Bioinformatics Officer

About SAGC

The South Australian Genomics Centre (SAGC) is a multi-institutional, national genomics and bioinformatics facility that is supported by Bioplatforms Australia (BPA) through the Australian Government's National Collaborative Research Infrastructure Strategy (NCRIS). The SAGC has consolidated genomics and bioinformatics expertise in the state, with a group of ~10 genomics and bioinformatics staff working side-by-side to deliver innovative genomics and bioinformatics solutions across all areas of genomics research, including agriculture, healthcare and ecology. The SAGC is headquartered in the iconic South Australian Health and Medical Research Institute (SAHMRI) in the Adelaide CBD.

About the Role

An exciting opportunity now exists for a post-doctoral researcher or experienced MSc-level bioinformatician to join the SAGC bioinformatics team. To flourish in this role, you will need to be able to work across multiple different projects and to possess excellent organisational and time-management skills.

This role is primarily responsible for supporting SAGC users to appropriately design genomics-related projects and to analyse and interpret their data. Working collaboratively with researchers across different disciplines, you will have a varied and interesting workload across projects in different areas of genomics, leading bioinformatics analyses with varying levels of complexity.

There are significant opportunities for professional growth and development through exposure to data sets from different genomics technologies including single cell and spatial transcriptomics. Staff are expected to enable research by leading the development of reproducible, standardised pipelines for genomics data analysis and, where necessary, develop new methods and pipelines. Your career development will be supported and you will be encouraged to publish your research and to collaborate on major funding applications to national and international funding bodies.

You will also be supported to develop your bioinformatics capabilities; ensuring that the SAGC can remain at the forefront of genomics. It is expected that you will have interest in and develop your capabilities in at least one specialist area of bioinformatics.

SAGC SOUTH AUSTRALIAN GENOMICS CENTRE

Key Responsibilities

- Support researchers to design innovative but rigorous genomics projects and collaboratively support the bioinformatics aspects of these projects.
- Develop and maintain reproducible bioinformatics pipelines and analyses approaches for routine analyses.
- Where needed develop and implement new bioinformatics approaches, methods or data visualisation approaches.
- Contribute to/or lead the drafting of reports and publications.
- Contribute to/or lead the drafting of applications to major funding bodies.
- Stay at the forefront of bioinformatics by undertaking continuous professional development and learning.
- Participate in/or lead bioinformatics workshops to build capacity among researchers.

Essential Criteria

- MSc, PhD, or equivalent experience, in either bioinformatics, computer science, physics, statistics or other relevant discipline
- Have a broad understanding of at least two of the following areas and a significant interest in developing a deep understanding in at least one:
    - **Transcriptomics**: bulk RNAseq, scRNAseq, spatial transcriptomics,
    - **Genomics**: variant, haplotype and diversity analysis, genome assembly, metagenomics, epigenetics
    - **DevOps**: version control: test driven development and continuous integration, containerisation using Docker/Singularity
    - **Systems biology**: multi-omics data integration, network analysis
    - **Statistics**: linear models, ANOVA, hypothesis testing
    - **Visualisation**: data visualisation and User Interface/Experience design
    - **Workflow systems**: Snakemake and/or Nextflow
    - **Other Omic's technology**: metabolomics, proteomics
- Prior experience with at least one of the following scripting languages: bash, R, Python and Perl
- A highly collaborative person, a strong team player and an excellent communicator
- Ability to work in an organised, methodical way and to manage multiple ongoing projects
- Attention to detail and a desire to understand a project and the intricacies of the data analysis
- Prior experience working in a high-performance computing environment

Desirable Criteria

- Prior experience working in a client-oriented bioinformatics role
- Prior experience working in a biomedical, agricultural or environmental context
- Experience with programming languages such as C/C++, Go, Rust, Java
- Working in a cloud computing environment
- Linux systems administration