

Position Description

Position Title: Software Programmer (Research Assistant)

Salary Range: Level A Step 1-5

Reporting Manager: Dr. Hieu Nim

Direct Reports:

Home Group: Transcriptomics & Bioinformatics

Who are we?

The Murdoch Children's Research Institute (MCRI) is home to significant scientific discoveries. We believe there is an answer, a cure or a better treatment for every childhood condition – and we're determined to find it.

We are a diverse team of world-leading researchers, doctors, engineers, and hardworking professionals in corporate and scientific services from all corners of the world with one shared goal – to transform child health worldwide.

Our strength lies in our partnership and co-location with The Royal Children's Hospital and the University of Melbourne – the Melbourne Children's Campus. This rare model amplifies opportunities to quickly translate research into clinical care.

At MCRI, you'll also find our subsidiary organisation, the Victorian Clinical Genetics Services (VCGS), a specialist childhood, prenatal and adult genetics service. VCGS provides an integrated genetic consultation, counselling, testing and diagnostic support service to children, adults, families and prospective parents.

Together, we share a powerful vision: re-imagine the future of child health.

What is it like to work for us?

We are committed to ensuring a positive working environment that values all backgrounds and experiences. We cultivate an inclusive culture that is underpinned by equal opportunity for all and a culture based on respect, consideration and dignity. We are also committed to developing our people and fostering an environment where learning and development is central to our staff reaching their full potential.

Position Overview

The Research Assistant will support the bioinformatics and programming activities of the Transcriptomics and Bioinformatics Group members and their collaborators. This will involve setting up, maintaining and updating bioinformatics pipelines for the use of the Group members and collaborators. The Research Assistant will design novel algorithms around data integration and visualisation and participate in bioinformatics training activities. Finally, the Research Assistant will develop novel virtual reality (VR) environments with high-fidelity haptic feedback.

Key Accountabilities

- Sets up and maintains bioinformatics pipelines and resources for the use of the Group members and collaborators

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- Liaises with IT and other Bioinformatics groups regarding infrastructure requirements
 - Inducts new group members and affiliates to the Group's bioinformatics infrastructure
 - Bioinformatics training of group members and collaborators
 - Provides assistance in analysing data for Group members and collaborators and presents at conferences
 - Participates and engages in the Group's activities (e.g.: laboratory meetings, scientific retreats, laboratory duties)
 - Develop new software, including data visualisation application front-ends and immersive VR environments with haptic feedback, using Unity API
 - Conduct software quality control, maintenance, and documentations using open source standards including Markdown and GitHub
 - Conducts ethical research at the highest level of integrity and in line with the Australian Code for Responsible Conduct of Research and MCRI policies
 - Assists and contributes to data generation for research and publications
 - Works to improve skill base in research productivity and methodology
 - Assists in high calibre, competitive research
 - Follows standard operating procedures, study protocols and study guidelines
 - Continuous maintenance of neat and orderly records, lab books and data storage
 - Understands and follows field work guidelines GCP / ICH
 - Fosters relationships with key internal and external stakeholders
 - Is engaged in the campus culture including professional development activities and attending internal/external campus conferences and seminars
 - Is aware of, and adheres to, MCRI policy on Intellectual Property/Material Transfer Agreements/Contracts/Clinical and Public Health Outcomes
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Selection Criteria

- Degree/Honours/Masters qualification in Computer Science, Electrical Engineering or related discipline
 - Appropriate level of expertise gained from a combination of experience, training or professional accreditation (Step 2 to 5)
 - Demonstrated capacity to work independently and collaboratively in a team environment
 - Excellent time management, organisational and analytical problem-solving skills
 - Demonstrated excellent verbal and written communication skills in a scientific context
 - Demonstrated computer skills, including spreadsheets, database programs, statistics and word processing
 - Demonstrated understanding of a range of research methodologies and their application in empirical research
 - Demonstrated experience in developing VR applications with high-fidelity haptic feedbacks
 - Proficiency in Unity API, C#, web-based programming (HTML, CSS, PHP and SQL), JavaScript, Markdown, and data visualisation tools
 - Demonstrated experience in technical training (ie: organisation of help-sessions or workshop)
 - Effective communications skills, specifically in communicating computer-related concepts and results to biologists
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Conditions of Employment

- Working with Children & National Police Clearance (if appointed) in compliance with the Victorian Governments Child Safety Standards
 - The right to reside and work in Australia and you meeting any applicable visa conditions
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Health, Safety & Wellbeing

- We are committed to providing and maintaining a working environment which protects the health, safety and wellbeing of our people, partners and the community
 - Employees conducting duties on behalf of MCRI are expected to meet the environment, health and wellbeing requirements and responsibilities specifically required for the role
 - We are committed to supporting children in their right to be safe and adhere to the responsibilities we have to ensure their protection and safety as per the Child Safety Standards Policy
 - Specified positions may be subject to medical review to ensure that the inherent requirements of the role can be undertaken safely.
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