

Research Assistant (Data Science)

Cancer Research UK Cambridge Institute

Closing Date: 1st December 2024
Job Reference: SW44080



Research Assistant (Data Science)

Salary:

£32,296-£34,866

Contract:

Fixed Term, 12 months in the first instance.

Location:

Camb ridge

Faculty / Department:

Cancer Research UK Cambridge Institute

Responsible to:

Group Leader

Working Pattern:

Full Time

Purpose of the role

The Brenton research group is located at the Cancer Research UK Cambridge Institute, University of Cambridge. The Institute is core-funded by Cancer Research UK and has state-of-the-art research facilities for over 20 research groups to undertake world-class research into all aspects of cancer biology.

Ovarian cancer is the 6th most common cause of female cancer related deaths. The research aims of our laboratory are to assess early prevention strategies and identify therapeutically relevant mechanisms of drug resistance in patients with high-grade serous ovarian cancer (HGSOC) using genomic and functional approaches. We are a multidisciplinary team of molecular and functional lab scientists, computational biologists, and clinical fellows. The successful applicant will be integrated within a diverse professional network of scientific backgrounds and expertise.

The role holder will help lead a project analysing multiomics datasets to identify molecular prognostic biomarkers of HGSOC. More specifically, this will involve integrating genomic, transcriptomic, immunohistochemistry and clinical datasets to identify prognostically relevant biomarkers using a combination of molecular biology and survival analyses. These biomarkers will help to inform the discovery of biologically relevant disease subtypes, which can be used in future clinical trials to test the efficacy of corresponding high precision therapeutics.

In addition, the role holder will support ongoing research efforts within the group, working with cutting edge sequencing technologies such as long read sequencing and single cell whole genome sequencing. The role holder will be expected to support both the analysis of genomics data, and the development of bioinformatics software which can be used for more automated analyses of group data.

This role would be ideal for a candidate who has completed a bachelor's or master's degree with a substantial data science or genomics component. This role would provide the successful candidate with the research experience, skills and mentoring necessary for a bioinformatics PhD programme or corresponding positions outside of academia.

Key responsibilities:

- Help lead a multiomics prognostic biomarker discovery project:**
 - Help lead an international collaborative research project analysing multiomics datasets for biomarker discovery
 - Work with an experienced postdoctoral research associate in the group to help advance project aims
 - Collaborate with statisticians, bioinformaticians, and domain experts who work in other institutes and universities
- Provide bioinformatics support for existing projects:**
 - Including data science projects using long read and single cell whole genome sequencing
 - Support and work closely with other members of the group by providing bioinformatics expertise, guidance and training.
 - Build and maintain domain-specific knowledge relevant to group research themes and related topics
 - Communicate research findings to colleagues with a wide range of bioinformatics and data analysis expertise
- Bioinformatics software development and administration:**
 - Develop, maintain and document bioinformatics software for use by yourself and other members of the group
 - Administer unix servers and related file systems
 - The organisation of some group data in well-documented and designed data structures
 - Maintain meticulous records of all work done



Person Specification

Criteria	Essential	Desirable
Education and qualifications		
<ul style="list-style-type: none"> BSc in biology, computer science or another relevant specialist subject 	✓	
<ul style="list-style-type: none"> MSc in biology, computer science or another relevant specialist subject 		✓
Specialist knowledge, skills & experience:		
<ul style="list-style-type: none"> Candidates without a biological background should be able to demonstrate their ability to extend knowledge of molecular biology Familiarity and competence navigating unix command-line interfaces with file and string manipulation Experience using statistical software for data analysis and visualisation (e.g. R language), with experience applying this to a specific research project 	✓	
<ul style="list-style-type: none"> Experience in analysis of genomics data and canonical bioinformatics workflows Experience executing bioinformatics workflows using a command-line interface Experience using relational database management systems Knowledge of statistics as applied to genomics problems 		✓
Interpersonal and communication skills:		
<ul style="list-style-type: none"> Ability to thrive in a team environment and contribute to a positive atmosphere in the group. Exhibit excellent written and spoken communication skills. Ability to work independently and be self-motivated 	✓	
Additional requirements:		
<ul style="list-style-type: none"> Strong critical thinking skills Ability to lead and troubleshoot complex projects and interact effectively with collaborators. Accurately record work completed and to document written code. Actively communicate research output, write up research work for presentation and publication. 	✓	

Behavioural Attributes

This section summarises the behavioural attributes (or competencies) that we expect the role holder to be able to demonstrate, at what level and whether this is an essential or desirable requirement. Full definitions are at: <https://www.hr.admin.cam.ac.uk/policies-procedures/behavioural-attributes>

Please review these and provide specific examples in your application of how you have demonstrated these attributes in your work, education or other experience. It will assist your application if you explain the situation, what you did and what the outcomes were.

