Summary

Job title	Senior Developer
Division	Medical Sciences
Department	Nuffield Department of Primary Care Health Sciences
Location	Radcliffe Primary Care Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG
Grade and salary	Grade 8: £48,235 - £57,255 per annum with discretionary range to: £62,407 per annum A market supplement may be payable up to a total maximum salary of £65,465.68
Hours	Full time (part time working may be considered)
Contract type	Fixed-term until 31 March 2028 in the first instance
Reporting to	Head of Engineering
Vacancy reference	BZ25020 - 179238

The Bennett Institute

We are the Bennett Institute for Applied Data Science, at the University of Oxford, led by Prof. Ben Goldacre. We are seeking software developers to join us in supporting and expanding OpenSAFELY, a revolutionary open source platform for secure clinical research. Conceived at the start of the COVID19 crisis, this has been used extensively to produce ground-breaking research using an unprecedented corpus of patient data which is not available anywhere else. Our research has been published in high profile journals such as Nature, and won praise from media outlets like The Economist, and patient advocacy groups like medConfidential.

Since 2020, the platform has been developed and supported by a small team. We have now secured funding to secure and accelerate the development of OpenSAFELY for the foreseeable future as a core part of national health data infrastructure: the NHS England OpenSAFELY Service.

About us

We are a small, productive team of software developers, academics, and clinicians, all pooling skills and knowledge to build platforms and tools as well as traditional academic papers.

Our work is influential: it features in high-profile mainstream media stories, drives the agenda at parliamentary committees, was regularly referenced in SAGE meetings during the pandemic, and is published in a wide range of very high impact journals. We are currently focussing on growing the OpenSAFELY platform, in both health and non-health fields (including data-driven research about education in schools). We have achieved public support for working with sensitive data because OpenSAFELY is an innovative, open source research environment which places patient privacy first. Our platform is productive: it has produced more high-impact academic outputs than any other similar Trusted Research Environment in the country. You can read a summary of press coverage on the OpenSAFELY website. We don't just produce papers and tools; we advocate for better use of software, including our campaign for all research to share their code.

About OpenSAFELY

Our vision is to make it easy and enjoyable to do secure, reproducible clinical analytics, and to radically democratise research access to the globally-important datasets hosted within the NHS. We are now looking to improve and expand the platform, expanding high-impact research that processes confidential data for years to come, within and outside the NHS.

The framework has a distributed architecture, based on a secure, docker-based execution environment and scheduler implemented using Python, Django, Docker, and SQLite. This component is deployed within the existing, secure infrastructures of the original data processors such as TPP and EMIS. Users develop against dummy data in a local sandbox using our powerful, domain-specific ETL language, ehrQL (explanatory blog post), and make requests for execution against real data via a public, auditable task queue (code). Authentication and authorisation is currently delegated to our GitHub organisation, where all research code repositories must be stored and tested. We also develop and maintain an innovative clinical coding authoring and validation suite called OpenCodelists. In the future, we plan to develop further standalone tools to improve the rigour and reproducibility of clinical research, for example around privacy, and "synthetic" data. The final core element in our roadmap is community development: we aim to create a vibrant open science network around the framework.

The Role

We are seeking an experienced Software Developer with an interest in web application development or infrastructure engineering. Your role will revolve around designing, implementing and maintaining essential features, data structures and protocols that power the OpenSAFELY platform. You will work with the rest of your team to build the software system and improve user experience by writing documentation and tooling.

Responsibilities

- Design and implement significant changes to software in collaboration with the rest of your team.
- Design and build thoughtful user interfaces.
- Contribute to the operation and support in production of the components that your team is responsible for.
- Investigate, integrate and deploy new tools and technologies as part of our system.
- Manage own work and administrative activities. This involves small scale project management, to coordinate multiple aspects of work to meet deadlines, and working flexibly to address emerging priorities.
- Identify opportunities for improvement of systems and processes and contribute suggestions for change.
- Work closely with all researchers and other group members to optimise collaboration and knowledge sharing, and share your expertise with other members of your team to advance our mission of developing impactful open tools.
- Provide support, guidance, and mentorship to colleagues from non-engineering backgrounds.
- Maintain effective communication channels with end users and staff regarding system changes, queries, or issues.
- Collaborate on written outputs, such as blog posts, documentation, and policy and research papers.

Selection criteria

Essential selection criteria

We are looking for candidates who can demonstrate excellent coding skills and practical knowledge of a wide variety of collaboration tools and software delivery techniques. They should show strong user empathy and enjoy helping others to be productive.

