



# Digital Scholarship @Oxford

Radcliffe Humanities Building, Woodstock Road, Oxford, OX2 6GG  
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## Job Description

### Summary

<b>Job title</b>	Senior Research Software Engineer (Artificial Intelligence & Machine Learning)
<b>Division</b>	Humanities Division
<b>Department</b>	Humanities Divisional Office (Digital Scholarship at Oxford)
<b>Location</b>	Radcliffe Humanities Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG and Centre for Digital Scholarship, Weston Library, Broad Street, Oxford, OX1 3BG
<b>Grade and salary</b>	Grade 8: £48,235 - £57,255 per annum
<b>Hours</b>	Full time
<b>Contract type</b>	Fixed-term (until 31 March 2026)
<b>Reporting to</b>	Dr Andrew Cusworth
<b>Vacancy reference</b>	174201
<b>Additional information</b>	<p>Whilst the role is a grade 8 position, we would be willing to consider candidates with potential but less experience who are seeking a development opportunity, for which an initial appointment would be at Grade 7 (£38,674 - £46,913 per annum) with the responsibilities adjusted accordingly. This would be discussed with applicants at interview/appointment where appropriate.</p> <p>The closing date for applications is 12 noon on Friday 29 November 2024.</p> <p>Shortlisting is expected to take place week commencing 2 November and interviews held the week beginning 9 November.</p>

### Overview of the role

The role of **Senior Research Software Engineer (Artificial Intelligence and Machine Learning)** is being created within the Digital Scholarship at Oxford (DiSc) team of research software engineers (RSEs). With specialisms in the fields of artificial intelligence and machine learning and working within a growing team of RSEs, the holder of this role will



support digital scholarship within the University, participate in the wider research software development community, and engage with researchers to help to realise the potential of their research and the University's collections through generating innovative and impactful digital outputs.

The post-holder will have opportunities to engage with the University's wider digital scholarship community and to contribute to a range of activities and initiatives, such as the Research Software Development Network, the Digital Humanities @Oxford Summer School and the MSc in Digital Scholarship.

## About Digital Scholarship @ Oxford

Digital Scholarship at Oxford (DiSc) was launched in 2021 to transform the University's capacity to support the cutting edge of collaborative researcher-led digital scholarship. The initiative is a co-led Humanities Division and Bodleian Libraries partnership supported by the University's Strategic Research Fund.

DiSc aims to develop five aspects of Digital Scholarship at Oxford:

1. **Capacity.** Building capacity for research with a demonstrable growth in researchers and academic staff making increased use of digital methods to enhance their research: ask new research questions; produce research outputs; and adapt to, adopt, and innovate digital tools and approaches;
2. **Collections.** Realising the research value of collections using digital tools and approaches, with increasing digital use for research of our unique resources in Bodleian, GLAM, and other collections across the institution;
3. **Community.** Building communities around approaches, software, and tools, with an emphasis on training, developing and sharing software tools, engaging academic research & professional services colleagues in collaboration with other investments, and developing the digital scholarship community more generally;
4. **Financial sustainability.** Supporting a culture shift to collaborative research models with the aim of identifying and supporting substantial grant capture opportunities through interdisciplinary and cross-divisional research and achieving financial sustainability;
5. **Sector Engagement.** Engaging with national and international communities, policies, and initiatives, helping to shape the narrative of the field and to attract investment in both the field in general, and in the University's provision and activity in the area.

DiSc's professional services team is led by its Programme Manager, Dr Andrew Cusworth and the comprises a Programme Officer, Katharine Dickinson, and a small team of specialised Research Software Engineers (including specialisms in Semantic Technologies, Visualisation, AI and Machine Learning, Data and Infrastructure, and Text). The initiative is directed by its Academic Director, Professor David De Roure, and governed by a steering committee and its funding body, the University's Strategic Research Fund. The post holder will work with the DiSc Team, and will regularly liaise with members of staff across the Humanities Division and Bodleian Libraries, as well as with researchers and other teams of Research Software Engineers across the University.

## Responsibilities

- Collaborate with research colleagues across the university to identifying, scope, and establish new research software projects, and add to the DiSc portfolio of collaborations and projects.

- Generate research income via the establishment of new collaborative research projects, grant and fellowship applications, including presenting your own ideas to senior DiSc group members and potential collaborators.
- Manage multiple projects within the DiSc portfolio, working directly on projects and/or supervising junior colleagues or external developers in their project work.
- Assist in the management of the research budget for the group and manage the budgets for individual projects.
- Manage own research support and administrative activities, coordinating multiple work streams and balancing project demands to meet deadlines.
- Design and implement high quality, reliable and maintainable software that will lead to specific research outcomes or enable the translational impact of existing research.
- Provide documentation and user support for software developed within DiSc.
- 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 on digital methods that may include algorithm development, data analysis, model evaluation and deployment, pipeline building, natural language processing, or computer vision.
- Act as a source of advice to other members of the team. Coach other members of the team on specialist methodologies, programming languages or design patterns.
- Work collaboratively with other members of the team across a range of projects, drawing on and applying different fields of expertise to enhance research projects.
- Assist with the development and delivery of training materials and workshops on digital methods for DiSc, including contributing to modules within the MSc in Digital Scholarship.
- Contribute to community activities such as seminars and networking events, and actively contribute to the community of researchers and RSEs in related fields.
- Regularly author research articles at a national level on topics in research software engineering and/or related to specific projects within the DiSc portfolio, contribute to the preparation of reports and journal articles, and present posters at events where appropriate.
- Represent DiSc at external meetings/seminars, either with other members of the group or alone.
- Develop personal skills in many areas of digital scholarship and software development via independent study and training courses.
- Any other duties appropriate with the role.

