Job title	Senior Research Software Engineer – 2 posts
Division	Medical Sciences
Department	Nuffield Department of Medicine
Location	Wellcome Centre Human Genetics, Henry Wellcome Building for Genomic Medicine, Old Road Campus, Roosevelt Drive, Headington Oxford, OX3 7BN
Grade and salary	Grade 9: £52,815 - £61,198 with a discretionary range to £66,857 per annum
Hours	Full time
Contract type	Fixed-term contract until 22 October 2025
Reporting to	Brian Marsden, PI, Research Informatics Alwyn Collinson, Head of Competency Centres
Vacancy reference	167373

Hybrid working arrangements	**The successful person will need to work on site for a minimum of 3 days per week**
Additional information	This role meets the eligibility requirements for a Skilled Worker Certificate of Sponsorship or a Global Talent Visa under UK Visas and Immigration legislation. Therefore, the Nuffield Department of Medicine welcomes applications from international applicants who require a visa.
About us	• University of Oxford - www.ox.ac.uk/about/organisation • Nuffield Department of Medicine (NDM) - https://www.ndm.ox.ac.uk • Wellcome Centre for Human Genetics - www.well.ox.ac.uk
What we offer	https://hr.admin.ox.ac.uk/staff-benefits • An excellent contributory pension scheme • 38 days annual leave • A comprehensive range of childcare services • Family leave schemes • Cycle loan scheme • Discounted bus travel and Season Ticket travel loans • Membership to a variety of social and sports clubs • A welcoming and diverse community

The role

This post provides an exciting opportunity to join the newly established Competency Centre for Cloud Computing and AI/ML, which is part of the University's Digital Transformation. The aim of the Competency Centre is to provide a centralised expertise on the use of public cloud computing for research applications, particularly in the context of contemporary AI/ML approaches You will provide this expertise working with researchers from all areas of research across the university who require access to cloud computing capabilities. This will require significant research software engineering experience and also hands-on experience of using public cloud infrastructure at different scales. Many of the use-cases will require the implementation of AI/ML methods and you will work closely with the OxRSE team to identify opportunities and pull together innovative software solutions. You will also lead in the development and delivery of training courses and workshops to other researchers within the University.

Responsibilities

You will:

- Develop an outstanding understanding of cloud service providers' capabilities in the context of research computing. This includes building strong working relationships with subject matter experts within these providers.
- Collaborate with research colleagues across the university to identify and establish research software projects, particularly in the context of AI/ML applications, that require cloud capabilities.
- Manage multiple projects within the portfolio of the Competency Centre, working directly on projects.
- Design and implement high quality, reliable and re-usable software that will lead to specific research outcomes or enable the translational impact of existing research.
- Maintain a catalogue of cloud research computing implementations across the University, collating and disseminating best practices.
- Maintain a catalogue of AI/ML applications in use or available from within the University, making this available to all researchers to foster collaboration and adoption of these approaches.
- Regularly write research articles at a national level, on topics in research software engineering related to implementations and delivery of Competency Centre capabilities.
- Generate income via the establishment of new collaborative research projects, grant and fellowship applications (e.g. EPSRC's RSE fellowship).
- Assist in the management of the research budget for the group and manage the budgets for individual projects.
- Work closely with other Competency Centres and pieces of work within the Digital Transformation programme to provide relevant expertise.
- Follow and promote software engineering and reproducible research best practices within the University of Oxford and the wider UK and international research community.
- Act as a source of information and advice to other members of the group. Coach other members of the group on specialist methodologies, programming languages or design patterns.
- Manage and deliver workshops and courses offered by the Competency Centre.
- Contribute to community activities such as seminars and networking events.
- Line manage staff within the Competency Centre.
- Support the development, documentation, release and user support for software developed within the Competency Centre.

- Develop own personal skills in many areas of computational research and software development via independent study and training courses.
- Participate in and support the public engagement and widening access activities of the Department and the University. This is anticipated to be not more than 2 days per year.
- Undertake mandatory training as required by the University, Division and Department. The specific list of training courses may change from time-to-time, in response to both legal and internal University requirements.

Selection criteria

Essential

- Hold a PhD/DPhil with a significant computational component, with post-qualification research experience or equivalent experience in a similar role.
- Strong track record of the use of public cloud service providers (e.g. GCP, AWS, Azure, Oracle etc.).
- Strong track record in research publications or released software projects.
- Ability to independently plan and manage a research project with a significant software engineering component.
- Significant experience with one programming language used for research (e.g. Python, C++, C, Matlab, R, Java, Javascript, Fortran, Rust) and conversant with at least one more.
- Ability to rapidly acquire fluent knowledge of new programming languages, libraries and platforms.
- Experience moving existing computational applications into a robust production offering, especially in the context of AI/ML workflows.
- Knowledge of and experience with common programming paradigms, data structures, algorithms and architectural patterns
- Knowledge of and commitment to software development best practices including issue tracking, testing, documentation, version control and continuous integration.
- Excellent communication skills, including the ability to communicate with researchers, write for publication, present research proposals and results, and represent the group at meetings
- Ability to work collaboratively and as part of a team.
- Ability to work under own initiative. Desire to keep up-to-date and learn about new developments in computational research.

Desirable

- Ability to raise research funds through project proposals and grant applications
- Experience using Unix-based operating systems and Unix system tools
- Experience of supervising staff and research students
- Experience of managing a research budget
- Experience designing and/or delivering training courses.

Pre-employment screening

Standard checks

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide: proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) we will contact the referees you have nominated. You will also be asked to complete a health

How to apply

Applications are made through our e-recruitment system and you will find all the information you need about how to apply on our Jobs website https://www.jobs.ox.ac.uk/how-to-apply.

If you would like to apply, **click on the Apply Now button** on the 'Job Details' page and follow the on-screen instructions to register as a new user or log-in if you have applied previously.

As part of your application you will be asked to provide details of two referees and indicate whether we can contact them now. You will be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants). Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

Please upload all documents **as PDF files** with your name and the document type in the filename. Please note using a long file name may prevent you from uploading your documents.

- http://www.ox.ac.uk/about_the_university/jobs/research/

All applications must be received by **midday** UK time on the closing date stated in the online advertisement

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

If you need help

Application FAQs, including technical troubleshooting advice is available at: https://staff.web.ox.ac.uk/recruitment-support-faqs. Non-technical questions about this job should be addressed to the recruiting department directly recruitment@ndm.ox.ac.uk

To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our online recruitment portal to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email. Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy. The University's Policy on Data Protection is available at: https://compliance.admin.ox.ac.uk/data-protection-policy.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for very senior research posts at **grade RSIV/D35 and clinical equivalents E62 and E82**, which with effect from 1 October 2023 will be 30 September before the 70th birthday. The justification for this is explained at: https://hr.admin.ox.ac.uk/the-ejra.

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: https://hr.admin.ox.ac.uk/the-ejra.

There is no normal or fixed age at which staff in posts at other grades have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.