UNIVERSITY OF OXFORD

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Summary

Job title	Senior Research Software Engineer
Division	University Administrative Services
Department	IT Services
Location	Central Oxford
Grade and salary	Grade 9 £52,815 - £61,198 with a discretionary range up to £66,857 per annum
Hours	Full time
Contract type	_Fixed_ -term / Secondment basis (2 years)
Reporting to	Head of Competency Centres
Vacancy reference	172324
Additional information	This recruitment is for x3 posts, available on a fixed term/secondment basis.

The role

This post provides an exciting opportunity to join the newly established Competency Centre for AI & Machine Learning Support, which is part of the University's Digital Transformation Programme. The aim of the Competency Centre is to provide centralised expertise on modern AI & ML methods and tools, to support their adoption across the University including in research, administration and teaching.

This will require significant software engineering experience and also hands-on experience implementing machine learning at all levels. You will work closely with the other Research Software Engineers at Oxford 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 modern machine learning approaches. 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 that require AI/ML approaches.

- 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.
- 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 selection criteria

- Hold a PhD/DPhil with a significant computational component, with post-qualification experience. Candidates without a PhD/DPhil but with substantial experience of software development (e.g. MSc and 5 years industry experience in software development) will also be considered.
- Strong track record in both publications and released software projects.
- Demonstrated ability to design, implement and deploy a complex software engineering project while applying software engineering best practices and using common software architecture paradigms (e.g., Object-orientated programming).
- Experience working on and contributing significantly to a software project team, including mentoring less experienced developers (e.g., RSEs or research staff).
- Demonstrated ability to rapidly acquire fluent knowledge of new programming languages, libraries and platforms.

- Excellent communication skills, including the ability to communicate with researchers, write for publication, present research proposals and results, and represent the group at meetings.

- Enthusiasm for promoting software engineering best practices in academia and experience implementing these practices in collaborative projects with researchers.

- 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.

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Desirable selection criteria

- 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.

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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 declaration so that you can tell us about any health conditions or disabilities for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at:
https://www.jobs.ox.ac.uk/pre-employment-checks

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information, please visit www.ox.ac.uk/about/organisation.

IT SERVICES

The role of IT Services is to ensure that the University of Oxford has the robust, reliable, and high-performing IT facilities it requires to support the distinctive needs of those engaged in teaching, learning, research, administration and strategic planning.

IT Services, headed by the University's Chief Information Officer, has around 320 staff across 2 buildings, an annual revenue budget of £22m and an IT capital plan of £60M across three years. The department is divided into groups covering infrastructure services, projects and programmes, software development, and customer services. Our aim is to attract and retain a workforce that is diverse, skilled, creative, and committed. We encourage flexibility in how we work, and welcome part time and flexible working arrangements. As a department we encourage a culture where we respect each other, are accountable for what we do, where we collaborate, give and receive constructive feedback and challenge one another. IT Services is a place where we value and recognise both our own and the contributions of others. By doing so we want to create a great culture to work in and a place where we all feel we belong.

For more information please visit: http://www.it.ox.ac.uk/

University Administration and Services (UAS)

University Administration and Services (UAS) is the collective term for the professional services departments of the University. UAS comprises structures to:

- support the University's core academic purposes of teaching, learning and research;
- ensure the University can meet the requirements of government, funding bodies and other external agencies; and
- facilitate the attainment of the objectives set out in the University's Strategic Plan.

The offices of the UAS sections are spread across the city centre, with the main University Offices located in Wellington Square.

For more information please visit: http://www.admin.ox.ac.uk

How to apply

Applications are made through our online recruitment portal. Information about how to apply is available on our Jobs website https://www.jobs.ox.ac.uk/how-to-apply.

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

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)

Please upload all documents **as PDF files** with your name and the document type in the filename.

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 hr@it.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** of 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.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See https://hr.admin.ox.ac.uk/staff-benefits

University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and https://www.sport.ox.ac.uk/.

Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See https://welcome.ox.ac.uk/

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme

Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to the Work+Family Space, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See https://hr.admin.ox.ac.uk/my-family-care

The University has excellent childcare services, including five University nurseries as well as University-supported places at many other private nurseries.

For full details, including how to apply and the costs, see https://childcare.admin.ox.ac.uk/

Disabled staff

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University's Staff Disability Advisor, see https://edu.admin.ox.ac.uk/disability-support

Staff networks

The University has a number of staff networks including the Oxford Research Staff Society, BME staff network, LGBT+ staff network and a disabled staff network. You can find more information at https://edu.admin.ox.ac.uk/networks

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is an organisation run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.

Oxford Research Staff Society (OxRSS)

A society run by and for Oxford University research staff. It offers researchers a range of social and professional networking opportunities. Membership is free, and all researchers employed by Oxford University are welcome to join. Subscribe at researchstaff-subscribe@maillist.ox.ac.uk to join the mailing list to find out about upcoming events and other information for researchers, or contact the committee on committee@oxrss.ox.ac.uk. For more information, see www.ox.ac.uk/oxrss, Twitter @ResStaffOxford, and Facebook www.facebook.com/oxrss.