## Selection criteria

### *Essential*

- Hold a PhD/DPhil with a significant software engineering component, with post-qualification research and software engineering experience. Candidates without a PhD/DPhil but with substantial experience of software development in a research environment (e.g. Research MSc and 5 years industry experience in software development) will also be considered.

- 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).
- Demonstrable experience in working with Artificial Intelligence and/or Machine Learning, and of least one of the following: model evaluation and deployment (e.g. TensorFlow), NLP, computer vision.
- Experience working in and contributing significantly to a software project team, including mentoring less experienced developers (e.g. junior RSEs or research staff).
- Substantial experience with at least one programming language used for research (e.g. Python, R, JavaScript) and conversant with at least one more.
- 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, e.g. Open-Source environment, version control, source control and dependency management, issue tracking, automated testing, package management, analysis tools etc.
- Ability to engage with partners from a variety of backgrounds, particularly from the humanities, including remotely/internationally.
- Strong creative, analytical, and problem-solving skills; proven ability to work with precision and accuracy.
- Ability to contribute ideas for new research projects and research income generation.
- Demonstrable ability to organise and prioritise multiple projects efficiently whilst delivering results to the required standard and to an agreed schedule.
- Excellent written and verbal communication skills, including the ability to write for publication and present research proposals and results

### *Desirable*

- Demonstrated ability to raise research funds.
- Experience of managing a research budget.
- Experience designing and/or delivering software training courses.
- Experience of data cleaning, transformation, integration, and synthesis from a variety of sources, particularly with data for cultural heritage or digital humanities applications.
- Experience of working within a digital archive, digital library, institutional repository, or a digital humanities project.
- An understanding of the research lifecycle, including the importance of data management, reproducibility and reusability.
- Experience designing and/or delivering online and in-person 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 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](http://www.ox.ac.uk/about/organisation).

## Humanities Division

The Humanities Division is one of four academic divisions in the University of Oxford, each with a full-time Head and elected Board. The Humanities Division is distinctive for its depth and breadth. Its activity spans nine faculties, one School and two independent research institutes: the faculties of Classics; English; History; Linguistics, Philology and Phonetics; Medieval and Modern Languages; Music; Asian & Middle Eastern Studies; Philosophy; and Theology and Religion; the Ruskin School of Art; the Rothermere American Institute and the Voltaire Foundation. Interdisciplinary links within and beyond the University are strong, extending to the social sciences, medical sciences and the natural and physical sciences.

One of the largest centres for Humanities internationally, with over 800 members of academic and research staff, the Division offers world-class research and teaching, backed by the superb resources of the University's libraries and museums, including the famous Bodleian Library, with its 11 million volumes and priceless early book and manuscript collections, the Pitt Rivers Museum, the History of Science Museum and the Ashmolean Museum of Art and Archaeology. Such historic resources are linked to cutting-edge agendas in research and teaching, with an increasing emphasis on interdisciplinary study and digital Humanities.

The outstanding quality of Humanities research at Oxford is recognised globally. This reputation for research excellence contributes to the University coming top of several international rankings for Arts and Humanities, including the US News and World Report rankings and the QS World University Rankings by Subject. The Division's faculties are among the largest in the world, enabling Oxford to offer an education in Arts and Humanities unparalleled in its range of subjects, from music and fine art to ancient and modern languages.

The Division has responsibility for over 4,000 undergraduates (a third of the University's total undergraduate population), and for over 2,000 postgraduate students (over 1,100 doctoral students and some 900 Master's students). Twenty-nine undergraduate courses are offered in Humanities subjects, seven of which are offered jointly with the other academic divisions. The Doctoral and Master's programmes offered are distributed across all of the Division's faculties, along with a suite of Master's courses offered with the Social Sciences Division and a growing portfolio of Master's courses that draw from across the Humanities. The Division is part of the Open-Oxford Cambridge AHRC Doctoral Training Partnership. The Humanities Division has embarked on a major building project on the Radcliffe Observatory Quarter, supported by a £185 million gift to create the Stephen A. Schwarzman Centre for the Humanities.

For more information please visit: <http://www.humanities.ox.ac.uk/>

## The Schwarzman Centre

The teaching and study of the humanities is so important because it tells the story of what it means to be human - who we are, where we came from, and how our culture, literature and language have developed over time. With over 700 academic staff and 6,000 students, Oxford Humanities leads the world in the breadth and depth of subject coverage and the quality of teaching and research. But don't just take our word for it - the latest QS World University Rankings placed us at number one.

The new Humanities building will take our teaching, research and public engagement to new heights. For the first time in the University's history, seven humanities faculties will be housed together along with a new library. These disciplines are currently scattered in buildings across Oxford but they will be united in a new building designed to encourage cross-disciplinary study and research. Academics in the building will work together to tackle some of the most pressing questions of our time. As well as a new Institute for Ethics in Artificial Intelligence, they will consider the environment and how society rebuilds after the pandemic.

Crucially, the building will be open to the public, and we aim to bring research and performance in the arts and humanities to new audiences. There will be dedicated space for schoolchildren to visit and engage with Oxford's researchers. There will be exhibition space and three new performance venues for music, theatre, drama, dance, lectures and more. A new Cultural Programme will bring the world's leading performers and artists to Oxford. Our venues will also be open to regional cultural organisations, with whom Oxford researchers will strengthen partnerships. We cannot wait to welcome you to the first performance in 2025!



## 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.

To return to the online application at any stage, please go to: [www.recruit.ox.ac.uk](http://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 70<sup>th</sup> 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](http://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](http://www.newcomers.ox.ac.uk).