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Research Scientist (Computational Biology, Cells and Tissues), London

Apply

London, England, United Kingdom

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We are here to advance human health, by reimagining drug discovery with the power of artificial intelligence.

The future is coming. A future enabled and enriched by the incredible power of machine learning. A future in which diseases are curtailed or cured by better and faster drug discovery.

Our values exist in service of that future. We think they'll help us bring it closer, too.

Come and be part of an interdisciplinary team driving groundbreaking innovation and play a meaningful role in contributing towards us achieving our ambitious goals, while being a part of an inspiring and collaborative culture.

The world we want tomorrow is the one we're building today. It starts with the culture at this company. It starts with you.

About Iso

Isomorphic Labs (IsoLabs) was founded in 2021 and is led by Sir Demis Hassabis. Our aim is to usher in a new era of biomedical breakthroughs and find cures for some of humanity's devastating diseases.

Our foundations are built on the success of Google DeepMind's AlphaFold, but we didn't stop there! We are continuing to develop and implement state-of-the-art technologies as we move towards our goal of dramatically accelerating and improving the process of designing and bringing new medicines to patients.

We have built a world-leading drug design engine comprising foundational AI models that are capable of working across multiple therapeutic areas and drug modalities. The company is continually innovating on model architecture and developing cutting-ed capabilities to advance rational drug design.

Your impact

This is an exciting opportunity for you to contribute to an ambitious Cell and Tissue Biology research program within the Computational Biology team, working in partnership with leading Machine Learning (ML) Researchers, Chemists and Biologists.

Building on the successful models in place to predict protein structure (AlphaFold-3), there is an unique opportunity for Research Scientists to have a direct impact on drug discovery using innovative ML approaches for modeling cells and tissues in health and disease. These are newly created roles; driven by a passion for problem solving, you will need to use your previous experience and show initiative in order to fully carve out your contribution.

What you will do

- Make original research contributions to enable machine learning model development, applied to cell and/or tissue biology, that impacts one or more critical problems in drug development.
- Identify and create novel ML approaches, model architecture, and training strategies, along with the required data to train.
- Analyse and tune experimental results to inform future experimental directions.
- Work within cross-functional ML Research, Chemistry, Engineering and Biology Teams, to direct research hypotheses and deliver outstanding research.
- Use your experience to undertake analysis of diverse computational biology datasets, including genetics, genomics, single-cell and bulk transcriptomics, proteomics, functional perturbation screens, imaging, knowledge graphs, PPI, clinical or other data types.
- Work in partnership with other Research & Development teams to evaluate the utility of research models, and incorporate feedback to ensure research outputs deliver high impact for drug design and development.
- Work with Bioinformatics, Data, and other groups to influence Iso's datasets and pipelines strategy, to ensure innovative insights from these data are consistently brought to bear within drug development programmes.
- Perform thorough data analysis and data quality assurance checks, with a strong focus on accuracy and reproducibility, inline with industry standard processes.
- Work with other members of the Computational Biology team to deliver a unified team strategy.
- Report and present research findings and developments clearly and efficiently, and provide documentation, guidance, and communication on computational biology to the wider organisation.

Skills and qualifications

Essential:

- Experience in computational biology specializing in cell and/or tissue biology, with PhD and research experience (i.e. postdoctoral or industry experience), or equivalent experience
- Track record of delivery of outstanding research using deep learning techniques, including designing new ML architectures, hands-on experimentation, analysis, and visualisation
- Strong knowledge of linear algebra, calculus, probability, and statistics
- Demonstrated ability to write clean, idiomatic, and highly performant Python code
- Experience using ML frameworks such as JAX, PyTorch, or TensorFlow, and scientific software such as NumPy, SciPy, or Pandas
- Expertise with detailed data quality control procedures and data visualisation
- Experience with experimental design and statistical analysis
- Demonstrated understanding of computational biology tools and methodologies and experience with the analysis of large -omics datasets
- Familiarity with a variety of assaying techniques, including NGS, cell-based assays, functional genomics, single-cell techniques, and image-based assays and their respective data analysis approaches
- Demonstrated understanding of the principles of molecular cell biology and genetics, or related biological disciplines
- Familiarity with data processing pipelines and tools
- Ability to effectively communicate scientific concepts to a variety of audiences
- Experience in using Git for version control and familiarity with CI/CD concepts
- Experience working in a Linux environment
- Demonstrated ongoing career progression / trajectory and a passion for learning

Nice to have:

- Experience in the context of therapeutic or diagnostic development programmes
- Familiarity with structural biology and biochemistry
- Experience working with complex data types, such as 3D epigenomics, long-reads, live imaging, and single-molecule localization microscopy
- Familiarity with the current landscape of immuno-oncology research and therapeutic approaches
- Experience working with clinical data
- Experience in applying computational biology methods to the process of drug discovery, such as methods used for disease modelling and target discovery, combination strategies, as well as biomarker development
- Experience applying computational biology workflows on Google Cloud Platform

Culture and values