Software Quality Assurance Analyst (Technical)

University Information Services

Closing Date: 21 May 2024
Job Reference: VC41463

Athena SWAN Silver Award

ECU RACE CHARTER — Race Equality Charter Bronze Award

disability confident COMMITTED

Software Quality Assurance Analyst (Technical)

Salary:
£ 33,966 - £44,263

Contract:
Permanent

Location:
Cambridge/Hybrid remote

Division:
Information Services

Responsible to:
Test Delivery Manager

Working Pattern:
Full Time

Purpose of the role

This role is responsible for the design, development, implementation and continual maintenance of test automation scripts across UIS systems and services.

The role holder will ensure that the test automation services they provide are robust, efficient, repeatable, maintainable, and scalable. Test automation services must meet our automated testing strategy principles and bring measurable Return on Investment (ROI).

The role holder will provide assistance in monitoring and maintaining automated test frameworks for the area to which they are assigned. They will strive to meet the desired objectives of the development team they are assigned to whilst maintaining an independence as a quality practitioner.

The role requires an intermediate to high degree of technical expertise and programming skills. The role holder will be required to keep aware of industry best-practice and innovation, but focus must be on the robustness and continual running of scripts to a high standard, constantly increasing coverage over time. Increasing the speed of test results (and associated information) available to stakeholders will be critical.

The role holder is likely to be asked to work with different languages and tools. The role holder may be asked to work with different methods of development and software delivery, including (but not limited to) Agile, Waterfall and DevOps.

Key responsibilities

The following duties of this role are based on the Skills Framework for the Information Age (SFIA).

Testing: Level 4

- Selects appropriate testing approach, including manual and automated testing.

- Develops and executes test plans and test cases. Implements scalable and reliable automated tests and frameworks.

- Collaborates across parties involved in product, systems or service design and development to enable comprehensive test coverage.

Key responsibilities…continued

Testing: Level 4

- Identifies improvements in requirements, design or specification processes to increase the effectiveness and efficiency of testing.

- Analyses and reports on test activities, results, issues and risks, including the work of others.

Programming/software development: Level 4

- Designs, codes, verifies, tests, documents, amends and refactors complex programs/scripts and integration software services.

- Contributes to the selection of the software development methods, tools and techniques.

- Applies agreed standards and tools to achieve well-engineered outcomes.

- Participates in reviews of own work and leads reviews of colleagues' work.

Quality management: Level 4

- Assists in the development of new or improved practices and organisational processes or standards.

- Assists projects, functions or teams in planning the quality management for their area of responsibility.

- Facilitates localised improvements to the quality system or services.

Service acceptance: Level 4

- Engages with delivery teams to confirm that products developed meet the service acceptance criteria and are to the required standard.

- Provides input into change control processes

Specialist advice: Level 4

- Provides detailed and specific advice regarding the application of their specialism to the organisation's planning and operations.

- Actively maintains knowledge in one or more identifiable specialisms.

- Recognises and identifies the boundaries of their own specialist knowledge.

- Where appropriate, collaborates with other specialists to ensure advice given is appropriate to the organisation's needs.

Acceptance testing: Level 4

- Develops acceptance criteria related to functional and non-functional requirements, business processes, features, user stories and business rules.

- Designs, specifies and executes test cases and scenarios to test that systems, products and services fulfil the acceptance criteria and deliver the predicted business benefits.

Key responsibilities…continued

Acceptance testing: Level 4 …cont'd

- Collaborates with project colleagues and stakeholders involved in the analysis, development and operation of products, systems or services to ensure accuracy and comprehensive test coverage.

- Analyses and reports on test activities, results, issues and risks including the work of others.

Availability management: Level 4

- Analyses service and component availability, reliability, maintainability and serviceability.

- Contributes to the availability management process and its operation. Performs defined availability management tasks.

- Ensures that services and components meet and continue to meet all of their agreed performance targets and service levels.

- Implements arrangements for disaster recovery and documents recovery procedures. Conducts testing of recovery procedures.

Measurement: Level 4

- Identifies and prioritises appropriate measures, scales, and targets.

- Supports projects, functions or teams in the development of measurement methods.

- Specifies base and derived measures which support agreed information needs. Specifies how to collect and store the data for each required measure. Provides guidance on collection of data.

- Designs reports and reporting formats.

Quality Assurance: Level 4

- Plans, organises and conducts assessment activity and determines whether appropriate quality control has been applied.