Attribute	Level
Valuing Diversity	A
Achieving Results	C
Communication	C
Innovation and Change	C
Negotiating and Influencing	D
People Development	C
Relationship Building	C
Strategic Focus	D

Professional Services Values

Developed by professional services staff, our values underpin everything we do. By living the values in the work we do, we hope to foster an environment where staff feel empowered. The values encourage staff to; work together and share skills to create a sense of community, act with integrity, take an inclusive and fair approach and develop honest and open relationships that are underpinned by our shared values. We encourage applicants to consider these values within their application.



CRUK Cambridge Institute

The Cancer Research UK Cambridge Institute (CRUK CI, www.cruk.cam.ac.uk), housed in the Li Ka Shing Centre, focuses on tumour ecology and evolution. We are one of 4 CRUK core-funded Institutes, the others being the Manchester Institute, The Scotland Institute, and The Francis Crick Institute.

The CRUK CI has a diverse faculty comprising both basic and clinical investigators and aims not only to contribute fundamental discoveries in the basic biology of cancer but also to translate these into the clinic in a way that benefits patients. We have particular strengths in genomics, spatial biology, computational biology, and imaging, and currently devote significant research effort to cancers arising in the breast, pancreas, brain, and colon. We are hoping to expand to other disease areas that align to strengths in our local clinical programs but prefer to maintain a focus on solid tumours.

Our underlying philosophy is that only by embracing the full complexity of human cancers will we be able to devise new and effective treatment strategies. This leads many of our groups to examine questions relating to tumour heterogeneity, both between and within individual patients, with a goal of understanding how genomic and phenotypic diversity impact the course of disease development and its response to treatment. We also study the ecology of tumours, probing how interactions between tumour cells and the normal cells of the patient influence their respective behaviours. This includes immune cells but extends to other cell types of the stroma and vasculature. We also study the developmental origins of tumours and the processes that govern transitions from 'normal' to malignant cells.

We are a core-funded Institute, receiving generous and flexible support from CRUK, which is meant both to provide a state-of-the-art research environment and to enable investigators to engage in high risk/high reward and/or long-term strategic research programs that would be unlikely to be funded by other mechanisms. We are currently supported by 11 core facilities, whose remits range from genomics and proteomics to whole animal imaging. We also benefit from a dedicated, professional administrative staff.

We have a highly interconnected and collaborative faculty and a vibrant research

environment. We serve as a significant hub within the broader Cambridge cancer community and house the headquarters of the CRUK Cambridge Centre, the

largest of the CRUK Major Centres. In addition, the CI contributes to many of the collaborative centres and initiatives that Cancer Research UK helps to support, including the [Cambridge Biomedical Research Centre](#), the [Experimental Cancer Medicine Centre](#), and the [Cambridge Pancreatic Cancer Centre](#). We play a strong role in strategic CRUK initiatives, including RADNET, the Cancer Grand Challenges, the Children's Brain Tumour Center of Excellence, the Personalized Breast Cancer Institute, and the Personalized Brain Tumour Program. In three years, we will be adjacent to the brand new Cambridge Cancer Research Hospital.

We are sited on the Cambridge Biomedical Campus, home to Addenbrooke's Hospital, the University of Cambridge teaching hospital. This site, which encompasses the largest biomedical research cluster in Europe, also hosts many of our collaborating institutes, including the [MRC Laboratory for Molecular Biology](#), the [Hutchison/MRC Research Centre](#), the [Strangeways Research Laboratories for Genetic Epidemiology](#), the [Wellcome Trust Stem Cell Institute](#) and the [Cambridge Institute for Medical Research](#). The campus is also home to the Astra Zeneca world headquarters. In the wider Cambridge area we also have extensive links with the [Wellcome Trust Sanger Institute](#), and the [European Bioinformatics Institute](#). The CI is also a member of the [Organisation of European Cancer Institutes \(OECI\)](#).

Overall, the CRUK Cambridge Institute provides an outstanding scientific environment in which investigators are driven to make critical contributions to our understanding of cancer and its treatment.



Professor Greg Hannon, Director of Cancer Research UK Cambridge Institute

School of Clinical Medicine

Doing great work in a great place to work

About the School

The School of Clinical Medicine currently employs nearly 3,000 people, spanning all varieties of staff type from Academic Professors to administrative support.

