UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Software Engineer (Data Visualisation)

Consumer Data Research Centre | School of Geography

Salary: Grade 7 (£35,333 – £42,155 p.a.)

Reference: ENVGE1198

Fixed term until 30 September 2024 (due to external funding)

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Are you interested in supporting social sciences research in a growing research centre committed to using consumer data for the public good? Would you like to develop a career in the emerging field of Research Data Science?

Formed in 2014, the Consumer Data Research Centre (CDRC) at Leeds delivers insights into human behaviour using consumer and commercial datasets. The CDRC continues to grow; and is seeking a Research Software Engineer who can help us deliver impact from our data assets and projects. We are looking for someone who is data-literate, driven and creative. The role will entail building and maintaining interactive web-based data visualisations and other web applications; contributing to the CDRC's mission to develop innovative and impactful data products and outputs. You should have a good understanding of project delivery, from inception through to dissemination; have experience in dealing with a range of internal and external stakeholders; and be comfortable providing technical advice, including to non-experts.

The CDRC is located within the Leeds Institute for Data Analytics (LIDA) at the University of Leeds. We are looking for a capable and driven individual with the capability, inventiveness and initiative to work alongside our established team of data scientists and internationally recognised academics; to drive this activity to more ambitious levels.

We have recently made a significant investment in our data infrastructure and analytical/software engineer staff. Having moved to a cloud-based research platform in mid-2021, we want to further develop and embed new and improved ways of working; and support our researchers in realising the exciting opportunities our enhanced infrastructure can bring.

As a Research Software Engineer (Data Visualisation) you will provide a range of technical software development-, data visualisation- and cloud-computing-related activities that enhance research outcomes, improve impact and accelerate productivity. You will work with researchers from both across and beyond the University.


What does the role entail?

Responsible to: CDRC Co-Directors

Reports to: Lead Research Data Scientist

As a Research Software Engineer (Data Visualisation) your main duties will include:

- Working with and providing expert advice, guidance and training to members of the research community who work as academic co-investigators in the CDRC; on areas relating to data visualisation for example:
    - Development of both static and dynamic data visualisation
    - Development and maintenance of interactive web applications that visualise relevant datasets and provide targeted insights
    - The use of web development libraries such as Shiny, Dash, D3js or similar
    - Software development practices such as testing and quality assurance
    - Cloud platforms for deploying and hosting bespoke data visualisation and dashboards
    - Providing specialist advice on and assessing disclosure risk in data, applying specialist mitigation techniques for risk reduction e.g. pseudonymisation;
- Contributing to the build and development of new/derived CDRC data products, in consultation with and on direction from the CDRC's Lead Research Data Scientist;
- Acting as the CDRC's first point of contact on the launch of new data products, fielding requests for technical support and troubleshooting / providing technical advice & solutions;
- Developing and optimising new techniques, ways of working and software in a range of programming languages;
- Maintaining and developing your knowledge of subject area fundamentals and developing knowledge of new advances in data visualisation and associated technology;
- Proactively sharing new advances and models of working with other members of the team and the wider research community;
- Undertaking outreach activities to better understand the needs of and improve engagement across the co-investigator community with the CDRC;
- Planning and allocating your own time with the support of the Lead Research Data Scientist , to ensure efficient deployment of resources, planning and prioritising work in line with defined aims, objectives and priorities;


- Using your knowledge and experience to contribute to the Centre's strategic long-term plans where these relate to research data science and research software engineering;
- Building and maintaining relationships with other Research Software Engineers across the University and the wider academic community, relevant professional societies, research funding bodies and project partners.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.


What will you bring to the role?

As a Research Software Engineer (Data Visualisation) you will have:

- Expertise in data visualisation, gained through substantial experience of working in an academic, public or private sector environment;
- An interest and understanding of data relating to consumer behaviour that is generated by day-to-day digital footprints and of the research questions and challenges associated with such data;
- Experience with one or more programming languages used in Data Visualisation such as R, Python, JavaScript;
- Fluency with web development libraries for interactive data visualisation such as Shiny, Dash or D3js;
- Familiarity with at least one data visualisation and analytics platform such as Tableau or Power BI;
- An awareness and interest in the use of tools and services in cloud computing to develop software tools for research;
- The ability to rapidly learn and assimilate new skills and knowledge and turn them into practical tools and techniques;
- An understanding of the importance of Research Software Engineering good practice for developing reliable and reproducible software tools (such as version control, testing, package management, literate programming tools such as Jupyter Notebooks and Rmarkdown/ R Notebooks);
- The ability to solve problems with technologies, languages and systems that you might not have seen before;
- Strong initiative, with excellent organisational, planning and self-management skills, including the ability to work accurately and carefully, manage and complete projects to agreed deadlines and deliver high quality work;
- Effective communication and interpersonal skills, working and engaging with a diverse range of collaborators / stakeholders including the ability to explain technical problems to non-specialists.

You may also have:

- Experience of working in a quality-controlled environment working with highly confidential data e.g. ISO27001, Department of Health Data Security and Protection Toolkit;
- Experience of Machine Learning and data analytics;
- Experience of handling sensitive data for research;


- Experience of developing and or delivering teaching and training for researchers and other Data Science professionals;
- Experience of working with other programming languages such as Java, C or C++;
- Experience of working with databases.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:
Oliver Mansell, Centre Manager, CDRC
Email: O.J.Mansell@leeds.ac.uk

Additional information

Find out more about the CDRC, and its host organisation at the University of Leeds, the Leeds Institute for Data Anaytics (LIDA)

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.