Research Software Engineer – Data Innovation Research Institute - Cardiff University

Job Description

Main Function

Combines expertise in programming with a detailed understanding of research in Data Science to translate research needs into computing applications in support of the Data Innovation Research Institute (DIRI) – either by porting existing code or designing and developing new software from scratch – and carrying out supporting work, providing advice, guidance and support, leading small-scale project activities and supporting the development of research grant applications in data science. To pursue excellence in research and to inspire others to do the same.

Key Duties

Research

•To undertake the development and implementation of high-quality reusable software and techniques for high-performance computing and data analysis to support research projects within the DIRI.

•To conduct research and support research activities in data science and contribute to the overall performance of the DIRI and wider research areas where applications exist by the production of measurable outputs, including publishing in journals.

•To develop research objectives and proposals for own or joint research and contribute to research funding proposals.

•To undertake administrative tasks associated with research projects, including the planning and organisation of the project and the implementation of procedures required to ensure accurate and timely reporting.

•To prepare research ethics and research governance applications as appropriate.

•To review and synthesise existing research literature within the field.

Internal & External Interaction

•To build and create networks both internally within the related research groups, across Cardiff University through the DIRI and across GW4 through related GW4 research institutes, to influence decisions, explore future research requirements and share research ideas for the benefit of the DIRI and associated collaborative research projects.

•To engage effectively with industrial, commercial and public sector organisations, professional institutions and other academic institutions, regionally and nationally, to raise awareness and the profile both of the DIRI and related research areas in associate Schools to cultivate strategically valuable alliances and, to pursue opportunities for collaboration across a range of relevant activities. These activities are expected to contribute to the DIRI to enhance the regional and national profile.

•To participate wherever appropriate in School-related research activities.

Other

•To carry out a range of duties at a strategic and technical level involving visiting other Data Institutes, partners, attendance at events, presenting at conferences and meetings, hosting visits and giving advice on activities of value to the project and/or the University.

•To undergo personal and professional development that is appropriate to and which will enhance performance.

•To participate in DIRI administration and activities to promote the School and its work to the wider University and the outside world.

•Any other duties not included above, but consistent with the role.

Person Specification

Important: evidencing you match the job criteria

It is Cardiff University's policy to use the Essential Criteria as a key tool for shortlisting. Candidates should evidence that they meet ALL of the Essential Criteria as well as, where relevant, the Desirable. Meeting all of the Essential Criteria does not guarantee you an interview however, as there may be other applicants who have demonstrated that they meet some or all of the desirable criteria, or that they meet the criteria to a greater depth and/or relevance.

As part of the application process you are asked to provide this evidence via a Supporting Statement. Please ensure that the evidence you are providing corresponds with the numbered criteria outlined below.

Your application will be considered based on the information you provide under each criteria.

When attaching the supporting statement to your application profile, please ensure that you name it with the vacancy reference number - 7182BR\_supporting\_statement.

This is particularly important if you have applied for other jobs at Cardiff University.

Essential Criteria

Qualifications & Education

1. Postgraduate degree at PhD level (or nearing completion / submitted) in a related subject area or relevant industrial experience.

Knowledge, Skills & Experience

2. Substantial knowledge and experience of programming skills and software engineering techniques to support data-intensive research activities.

3. An established expertise and portfolio of research and/or relevant industrial experience within at least one of the following research fields:

\* Data Intensive Science

\* Software Engineering

\* Machine Learning

4. Knowledge of current status of research in specialist field.

5. Proven ability to support research teams with preparing papers resulting in publications.

6. Understanding of academic research funding and the ability to support to research teams in developing competitive applications.

Communication & Team Working

7. Proven ability in effective and persuasive communication.

8. Ability to supervise the work of others to focus team efforts and motivate individuals.

Other

9. Proven ability to demonstrate creativity, innovation and team-working within work.

Desirable Criteria

1. Relevant professional qualification(s).

2. Evidence of collaborations with industry.

3. Proven ability to work without close supervision.

4. Proven ability to adapt to the changing requirements of the Higher Education community.

5. Evidence of ability to participate in and develop both internal and external networks and utilise them to enhance the research activities of the Data Innovation Research Institute.

6. A willingness to take responsibility for academically related administration.

Additional Information

Data Innovation Research Institute

The Data Innovation Research Institute has been set up to conduct fundamental research into the aspects of managing, analysing and interpreting massive volumes of textual and numerical information. Through the cross-disciplinary nature of our research, we will engage in projects covering a wide-ranging spectrum of disciplines, including social, biological, life and engineering sciences, in order to provide research-led solutions to real-world problems.

The Research Institute has recently been awarded its first round of seedcorn funding and is supporting data-intensive research projects across a broad range of disciplines including Brain Imaging, Cancer Research, Digital Humanities, Pedestrian Modelling and Online Advertising.

More details of the Data Innovation Research Institute can be found at http://www.cardiff.ac.uk/data-innovation-research-institute