- Conducts formal assessments or reviews for given domain areas, suppliers, or parts of the supply chain. Collates, collects and examines records, analyses the evidence and drafts all or part of formal compliance reports.

- Determines the risks associated with findings and non-compliance and proposes corrective actions.

- Provides advice and guidance in the use of organisational standards.

- Where appropriate, collaborates with other specialists to ensure advice given is appropriate to the organisation's needs.

Key responsibilities…continued

Methods and tools: Level 4

- Provides advice and guidance to support the adoption of methods and tools and adherence to policies and standards.

- Tailors processes in line with agreed standards and evaluation of methods and tools.

- Reviews and improves usage and application of methods and tools.

Knowledge management: Level 4

- Organises knowledge assets and oversees the life cycle of identifying, capturing, classifying, storing, and maintaining assets.

- Facilitates sharing, collaboration and communication of knowledge. Implements specific knowledge management initiatives.

- Monitors the use and impact of knowledge.

- Interrogates existing knowledge content to identify issues, risks, and opportunities.

Requirements definition and management (software testing): Level 4

- Defines and manages scoping, requirements definition and prioritisation activities for initiatives of medium size and complexity.

- Contributes to selecting the requirements approach.

- Facilitates input from stakeholders, provides constructive challenge and enables effective prioritisation of requirements.

- Establishes requirements base-lines, obtains formal agreement to requirements, and ensures traceability to source.

Networking

- Actively contributes to the University IT Community in order to share knowledge, best practice, and technical expertise

Person Specification

Criteria	Essential	Desirable
Education		
ISTQB Technical Test Analyst Advanced Certification (or equivalent experience).	✓	
Degree level qualification/Level 6 vocational qualification or equivalent level of experience	✓	
Experience		
Experience of creating, executing maintaining and improving efficient, robust, and reusable testing services.	✓	
Appropriate use and awareness of Exploratory Testing techniques and methods	✓	
Experience of using professional Test Management Tools	✓	
Ability to use BDD tools such as Cucumber (or writing and executing tests using a business-readable domain-specific language).		✓
Foundation to intermediate programming level in Python or Java	✓	
Excellent analytical and problem-solving skills with strong attention to detail.	✓	
Compelling experience of successful deliveries within Agile. DevOps and Waterfall methodologies. Be able to work within formal or informal methodologies, applying the appropriate level of rigour to each.	✓	
Proven knowledge of BDD and TDD		✓
Ability to work in a fast-changing environment that requires continual development of knowledge and skills.	✓	
The ability to take responsibility and ownership for test services related to the project, assignment, or tasks.	✓	
Excellent stakeholder management skills.	✓	
Broad high-level knowledge of functional requirements in HR, Teaching and Learning, Student Records and Financial Systems.		✓
A logical, pragmatic approach to testing and the ability to see the bigger picture	✓	
A sophisticated level of computer literacy with the ability to quickly understand how applications are configured, and to design and automate tests that cover all potential outcomes.	✓	
Demonstrable knowledge of proven test design techniques e.g. equivalence partitioning, boundary value analysis, state transition testing, etc.		✓

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.

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

University Information Services

The UIS provides the digital infrastructure at the heart of the University's world-leading education and research.

For example, our high performance computing team has developed the UK's fastest academic computer and is supporting groundbreaking medical, engineering and astronomy research. Our networks team runs Europe's biggest privately owned ultra-high speed fibre optic network, connecting researchers, students and other organisations across Cambridge and beyond. And, the University's finance, HR and student administration rely on our business systems.

The University also has a bold ambition to use digitalisation to transform education and research. The UIS's team of developers, designers, testers, analysts and support staff is leading this exciting work. Our work ensures Cambridge continues to be one of the world's top universities.

The University of Cambridge consists of over 100 institutions (Departments, Faculties and Schools) and employs around 12,000 staff. The Director of Information Services leads a University Information Services function which positively adds value to the University. For the delivery of a world – class computing service for all of the relevant stakeholder communities.

As a customer focussed organisation the purpose of UIS is to provide business information services that underpin the critical management processes used across the collegiate University in research, teaching and administration.

The UIS works strategically with Schools, Faculties, Departments, Colleges and other institutions, in planning and delivering the future information service requirements of the University, progressively improving business processes, capabilities and information solutions that meet business needs.

Terms of Appointment

Tenure and probation
Appointment will be made on a permanent basis and will be subject to satisfactory completion of a 6 months probationary period.

