**Software Developer (R Specialist)**

QCIF

Brisbane QLD

Developers/Programmers (Information & Communication Technology)

Full time

$96,647 – $122,176 per year

Position Title:          Software Developer (R Specialist)

Employment Type:  2-Year, Fixed Term, Full-Time (with possible extension)

Salary Level:           HEW 7 or 8 equivalent

Salary Range:         $96,647 - $122,176 (plus superannuation)

**About QCIF**

The Queensland Cyber Infrastructure Foundation (QCIF) is a non-profit organisation that provides cutting-edge digital infrastructure capabilities for research and innovation across Queensland and Australia. QCIF draws investment from its Members, the Queensland Government, and the Australian Government’s National Collaborative Research Infrastructure Strategy (NCRIS) program. We are an NCRIS node for the Australian BioCommons (Bioplatforms Australia), and the Australian Research Data Commons (ARDC) and its Nectar Research Cloud.

*Our purpose*

To provide cutting-edge digital research infrastructure to our Members.

*Our vision*

To be the digital research partner of choice for our Members, collaborators and clients.

*Our mission*

To accelerate research excellence and societal impact through our Members by:

* Provisioning cutting-edge digital research infrastructure capabilities and enterprise solutions;
* Upskilling current and future researchers and innovators; and
* Catalysing collaboration within Queensland and across Australia.

*Our values*

* Excellence — we stand by the quality and integrity of our contributions to research;
* Collaboration — we believe teams are best placed to tackle the grand challenges that confront society; and
* Entrepreneurial — we do not wait for opportunities to come to us; we make things happen.

**About EcoCommons**

The EcoCommons Australia platform is a culmination of a thirteen-year national investment worth $8.45M across multiple partners, positioning the nation for research with impact through effective leveraging of eco-data and eco-analytics. EcoCommons currently provides access to over 60,000 curated datasets—on species, environment and climate—and dynamically updated data-streams through API with major national and international biodiversity data providers. The Platform's existing capabilities span modelling geographic distribution of single/multiple species (land, freshwater or oceans) and species traits, based on environmental features and historical, current, or projected future climates.

Software development will look to mature the existing Platform capabilities and operation of EcoCommons Australia and continue alignment with ARDC’s Planet Research Data Commons (Planet RDC) for biodiversity and ecological modelling, specifically under the Modelling, Analytics and Decision Support Infrastructure Program (MADSI).

**About the Role**

Technical delivery for development of scripts, packages and workflows needed to complete key analytical tasks in ecological and biodiversity modelling within the R programming language. The role is responsible for delivering standardised, reproducible software tools, and supporting the integration of those methods with the wider EcoCommons platform.

This is a hands-on role which requires technical expertise to tackle complex technical challenges encountered by researchers and decision-makers concerned with biodiversity including ecosystem services, biosecurity, natural resource management and climate-related impacts and responses. The role strives to continuously develop new and improved data engineering and operations capabilities.

**Key responsibilities**

* Develop scripts to deliver species distribution models and ensemble models in R.
* Work with other developers to link R scripts to workflows written in other programming languages (such as Python).
* Develop R packages to support reproducible workflows.
* Liaise with users and their communities/representatives regarding the delivery of data services to meet their requirements.
* Work collaboratively with colleagues within your team and across partner institutions to reach objectives.
* Understand user requirements and impacts on implementation, testing and delivery.
* Integrate knowledge and experience of software development, task planning, and available technical options, to assist improving processes.
* Assist collaborators to integrate their requirements into software products, including strategic advice regarding the impacts and potential of available technical solutions.
* Be aware of security considerations and implementation of security best practices.
* Iterative improvement of software and system architecture.
* Actively contribute to and identify opportunities for improved system performance through regular review of metadata, data, and quality assurance processes.
* Actively communicate with a geographically dispersed team to share knowledge, collaboratively use a range of software, document work, and solve problems.
* Interact and engage with external organisations to provide desired project outcomes.
* Take shared ownership of complex problems and issues to resolve them within the agreed timeframes.
* Report on progress against project tasks and milestones.
* Contribute to the development and delivery of training programs.
* Interface with stakeholders to manage expectations and ensure satisfaction.
* Work closely and actively communicate with a team of engineers, product managers, and analysts.
* Capture requirements and develop proposals with collaborators.
* Contribute to strategy for long term platform architecture.
* Be aware of security considerations and implementation of security best practices.
* Ensure awareness of and compliance with legislation and host university policies.
* Maintain high standards of professionalism and approach tasks in an ethical manner.

**About you**

Essential qualifications and experience

* A Bachelor’s degree or higher in Science, Engineering, Computer Science, Quantitative Ecology or a related discipline with at least 10 years of experience or an equivalent combination of relevant experience and/or education/training.
* Advanced skills in R programming  and experience of R package development.
* Experience in Species Distribution Modelling and/or climate change projections.
* Demonstrated ability to work in a team and contribute effectively to designing and developing appropriate solutions and resolve information system problems.
* Good oral and written communication skills in both technical and non-technical areas.
* Ability to set, manage and achieve deadlines and project objectives while working individually with minimal direction; in a team; and with external collaborators.
* An understanding of how to effectively manage data belonging to collaborators, including appropriate handling of sensitive data.

Desirable qualifications and experience

* PhD in ecology, conservation, or evolutionary biology.
* Demonstrated experience in analysis of spatial ecological data and ecological modelling.
* Working knowledge with Python.
* Skills in effective visualisation of complex data.

**Organisational Relationships**

The position reports to the Principal Data Scientist (Sustainable Futures) and works in close collaboration with the Head of Data & Software Solutions and other QCIF Software Developers.

**Location**

* The role will work from the QCIF offices at UQ, St Lucia.   
  Applicants outside the greater Brisbane region must be willing to relocate.
* Flexible working arrangements may be negotiated.
* This position may be hosted by one of QCIF’s Member universities. Details about QCIF can be found here http://qcif.edu.au