Seeking PhD students to join our Genomic Data Science Lab at the National University of Singapore

The Liu lab of Genomic Data Science (https://www.boxiangliulab.com/) develops novel computational tools to extract insights from big data in genomics. We are recruiting two Ph.D. students with a research interest related to any of the following areas:

1) **single cell multi-omic quantitative trait loci.** We seek to identify cell-type-specific regulation of molecular traits using single-cell multi-omic measurements from blood samples. The regulatory signals will help understand several disease areas, with a specific focus on autoimmune and cardiovascular diseases. Our lab is part of the Asian Immune Diversity Atlas, who have collected the largest pan-Asian single-cell dataset.
2) **Genetics of type-2 diabetes.** Singapore has one of the highest prevalence of diabetes. We seek to identify the genetic drivers of type-2 diabetes using a combination of genomic, transcriptomic, proteomic, and metabolomic datasets in a multi-ethnic pan-Asian cohort with tens of thousands of participants.

Application / Programme Information

Application for the Jan 2023 intake is now open until **30 Sep 2022**. Interested applicants can submit their application online via the Graduate Admission System. Applicants are encouraged to browse through the User Guide to better equip themselves before commencing their application. More information about our postgraduate programme can be found at the following links:

Overview of the programme
https://www.science.nus.edu.sg/admissions/graduates/research-programmes/

Admission requirements
https://www.science.nus.edu.sg/graduates/phd/

Degree requirements
http://www.nus.edu.sg/registrar/academic-information-policies/graduate/graduate-degreerequirements

Course fees
http://www.nus.edu.sg/registrar/administrative-policies-procedures/graduate/graduate-fees

Scholarship information
https://nusgs.nus.edu.sg/scholarships/

Minimum requirements

- Bachelor / Master's degree in genetics/genomics, bioinformatics/computational biology, statistics, data science, computer science, electrical engineering, related technical fields, or equivalent practical experience. We are open to students with background in biology who are willing to learn bioinformatics.
- Programming experience in UNIX, R and/or Python, and knowledge of basic statistical and machine learning techniques
- Familiarity with high-performance and/or cloud computing
- Have excellent communication skills in written and spoken English.
- Be self-motivated, proactive, resilient, and humble.

Preferred qualifications

- Evidence of prior research experience in genomics / bioinformatics / data science or related fields.

What we offer

- World-class high-performance computing infrastructure with thousands of CPU and GPU nodes
- Access to the latest sequencing platforms and technologies
- Access to large-scale genetic and multi-omic datasets with tens of thousands of individuals.
- Personalized mentorship for both academic and industry career trajectories
- Flexible work hours and hybrid work-from-home opportunities
- Comprehensive healthcare insurance coverage

Contact information

If you are interested in joining our lab, please email Boxiang Liu at jollier.liu@gmail.com with the following information:

- A cover letter to describe previous work and/or research experience and projects of interest in our lab. Please also describe your level of experience with Unix, R, and Python.
- A short CV or resume
- Contact information for two references