Katherine Driscoll

Computational Biologist

Grenoble, France
kateedriscoll01@gmail.com
Personal webpage

Technical Skills

Programming

Python, Bash, C++, Julia, R, Wolfram, Fortran, SQL

Project Management

Cross-functional collaboration, Github Projects, Scrum, Click-up

Computational Biology

Scanpy, GSEA, PyDESeq2, TileDB-SOMA, Seurat, limma, Plotly, Dash, Networkx

Data Visualization

Matplotlib, Seaborn, Dash apps, Plotly, Quarto, Jupyter, Tufte-latex, Bokeh

DevOps/MLOps

Git, CI/CD, Github Actions, GCP, Scaleway, Docker, Microservices architecture, BentoML, REST APIs, Jenkins

Machine Learning

PyTorch, PyTorch Geometric, scikit-learn, Tensorflow

Bioinformatics

Viash, Docker

Soft Skills

- Leadership
- Problem-solving
- Organization
- Critical thinking
- Teamwork
- Communication

Languages

- English
- French
- Spanish

Profiles

kateedriscoll
Katherine Driscoll

Summary

Specialized in the construction of single-cell atlases and pioneering a platform to evaluate single-cell foundation models for drug discovery. Seeking a Senior Computational Biologist role to apply expertise in driving innovative solutions.

Experience

DeepLife — **Sept. 2022 - Present**
Computational Biologist — Remote
https://www.deeplife.co/

- **Foundation model API**: Leading a team to streamline access to single-cell foundation models and their use in tasks such as cell type annotation and target identification. Collaborating with cross-functional teams to ensure integration, scalability, and usability.
- **Target identification leaderboard**: Spearheading the benchmarking of internal target identification methods with the results providing a data-driven approach to product development.
- **scRNA-seq atlases**: Led a team to convert a technical-debt-ridden project into a scalable, cloud-based pipeline for ensuring deliveries for potential clients.
- **Biomarker identification pilot**: Designed and conducted project exploring transcriptomic data in biomarker discovery. Revealed limitations in small-scale analyses and devised strategies for future large-scale studies.
- **DevOps best practices and cloud resource management**: Onboard new team members and provide training on DevOps practices, including code documentation, code review, and CI/CD. Encourage responsible use of cloud computing resources to optimize costs and efficiency.
- **Team development and collaboration**: Advocate for knowledge sharing via parallel journal club structure (technical and high-level). Participate in recruitment by sourcing candidates, and organizing and conducting interview sessions.

Education

Ph.D. in Theoretical Physics — **2018-2022**
Long-range interactions and charge frustration in strongly correlated quantum matter.
University of Grenoble Alpes, Grenoble, France

M.Sc. in Physics — **2016-2018**
Atomic scale modeling of physical, chemical, and biomolecular systems
ENS de Lyon, La Sapienza, Universiteit van Amsterdam, Vrije Universiteit

B.Sc. in Physics, B.Sc. in Mathematics — **2012-2016**
University of South Carolina, Columbia, South Carolina, USA

Publications

A quantum theory of the nearly frozen charge glass — **May 2023**
SciPost Physics
doi: 10.21468/SciPostPhys.14.5.124

Long-range Coulomb interactions and charge frustration in strongly correlated quantum matter — **July 2022**
Ph.D. Thesis, HAL Archives
HAL Id : tel-03626120

Pseudogap metal induced by long-range Coulomb interactions — **May 2021**
Physical Review B
doi: 10.1103/PhysRevB.103.L201106

Single-Molecule Imaging Reveals that Rad4 Employs a Dynamic DNA Damage Recognition Process — **Oct. 2016**
Molecular Cell
doi: 10.1016/j.molcel.2016.09.005