We will be considering the following characteristics:

- Be self-motivated and capable of combining strategic thinking with hands-on engineering skills, and take responsibility for handling complex, existing apps: this means new features, maintenance and devops.
- A demonstrable track record of engaging with the cultural and operational changes required to grow a product suite.
- Experience with Python and relational databases; and at least one of the following:
  - Expertise in building user interfaces with HTML, CSS and JavaScript.
  - Strong infrastructure engineering and operations skills, including Docker.
  - Expert-level Python skills.
- Significant experience with commonly-used collaboration tools and practices such as distributed version control, code review and continuous integration.

- Strong interpersonal skills and able to contribute to a supportive, helpful culture and work very closely with end users.
- Enjoy working independently, in a small team, with a light management touch.
- Show enthusiasm for tackling challenges in medical informatics.
- Happy switching between quite different domains and have a natural curiosity about topics outside their normal area of expertise – we take joint responsibility for all our outputs and activities.
- Embrace a "leave it better than you found it" mindset, actively improving code even if you didn't originally write it.

Desirable selection criteria

- Statistical or data processing experience, academic or commercial, and knowledge of data science tools and frameworks.
- User interface design skills.

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. If you have previously worked for the University we will also verify key information such as your dates of employment and reason for leaving your previous role with the department/unit where you worked. 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.

Nuffield Department of Primary Care Health Sciences

A top ranked centre for academic primary care in the UK, we lead world-class research and training to rethink the way healthcare is delivered in general practice and other primary care settings, both across the UK and globally. Integrating evidence and innovation, our main research focus is on enhancing prevention, early diagnosis and management of common illness.

Our research is led by internationall-renowned scientists; many of whom are practising GPs and primary care clinicians. Many others are psychologists, epidemiologists, sociologists, and public health academics. We cover the broad range of issues that you might expect to address in the community, including cardiovascular and metabolic disease, infectious diseases and childhood illness, diet, smoking and cancer. We also focus on understanding and improving the experiences of patients, rigorously evaluating the effectiveness of treatments and diagnostics, utilising big data, developing digital health interventions and working internationally. We have methodological expertise in novel clinical trial design and implementation, clinical decision-making and diagnostics, clinical epidemiology, medical statistics, behavioural science, modelling, qualitative research and the wider application of social science theory and methods to address practical and theoretical challenges in health and care settings.

The department was established in October 1998 (as the Department of Primary Health Care) with the appointment of a foundation chair in general practice, and was made a free-standing department in 2011 with the first Oxford statutory chair in primary care. We provide a strong multi-disciplinary training environment, a full programme of academic support and good IT facilities. Our ability to collaborate with other epidemiological and community based research groups across the University and with GP surgeries locally and nationally enables us to utilise a broad range of relevant expertise into our teaching and research.

Our main research themes coalesce around cardiovascular disease and diabetes, infection, cancer, health behaviours, and digital health, with several cross-cutting themes, including disease prevention, early diagnosis, and patient self-management, big data and new clinical themes. We place inclusivity and diversity at the forefront of our approach to research from design and conduct through to the dissemination of our findings.

The department has exceptional infrastructure, including the long-established Primary Care Clinical Trials Unit, one of the most expert CTU's for trials conducted in community settings. We also host the Oxford Institute for Digital Health; the Bennett Institute for Applied Data Science; the Oxford Centre for Evidence-Based Medicine; the Interdisciplinary Research in Health Sciences research group (which uses both quantitative and qualitative methods to examine the human, organisational and societal issues relating to the delivery of healthcare and the improvement of health services); and the Medical Sociology and Health Experiences Research Group (MS HERG), which is a centre of excellence in qualitative research methods and conducts studies of experiences of health and illness, digital health and organisation and delivery of care. The department is a founding member of the National Institute for Health Care Research (NIHR) School of Primary Care Research, houses both the NIHR Applied Research Collaboration (ARC), Oxford Thames Valley and the NIHR MedTech and In Vitro Diagnostics Co-operative (MIC), and leads several themes of the Oxford University Hospital and Oxford Health BRCs. In terms of methodologies, as well as our critical mass of social scientists and computer/information scientists, the department supports one of the largest groups of medical statisticians in medical sciences and a growing team of health economists.

Clinicians in our department teach a number of threads in the undergraduate course in Medicine and we place students in GP practices as part of their training. We run a very successful, well-established MSc programme in Evidence Based Health Care, and a new MSc in Translational Health Science with the Department of Continuing Education. In 2023 we accepted the first students to a new MSc in Applied Digital Health and to an MSc in Global Health Care Leadership run in partnership with the Said Business School.

