deep genomics

(Senior) Research Scientist - Statistical Genetics

North America

Systems And Target Biology / Full-Time / Hybrid

About Us

Deep Genomics is at the forefront of using artificial intelligence to transform drug discovery. Our proprietary AI platform decodes the complexity of RNA biology to identify novel drug targets, mechanisms, and genetic medicines inaccessible through traditional methods. With expertise spanning machine learning, bioinformatics, data science, engineering, and drug development, our multidisciplinary team in Toronto and Cambridge, MA is revolutionizing how new medicines are created.

Where You Fit In

In this role, you will be responsible for leveraging large-scale human genetic datasets (e.g., whole genome sequencing, whole exome sequencing, array genotyping) for genetic target identification and patient stratification. You will be responsible for the development and implementation of analyses methods. You will collaborate closely with machine learning scientists for the development of integrative approaches using artificial intelligence to detect and prioritize associations. You will work closely with the statistical genetics, bioinformatics and biology teams to prioritize targets.
We are looking for someone with a PhD in statistical genetics and 2+ years of postgraduate experience who is passionate about the potential of artificial intelligence to disrupt therapeutic target discovery and who is able to adapt to changing requirements in a rapidly evolving field.

Key Responsibilities

- Perform advanced analyses, including GWAS, PheWAS, rare variant burden testing, Mendelian randomization. Apply and improve post-hoc analysis methods to investigate and prioritize potential targets.
- Develop robust methods for integrating AI-powered variant effect predictors with traditional analysis techniques.
- Create robust containerized software workflows and execute them at scale on Google Cloud Platform (GCP) infrastructure.
- Participate in cross-functional projects to improve and apply genomic AI models for target discovery and patient stratification.
- Translate findings into biological insights that inform drug target and patient prioritization.
- Actively participate in code review and testing (your own and others from within the team).

Basic Qualifications

- PhD in human statistical genetics or related discipline with 2+ years of postgraduate experience and a robust publication record.
- Experience with large-scale human genetic association analyses (WGS, WES, GWAS, PRS, etc.) using biobanks or other large datasets.
- Strong scientific programming skills (Python strongly preferred) and experience with high-throughput or cloud compute (especially GCP).
- Solid understanding of human genetics and basic understanding of human biology.
- Critical thinking, intellectual curiosity and commitment to innovation.
- Excellent communication and interpersonal skills.
- Excellent documentation of workflows and results

Preferred Qualifications

- Post-graduate experience in either academia or industry.
- Direct experience with UK Biobank.
- Familiarity with variant effect predictors, and machine learning or AI models in the context of target discovery.

- Familiarity with systems biology techniques and/or single-cell sequencing data.
- Experience integrating over multi-modal data to derive insights with, for example, large language models.

What we offer

- A collaborative and innovative environment at the frontier of computational biology, machine learning, and drug discovery.
- Highly competitive compensation, including meaningful stock ownership.
- Comprehensive benefits - including health, vision, and dental coverage for employees and families, employee and family assistance program.
- Flexible work environment - including flexible hours, extended long weekends, holiday shutdown, unlimited personal days.
- Maternity and parental leave top-up coverage, as well as new parent paid time off.
- Focus on learning and growth for all employees - learning and development budget & lunch and learns.
- Facilities located in the heart of Toronto - the epicenter of machine learning and AI research and development, and in Kendall Square, Cambridge, Mass. - a global center of biotechnology and life sciences.

Deep Genomics welcomes and encourages applications from people with disabilities. Accommodations are available on request for candidates taking part in all aspects of the selection process.

Deep Genomics thanks all applicants, however only those selected for an interview will be contacted.

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