In 1976 in response to the recommendation of the Royal Commission on Medical Education in the late 1960's, a complete medical course was re-established in Cambridge with the opening of the School of Clinical Medicine at the new Addenbrooke's Hospital site.

On 21st November 1980, HRH The Duke of Edinburgh, the Chancellor of the University of Cambridge, officially opened the Clinical School Building which presently accommodates the medical library, lecture theatres and seminar rooms.

The University of Cambridge School of Clinical Medicine aspires to change the practice of medicine and improve biological understanding in a wide range of clinical specialties and scientific disciplines. Collaborative research, both within biomedicine and crossing the boundaries to the mathematical, physical and social sciences, is key to our approach. The School also supports key enabling technologies and facilities in imaging, bioinformatics and biological systems. The main areas of research interest are:

- Cancer research
- Cardio-Respiratory Medicine
- Cellular mechanisms of disease
- Diabetes, Endocrinology and Metabolism
Epidemiology, Public Health and Primary Care
Genetics and Genetic Medicine
Haematological and Transplantation
Medicine
- Infection and Immunity
- Neurosciences and Mental Health
- Stems Cells and Regenerative Medicine.



**Professor Patrick Maxwell, Regius
Professor of Physic and Head of the
School of Clinical Medicine**

The School aims to provide leadership in education, discovery and healthcare. It will achieve this through; inspirational teaching and training, outstanding basic and clinical research and integration of these to improve medical practice for both individual patients and the population.

The School will:

Through inspirational teaching and training, educate individuals who:

- will become exceptional doctors or biomedical scientists
- combine a depth of scientific understanding with outstanding clinical and communication skills demonstrate a caring, compassionate and professional approach to patients and the public and
- are equipped to become future international leaders of their profession.

Through its commitment to the pursuit of excellence, support scientists of international standing in basic and clinical research aiming to:

- understand fundamental biology and thereby the mechanisms underlying disease integrate basic and clinical research
- apply a rigorous mechanism-based approach to clinical problems and
- innovate to solve the health challenges of our society.

Terms of Appointment

Tenure and probation

Appointments will be made on a fixed-term basis for a period of twelve months in the first instance.

Appointments will be subject to satisfactory completion of a six-month probationary period.

Hours of Work and Working Pattern

The hours of work for the position are full-time, working Monday to Friday.

Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a hybrid pension scheme. For further information please visit: www.pensions.admin.cam.ac.uk/.

Annual leave

Full time employees are entitled to annual paid leave of 41 days inclusive of public holidays. For new part-time employees, annual leave will be pro rata'd based on days worked.

General information

Pre-employment checks

Right to work in the UK

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.

Health declaration: Once an offer of employment has been made the successful candidate will be required to complete a work health declaration form.

Qualifications: The person specification for this position lists qualifications that are essential and/or desirable. Please note that if you are offered the post you will be asked to provide your relevant original certificates of these qualifications.

References: Offers of appointment will be subject to the receipt of satisfactory references.

Screening Checks:

This role requires a basic disclosure and a security check. Any offer of employment we make to you will be conditional upon the satisfactory completion of these checks; whether an outcome is satisfactory will be determined by the University. The nature of this role may mean that the successful candidate will also need to undergo a health assessment.

Equality and Diversity

We particularly encourage women, and/or candidates from a Black, Asian and Minority Ethnic background to apply for this vacancy as they are currently under-represented at this level within our University.

Information if you have a disability

The University welcomes applications from individuals with disabilities. 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 the HR team at mailbox-hr@cruk.cam.ac.uk

The University

The University of Cambridge is one of the world's oldest and most successful universities. We are a renowned centre for research, education, and scholarship that makes a significant contribution to society. The University is consistently ranked amongst the top universities in the world. Our affiliates have won more Nobel Prizes than any other University.

Our sustained pursuit of academic excellence is built on a long history of world-leading teaching and research within a distinctive collegiate system. For eight centuries our ideas and innovations have shaped the world. Our principal goal is to remain one of the world's leading universities in an increasingly competitive global higher education sector. Today the University of Cambridge is at the centre of a cluster of over 4,300 businesses employing 58,000 people.

Our capital investment projects include academic and commercial growth at both the West Cambridge Innovation District, and the Biomedical Campus in the south of the city. Eddington, in North West Cambridge, is a mixed-use development including key worker housing for staff, a community centre and a new primary school, managed by the University. Through these projects, the University is deeply embedded in, and committed to serving, our local community. These are all conspicuous signs of a University that is not only adapting to new needs, but also anticipating the future.