Hours of Work and Working Pattern
The hours of work for the position are full-time / 37 hours per week.

We welcome applications from individuals who wish to be considered for part-time working or other flexible working arrangements.

Pension
You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a defined benefits 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.

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 Department Administrator, who is responsible for recruitment to this position.

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 first-class 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 the West Cambridge site, the North West Cambridge development and the growth of the Biomedical Campus in the south of the city. The North West Cambridge development includes the opening of a primary school – the first in the UK to be managed by a University. So we are 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 students, provide student accommodation and deliver small group teaching.

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

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 18,000 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 new science and technology campus to the west of the city centre, and is now 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.
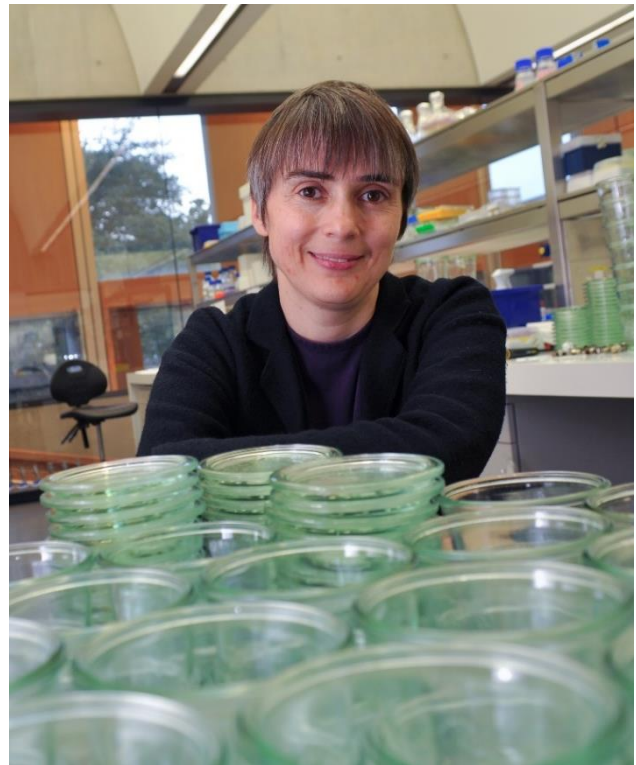
Equality & diversity

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 networks for women, black and minority ethnic and lesbian, gay, bisexual and transgender staff. More details are available here: http://www.equality.admin.cam.ac.uk/

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

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/relocation. 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. Payroll giving is also a simple, tax-efficient way for employees to make monthly donations to charity.

CAMbens employee benefits

We offer a CAMbens scheme for University employees, providing access to online and in-store shopping discounts and cashback. With more than 2,000 participating retailers, employees can save money on a wide range of household expenses, from groceries and clothes, to holidays and insurance and much more. A range of local discounts are also available, helping employees to save money whilst also supporting local Cambridge businesses and a CAMbens Cycle to Work salary sacrifice scheme is also available, which enables employees to save money on transport costs. A 10% discount rate on the purchase of train season tickets, bulk buy tickets and an interest free travel to work loan are also available for staff of the University.

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 emergency family care support via My Family Care.

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 Office of Postdoctoral Affairs supports the postdoctoral community within Cambridge. Further details are available here: https://www.opda.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. There are many societies in Cambridge catering for almost every taste and interest. Whether you want to take part in a sport, participate in music or drama, pursue a hobby, or join a political group, you will almost certainly find that a society exists for this purpose. The University also hosts the Cambridge Science Festival and Cambridge Festival of Ideas, as well as Open Cambridge weekend, which together attract over 50,000 visitors per year. The festivals are 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. The encouragement of career development for all staff is one of the University's values and we put this into practice through various services and initiatives. Our Personal and Professional Development Department provides development opportunities and courses for all University employees. These include face-to-face sessions, online learning modules and webinars. Employees may also apply for financial support to undertake training that will lead to a qualification. 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. The CareerStart@Cam programme also supports employees in assistant staff roles who do not hold higher education qualifications to develop their skills, experience and qualifications.

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: to Agustin Fernandez Trujillo, Test Delivery Manager, at **agustin.fernandez@uis.cam.ac.uk**

If you have any queries regarding the application process please contact adminoffice@uis.cam.ac.uk, quoting vacancy reference **VC41463**.

The closing date for applications is: **21 May 2024**

UNIVERSITY OF CAMBRIDGE