The University of Oxford is a member of the Athena SWAN Charter to promote women in Science, Engineering, Technology and Medicine and holds an Athena SWAN Silver award at institutional level. The Nuffield Department of Primary Care Health Sciences holds a departmental Gold Athena SWAN award (awarded in March 2023 and the first Gold in the University of Oxford) to recognise advancement of gender equality: representation, progression and success for all.

The Nuffield Department of Primary Care Health Sciences currently holds a Gold National Union of Students (NUS) Green Impact award. Green Impact is an environmental accreditation scheme championed by the National Union of Students and is designed to support environmentally and socially sustainable practice. The department supports sustainability initiatives in the following areas: supporting and leading change; energy; water; materials and waste; sustainable travel; biodiversity and nature; and food.

In order to create a positive culture, the department has created a set of values that we all aspire to demonstrate in the way we work and behave. These can be viewed here

Our staff are mostly located in the superbly renovated Grade II listed Radcliffe Primary Care Building on the Radcliffe Observatory Quarter (ROQ), the University's most prestigious development site for a generation, and close to the city centre (see http://www.ox.ac.uk/roq/ for more information). Some staff are located nearby in the Gibson Building at the ROQ and some, including clinical teachers are based in Eagle House nearby off Walton Street.

Car parking is very restricted at both sites with only a small percentage of staff being granted an annual parking permit and priority being given to those with access needs. Bus Pass, Train Pass, bicycle loans and Season Ticket Loan Schemes are all in operation for staff.

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

Medical Sciences Division

The Medical Sciences Division is an internationally recognised centre of excellence for biomedical and clinical research and teaching. We are the largest academic division in the University of Oxford.

World-leading programmes, housed in state-of-the-art facilities cover the full range of scientific endeavour from the molecule to the population. With our NHS partners we also foster the highest possible standards in patient care.

For more information please visit: http://www.medsci.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)

If you are applying for a research post and you have had periods of working part-time, please indicate this on your CV or in your supporting statement. This will ensure that any outputs such as publications are fairly judged when considered alongside the expected outputs of full-time workers.

Where posts are advertised full-time, we **may** be able to consider part-time working or job share arrangements depending on the requirements of the role. If you want to work part-time and this option is not expressly stated in the advert or job information, please email recruitment@phc.ox.ac.uk to enquire whether the role you are applying for might be available on a part-time basis.

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

Please do not upload full published papers or certificates as part of your supporting documents.

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

If you currently work for the University please note that:

- as part of the referencing process, we will contact your current department to confirm basic employment details including reason for leaving
- although employees may hold multiple part-time posts, they may not hold more than the equivalent of a full time post. If you are offered this post, and accepting it would take you over the equivalent of full-time hours, you will be expected to resign from, or reduce hours in, your other posts(s) before starting work in the new post.

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@phc.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, flexible working options, travel discounts including salary sacrifice schemes for bicycles and electric cars and other discounts. Staff can access a huge range of personal and professional development opportunities. See https://hr.admin.ox.ac.uk/staff-benefits

Employee Assistance Programme

As part of our wellbeing offering staff get free access to Health Assured, a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more https://staff.admin.ox.ac.uk/health-assured-eap

University Club and sports facilities

Membership of the University Club is free for University staff. It 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 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

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see https://hr.web.ox.ac.uk/family-leave). Our Childcare Services team provides guidance and support on childcare provision, and offers a range of high-quality childcare options at affordable prices for staff. In addition to 5 University nurseries, we partner with a number of local providers to offer in excess of 450 full time nursery places to our staff. Eligible parents are able to pay for childcare through salary sacrifice, further reducing costs. See https://childcare.admin.ox.ac.uk/.

Supporting disability and health-related issues (inc menopause)

We are committed to supporting members of staff with disabilities or long-term health conditions, including those experiencing negative effects of menopause. Information about the University's Staff Disability Advisor, is at https://edu.admin.ox.ac.uk/disability-support. For information about how we support those going through menopause see https://hr.admin.ox.ac.uk/menopause-guidance

Staff networks

The University has a number of staff networks including for research staff, BME staff, LGBT+ staff, disabled staff network and those going through menopause. Find out more at https://edu.admin.ox.ac.uk/networks

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is 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.

Research staff

The Researcher Hub supports all researchers on fixed-term contracts. They aim to help you settle in comfortably, make connections, grow as a person, extend your research expertise and approach your next career step with confidence. Find out more https://www.ox.ac.uk/research/support-researchers/researcher-hub

Oxford's Research Staff Society is a collective voice for our researchers. They also organise social and professional networking activities for researchers. Find out more https://www.ox.ac.uk/research/support-researchers/connecting-other-researchers/oxford-research-staff-society