Our mission is to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence. Our core values are:

- freedom of thought and expression; and
- freedom from discrimination.



About Us

The University is one of the world's leading academic centres. It comprises 150 faculties and departments, together with a central administration and other institutions. Our institutions, museums and collections are a world-class resource for researchers, students and members of the public representing one of the country's highest concentrations of internationally important collections.

The University has an annual income of £2 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £500 million per annum and continues to grow.

The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic staff are invited to join a College as a Teaching Fellow, which provides a further social and intellectual dimension. The Colleges admit undergraduate students, provide student accommodation and pastoral support and deliver small group teaching for undergraduates.

The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching.

Our instinct for seeking out excellence and setting up enduring and mutually beneficial collaborations has led us to establish strategic partnerships across the globe. Whether it is the successful Cambridge-Africa Programme involving universities in Ghana, Uganda and elsewhere on the African continent; or the close association with the government of India to pursue new research in crop science; or the creation, with Germany's Max Planck Institutes, of a Cambridge-based centre for the study of ethics, human economy and social change – international partnerships are now an inextricable part of the University's make-up.

“Cambridge graduates and researchers have made – and continue to make – a colossal contribution to human knowledge and the understanding of the world around us. Their work touches on the lives and livelihoods of everyone from patients diagnosed with life-threatening diseases, to residents of areas critically affected by climate change, to children growing up in conflict zones. It has a lasting impact on our society, our economy and our culture: the world is truly a better place thanks to their efforts.”

Stephen Toope, Vice Chancellor 2019



Working at the University

Working at Cambridge you will join a diverse, talented and innovative community, with more than 23,000 students and over 16,000 staff from all walks of life and corners of the world.

The University continually explores strategies to attract and retain the best people. It is committed to supporting its staff to achieve their best. We are a fair, diverse and inclusive society and we believe our staff are our greatest asset. There is strong commitment to developing institutional leadership and supporting and encouraging staff development at all levels.

We offer a variety of roles including academic, research, professional, managerial and support roles. We also offer extensive benefits and excellent learning opportunities within a stimulating working environment.

The University's estate is undergoing the most significant transformation in its history. Cambridge has been able to create a science and technology campus to the west of the city centre, and is expanding further to the north west of Cambridge including investing in affordable homes for University key workers and community facilities. Even with our continued development, the University remains within walking or cycling distance across the campus. The University is a major partner on the Cambridge Biomedical Campus and we continue to redevelop our historic city centre sites demonstrating our determination to ensure that we can offer the best facilities and opportunities for our staff and students.



Equality & diversity

The University has built its excellence on the diversity of its staff and student community. We aim to be a leader in fostering equality and inclusion, and in promoting respect and a sense of belonging for all. We encourage applications from all sections of society. All appointments are made on the basis of merit. We have an Equal Opportunities Policy, along with a range of diversity groups, including the Women's Staff Network, Race Equality Network and LGBT+ Staff Network. More details are available here:

<http://www.equality.admin.cam.ac.uk/>

The University has a bronze Race Equality Charter award, with a framework for improving the representation, progression and success of minority ethnic staff and students within higher education. Furthermore, the University's silver Athena swan award recognises and celebrates good practice in recruiting, retaining and promoting gender equality.

Living in Cambridge

Cambridge is rich in cultural diversity. From beautiful University and College buildings, museums and art galleries, quaint gardens and punts on the River Cam, to a vibrant restaurant and café scene, our employees are surrounded by the wonderful features of this unique city.

You can find a wide-range of high street shops and 3 shopping centres, with independent alternatives at the historic market and nestled within the passageways in the city centre. You will find a cinema, bowling alley, a nightclub and various live performances at the Cambridge Leisure Park, with further entertainment options at the Corn Exchange, Arts Theatre and the ADC Theatre. Further information can be found on the Visit Cambridge website.

If you prefer the faster pace of life, London is a 45 minute train journey away. For those travelling from overseas, Stansted Airport is just 45 minutes away and Heathrow Airport under 2 hours away. The University is a short distance from a host of other attractions such as Ely Cathedral, Newmarket Races and various wildlife parks and stately homes. Cambridge is also within easy reach of the beautiful Broads and coastlines of Norfolk and Suffolk.

