomedical Research Centre. Including departmental and university wide seminar programs and training courses.

Liaising (by email, web-conferences, and face-to-face meetings) with collaborators at various academic and healthcare sites across the UK, researchers and rare disease networks across the EU, and standards bodies across the globe. Including dissemination of scientific results to national and international conferences.



**Planning and Organising**

Plan and prioritise own workload considering current, short term and long term responsibilities and achievability of project objectives.

Work largely with minimal supervision, and provide supervision to others, whilst maintaining professional levels of support.

Prioritise and manage their own workload, within agreed work schedules set by Principal Investigator or jointly agreed within teams.

**Qualifications, Knowledge and Experience**

**Essential**

- Computer Science or relevant biology/health related scientific degree\*
- In possession of or working towards a PhD in Bioinformatics, Computer Science or similar OR have equivalent experience\*
- Demonstration of contributions to informatics/IT projects (links to project source code is encouraged)\*
- Good background in biomedical research or data integration and management
- Software development experience using good development techniques (e.g. OOP, functional programming, formalised testing, version control)\*
- Knowledge and experience of using SQL and noSQL databases\*
- Experience of web application development technologies
- Experience in languages commonly used in field (e.g Perl, Python, R, JAVA)\*

**Desirable**

- Evidence of research activity (e.g publication record, involvement in successful grant applications)\*
- Experience in biology/health data ontologies\*
- Experience in data mining, genomics or health data research projects

**Skills, Abilities and Competencies**

**Essential**

- Proven analytical and technical/scientific problem solving
- Ability to work independently but also as part of a research team\*
- Excellent interpersonal skills (including written and verbal communication)

**Desirable**

- Potential to visit collaborator sites
- Effective planning and organisational skills





**\*Criteria to be used in shortlisting candidates for interview**

**Reason for Fixed Term Contract**

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

**Criminal Declaration**

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

**VITAL**

The University encourages all staff to live our [VITAL values](#) which are:

**Valuing People, Innovators, Together, Accountable, Leaders.**

**Equality and Diversity**

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

