

Job title	Winton Centre Web Developer
Grade	7
Salary range	£29,799 - £38,833
Staff Group	Academic-Related
Department / Institution	Winton Centre for Risk and Evidence Communication

Role-specific information

Role Summary

The University of Cambridge consistently ranks amongst the top ten Higher Education Institutions worldwide. The Mathematics Departments are particularly well regarded and were chosen by the Winton Charitable Foundation and the David and Claudia Harding Foundation to establish a Centre for Risk and Evidence Communication in order to:

- Develop methods for transparent and balanced communication of quantitative evidence
- Critically appraise the ways quantitative evidence is communicated to the public, both in the UK and internationally
- Serve as a vital resource for those responsible for public communication
- Be a prominent campaigner for best practice, through collaborations, education and media engagement and training

The role holder will report to the Technical Lead, Mike Pearson, and will be under the management of the Centre's Executive Director, Alexandra Freeman. The role holder will work closely both with investigators in the Centre and external collaborators. A number of short and medium term projects are in development simultaneously, alongside daily work reacting to news stories and advising journalists and academics on visualisation of their data. The role-holder will be expected to manage their time appropriately between different projects and contribute to the Centre's day-to-day work.

Further details of the proposed programme for the Centre can be found at the end of this document.

The Position

The primary purpose of this role is to support the strategic aims of the Winton Centre for Risk and Evidence Communication in the area of web development.

There is a pressing need to improve formal and informal education and evidence communication for those making important decisions. Part of the Centre's activity in this sphere is the provision of adaptable software components that can be integrated into a range of externally-hosted websites, for example for displaying icon arrays and expected frequency trees, as well as tailoring this content for specific tasks, such as making a new, more patient-friendly front end for the NHS Predict site for women considering breast cancer treatment options.

Much of the software development will use open source software and the role-holder will be responsible for ensuring feedback of improvements and modifications to the international development teams for these pieces of software.

Responsibilities

The holder will develop and maintain systems to support statisticians and psychologists with the tools they need to improve the communication of risk within a Unix/MacOSX, open source development environment.

This will involve

- * developing new server-side and client-side tools where necessary
- * providing technical support to researchers;
- * validation and testing
- * working with IT Officers in the Centre for Mathematics at the University of Cambridge to resolve technical and IT resource issues and helping to set up system administration procedures appropriate to the project.

The requirements for this role are:

Essential:

- * A good honours degree in a numerate discipline
- * Excellent web development skills
- * A good understanding of functional programming

Desirable:

- * Exposure to software test methodologies.
- * Full stack experience
- * Some devops experience
- * Familiarity with web development for mobile devices
- * Some data visualisation experience
- * A statistical language such as R, SPSS, Stata
- * A functional language such as clojure, elm, ocaml
- * A scripting language such as python, perl, bash, clojure
- * java or C#
- * An understanding of modern javascript and libraries such as React, Angular, D3

Terms and Conditions

Location	The Department of Pure Mathematics and Mathematical Statistics (DPMMS), Wilberforce Road, Cambridge, CB3 0WB
Working pattern	Full time
Hours of work	There are no formal conditions relating to hours and times of work but you are expected to work such hours and days as are reasonably necessary for the proper performance of your duties. Your times of work should be agreed between you and your head of institution.

Length of appointment	The post-holder will be appointed for 6 months in the first instance to work on projects currently in development. This may be extended depending on the needs of the Centre beyond this point.
Limited funding	The Centre is funded by a donation from the Winton Charitable Foundation and the David and Claudia Harding Foundation until 30 th September 2021.
Probation period	3 months
Annual leave	Full time employees are entitled to annual paid leave of 6.6 weeks (or 33 days), plus public holidays.
Pension eligibility	Universities Superannuation Scheme (USS) Pension scheme details, including information about the legal requirement for the University to automatically enrol its eligible jobholders into a qualifying workplace pension scheme from 1 March 2013, is available at: http://www.pensions.admin.cam.ac.uk/ .
Retirement age	The University does not operate a retirement age for unestablished academic-related staff

Screening Check Requirements

We have a legal responsibility to ensure that you have the right to work in the UK before you can start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it. If you need further information, you may find the Right to Work page within the 'Applying for a job' section of the University's Job Opportunities pages helpful (please see <http://www.jobs.cam.ac.uk/right/have/>).

Application Process

To apply online for this vacancy, please go to the University Jobs Opportunities pages at <http://www.jobs.cam.ac.uk/job/16583> and click on the 'Apply' button. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form. With your application, please upload a full curriculum vitae and covering letter, including links to sites as appropriate. The contact details of two professional referees should also be included, at least one of whom should be contactable if you are invited to attend an interview. Please ensure that your referees are aware that they will be contacted by the Mathematics HR Office Administrator to request that they upload a reference for you to our Web Recruitment System.

The closing date for applications is 19 March 2018. If you have any questions about this vacancy or the application process, please contact Mike Pearson (gmp26@cam.ac.uk)

Interviews are expected to be conducted in the week beginning 26 March 2018.