Relocation Support

The University recognises the importance of helping individuals to move and settle into a new area. We provide support and guidance to those relocating internationally or domestically to take up a post at the University of Cambridge, liaising with other University offices and selected partners to ensure comprehensive relocation support is available. This includes: accommodation, childcare, schools, banking, immigration and transport. If you would like further information, please visit <https://www.accommodation.cam.ac.uk/RelocationService/>. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of staff with the costs of relocating to Cambridge.

Accommodation Service

The University Accommodation Service helps staff, students and visiting scholars who are affiliated to the University in their search for suitable accommodation in Cambridge. The dedicated accommodation team can provide access to a wide range of University-owned furnished and unfurnished properties, and has a database of private sector accommodation available for short and long-term lets. For further information and to register with this free service please visit <https://www.accommodation.cam.ac.uk/>



What Cambridge can offer

We offer a comprehensive reward package to attract, motivate and retain high performing staff at all levels and in all areas of work.

The University offers a wide range of competitive benefits, from family leave entitlement, to shopping and travel discount schemes. Our generous annual leave package contributes to the positive wellbeing of our University employees. Sabbatical leave enables academics to focus on research and scholarship, whilst still maintaining their full salary. The University also has a [career break scheme](#) for academic and academic-related staff, with additional flexible working policies for all other staff.

Pay and benefits

The University salary structure includes automatic service-related pay progression in many of its grades and an annual cost of living increase. In addition to this, employees are rewarded for outstanding contribution through a number of regular pay progression schemes. The University offers attractive pensions schemes for employees, with an additional benefit of a salary exchange arrangement providing tax and national insurance savings.



CAMbens employee benefits

The University offers employees a wide range of competitive benefits, known as CAMbens. CAMbens offers something for everyone across a range of categories, including:

- Financial Benefits, including shopping discounts (both local and national) and a Payroll Giving scheme;
- Relocation and Accommodation Benefits, including relocation assistance and interest-free Rental Deposit Loans;
- Travel Benefits, including Cycle to Work, discounts on train season tickets and interest-free Travel to Work loans;
- Family Friendly and Lifestyle Benefits, including support with childcare and family friendly policies;
- Health and Wellbeing Benefits, including a University Staff Counselling Service, discounts at the University Sports Centre, and other local gyms, and healthcare schemes.



What Cambridge can offer

Family-friendly policies

The University recognises the importance of supporting its staff. We have a range of family-friendly policies to aid employees' work-life balance including a generous maternity, adoption and shared parental leave entitlement of 18 weeks full pay, and paid emergency leave for parents and carers.

Other family-friendly support includes:

Our highly regarded workplace nurseries, a childcare salary exchange scheme and a high quality holiday Playscheme may be available to help support University employees with caring responsibilities (subject to demand and qualifying criteria). Further childcare information can be found here:

<https://www.childcare.admin.cam.ac.uk/>

The [Newcomers and Visiting Scholars Group](#) is an organisation within the University run by volunteers whose aim is to help newly arrived wives, husbands, partners and families of Visiting Scholars and members of the University to settle in Cambridge and give them an opportunity to meet local people. The Postdoc Academy supports the postdoctoral community within Cambridge. Further details are available here: <https://www.postdocacademy.cam.ac.uk/>

Your wellbeing

The University's Sport Centre, Counselling Services and Occupational Health are just some of the support services available to University employees to promote their physical and mental wellbeing. The University delivers The Festival of Wellbeing annually, which is a programme of stimulating talks and activities, which aim to promote wellbeing and good mental and physical health. The University also hosts the [Cambridge Festival](#), which is a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.

Development opportunities

We support new employees to settle in through various activities as well as supporting their professional and career development on an ongoing basis. Our Personal and Professional Development (PPD) team provide development opportunities for all University employees, including face-to-face sessions, online learning modules and webinars. All employees also have unlimited access to LinkedIn Learning to support their development. Both new and existing employees can undertake funded Apprenticeships, which lead to a range of vocational and professional qualifications. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and institutions. A range of University training providers also offer specialist learning and development in their own areas e.g. teaching and learning, digital literacy, finance, health and wellbeing, safety.



How to apply

Applications should be submitted online via the University of Cambridge jobs page www.jobs.cam.ac.uk by clicking “Apply online” in the job advert. You will need an email address to register for our online system.

Conversations about flexible working are encouraged at the University of Cambridge. Please feel free to discuss flexibility prior to applying (using the contact information below) or at interview if your application is successful.

Informal enquiries are welcomed and should be directed to:

Mailbox-HR@cruk.cam.ac.uk



UNIVERSITY OF
CAMBRIDGE