General Information

The University of Cambridge

The University of Cambridge is one of the world's oldest and most successful Universities, with an outstanding reputation for academic achievement and research. It was ranked first in the 2011 QS World University Rankings and its graduates have won more Nobel Prizes than any other university in the world. The University comprises more than 150 departments, faculties, schools and other institutions, plus a central administration and 31 independent and autonomous colleges.

The University and the Colleges are linked in a complex historical relationship. The Colleges are self-governing, separate legal entities which appoint their own staff. They admit students, provide student accommodation and deliver small group teaching (supervisions). The University awards degrees and its faculties and departments provide lectures and seminars for students, determine the syllabi for teaching and conduct research.

There is much more information about the University at <http://www.cam.ac.uk/univ/works/index.html> which we hope you will find helpful.

Department of Pure Mathematics and Mathematical Statistics (DPMMS)

The Department of Pure Mathematics and Mathematical Statistics (DPMMS) is one of the two mathematics departments in Cambridge, the other being the Department of Applied Mathematics and Theoretical Physics. The Statistical Laboratory is a sub-department of DPMMS. Together with the Isaac Newton Institute, the two departments occupy the Centre for Mathematical Sciences (CMS). The CMS is a beautiful development west of the city centre and close to other Science Departments. The accommodation is of the highest quality and was designed by mathematicians and architects to facilitate the study of mathematics. It comprises offices, meeting rooms, seminar/lecture rooms, and common rooms, and is equipped with an excellent computer network. It may be viewed at <https://www.dpmms.cam.ac.uk/about/photos/>

DPMMS comprises at present about 40 tenured staff, more than 70 post-doctoral members of the Department and more than 90 PhD students. DPMMS and DAMTP gained excellent quality profiles in the 2014 Research Excellence Framework. See <http://www.ref.ac.uk>

The Faculty holds an Athena SWAN Bronze award for promoting women in Science, Technology, Engineering and Medicine and supports the aims of the Charter Scheme and the LMS Good Practice Scheme in seeking to advance women's careers in the mathematical sciences. New staff are mentored and all staff are offered advice on career and promotion opportunities. The research environment in DPMMS is very lively. Many regular seminar series meet weekly during term, and there is a steady stream of short-and long-term visitors from around the world.

What the University can offer you

One of our core values at the University of Cambridge is to recognise and reward our staff as our greatest asset. We realise that it's our people who have built our outstanding reputation and that we will only maintain our leading position in the academic world by continuing to attract and retain talented and motivated people. If you choose to come and work with us, you will find that we offer:

- **Excellent benefits** – You will be eligible for a wide range of competitive benefits and services, including numerous discounts on shopping, health care, financial services and public transport. We also offer defined benefits pension schemes and tax-efficient bicycle, car lease and charity-giving schemes.

We will help you balance your home and work life by providing you with generous annual leave entitlement and procedures for requesting a career break or flexible working arrangements if you need them. You will also have access to a range of well-being support services, including in-house Occupational Health and Counselling services. If you have childcare responsibilities, you may also

benefit from the enhanced maternity/adoption pay, two nurseries and a holiday play scheme that we provide.

We are keen to welcome new employees from other parts of the UK and other countries to Cambridge. If you will be relocating to Cambridge on a centrally funded appointment of two years or more, you may be eligible for our relocation expenses scheme. The University Accommodation Service (<http://www.accommodation.cam.ac.uk/>) will also be available to help you find suitable rented accommodation and to provide advice on renting arrangements and local facilities, if required. In addition, certain academic and academic-related appointments are eligible for the Shared Equity Scheme which offers financial assistance with the purchase of living accommodation.

- **A welcoming and inclusive environment** - We will help you settle into your new role and working environment through a central University induction event, local induction activities and our online induction package. Where appropriate to your role, you will have a probation period to provide a supportive framework for reviewing your progress and discussing your training and development needs.

If you are relocating to Cambridge, you and your family will be welcome to attend the Newcomers and Visiting Scholars Group, which provides an opportunity to find out more about Cambridge and meet other people new to the area.

- **Extensive development opportunities** - The encouragement of career development for staff is one of the University's core values. We put this into practice through various services and initiatives, including:
 - A wide-range of training courses and online learning packages.
 - The Staff Review and Development (SRD) Scheme, which is designed to enhance work effectiveness and facilitate career development post-probation.
 - Leave for career and personal development, including long-term study leave for assistant staff and sabbatical leave for academic staff.
 - The CareerStart@Cam programme, which supports assistant staff roles without higher education qualifications to develop their skills, experience and qualifications. Assistant staff may also apply for financial assistance for study which results in a qualification.
 - Reduced staff fees for University of Cambridge graduate courses.
 - The opportunity to attend lectures and seminars held by University departments and institutions.
 - Policies and processes dedicated to the career development of researchers and the implementation of the principles of the Concordat, which have led to the University being recognised with an HR Excellence in Research Award by the European Commission.

You can find further details of the benefits, services and opportunities we offer in our CAMBens Employee Benefits web pages at <http://www.hr.admin.cam.ac.uk/pay-benefits/cambens-employee-benefits>. A range of information about living and working in Cambridge is also available to you within the University's web pages at <http://www.jobs.cam.ac.uk/> and <http://www.hr.admin.cam.ac.uk/hr-staff/information-staff>.

Equality of Opportunity at the University

We are committed to a proactive approach to equality, which includes supporting and encouraging all under-represented groups, promoting an inclusive culture and valuing diversity. We make selection decisions based on personal merit and an objective assessment against the criteria required for the post. We do not treat job applicants or members of staff less favourably than one another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

We have various diversity networks to help us progress equality; these include the Women's Staff Network, the Disabled Staff Network, the Black and Minority Ethnic Staff Network and the Lesbian, Gay, Bisexual and Transgender Staff Network. In addition, we were ranked in the top 100 employers for lesbian, gay and

bisexual (LGB) staff in Stonewall's Workplace Equality Index 2013 and we hold an Athena SWAN silver award at organisation level for promoting women in Science, Technology, Engineering and Medicine.

We are supportive of staff with caring responsibilities, such as through our flexible working, career break and returning carers schemes. We encourage individuals to include details of any breaks in employment due to caring responsibilities in applications for employment so that these can be taken into consideration in assessments made, where appropriate.

Information if you have a Disability

The University welcomes applications from individuals with disabilities and we are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so, and, if successful, to assist them during their employment. Information for disabled applicants is available at <http://www.admin.cam.ac.uk/offices/hr/staff/disabled/>.

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

If you prefer to discuss any special arrangements connected with a disability, please contact, Ms Julie Bazin in the HR Office, who is responsible for recruitment to this position, on 01223 764289 or by email on hr-office@maths.cam.ac.uk or by post to Department of Pure Mathematics and Mathematical Statistics, Wilberforce Road, CAMBRIDGE CB3 0WB. Alternatively, you may contact the HR Business Manager responsible for the department you are applying to via hrenquiries@admin.cam.ac.uk.

The Winton Centre for Risk and Evidence Communication The University of Cambridge

Introduction

As data take on a more prominent role in society, the way in which quantitative evidence is communicated is becoming increasingly important. Through the generosity of the David and Claudia Harding Foundation, the University of Cambridge has established the Winton Centre for Risk and Evidence Communication. This Centre will:

- Develop methods for transparent communication of quantitative evidence
- Critically appraise the ways quantitative evidence is communicated to the public, both in the UK and internationally;
- Serve as a vital resource for those responsible for public communication; and
- Be a prominent campaigner for best practice, through collaborations, education and media engagement and training.

The Chair of the Management Board is Sir David Spiegelhalter, the current Winton Professor for the Public Understanding of Risk, and the Centre is part of the Department of Pure Mathematics and Mathematical Statistics in the Centre for Mathematical Sciences. Being sited in one of the top mathematics departments in the world adds to the Centre's reputation as a source of rigorous and unbiased information, guidance and research.

The Centre will become a leading global hub for the transparent communication and improved public understanding of risk, statistics and evidence. In close collaboration with numerous partners, both in

Cambridge and beyond, it will form an international core for the propagation of best practice in health, public policy, official statistics, education and the media.

The work of the Centre will be driven by the best research in psychology, with expertise provided both from the Department of Psychology and the Institute of Public Health at the University of Cambridge.

Centre aims

The Centre's work is based on the fundamental principle that the public, media, professionals and policy makers all have a right to receive quantitative evidence in a way that:

- Is appropriate for the decision being faced
- Is as transparent and balanced as possible, seeking only to inform and not to persuade in any one direction
- Is not deliberately manipulated to persuade audiences towards a particular opinion or action, for example by making some numbers either look as big or as small as possible
- Uses best current practice in design to improve engagement and comprehension to different groups
- Has been developed in close cooperation with all stakeholders
- Acknowledges uncertainty and limitations of the data

Organisation of the Centre

The current organisation of the Centre is as follows:

- Executive Director: Reporting to the Management Board, the Executive Director, Alexandra Freeman, oversees and coordinates all day-to-day activities, and supports the Centre's strategy.
- Technical lead: Mike Pearson oversees the development of the both the Centre's website and all web development work.
- Postdoctoral fellows: We currently have 3 psychology post-docs working on different areas of risk communication.
- Research Assistants: Two Research Assistants (one psychologist, one communications specialist) currently work within the team.

External Collaborators

The Centre works closely with partner organisations in order to ensure that its work serves the public good, including Full Fact, Sense About Science, the Alliance for Useful Evidence, Royal Statistical Society, BBC, Science Media Centre and PPI (Patient and Public Involvement) groups as well as many government departments and academic collaborators. The Centre at Cambridge has a sister group: Gerd Gigerenzer's team at the Harding Center for Risk Literacy, Max Planck Institute for Human Behaviour.