



(<http://repertoireimmunemedicinesinc.applytojob.com/apply>)

Data Scientist

📍 Cambridge, MA

🕒 Full Time

🏢 Platform & Target Discovery and Validation

🎓 Experienced

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Data Scientist

Repertoire Immune Medicines is a biotechnology company working to unlock and direct the remarkable power of the human immune system to treat cancer, autoimmune disease and infectious disease. The company was founded on the belief that understanding the repertoire of T cell receptor (TCR)-antigen immune synapses that maintain health and drive disease represents one of the greatest opportunities for innovation in medical science. Repertoire scientists created and developed the DECODE™ platform, which allows in-depth characterization of TCR-antigen pairs, and the ability to deploy this information in the form of novel targeted immune medicines to fundamentally reprogram the immune system to kill tumors or induce immune homeostasis.

From its sites in Cambridge, Massachusetts and Zurich, Switzerland, Repertoire's team is advancing a pipeline of DECODE-enabled immune medicines, such as TCR bispecifics and mRNA cancer vaccines for treatment of solid tumors and mRNA tolerizing vaccines for treatment of autoimmune diseases.

Repertoire was founded by Flagship Pioneering and is supported by a strong investor base. In addition, the company recently entered a strategic partnership with Bristol Myers Squibb to develop tolerizing vaccines for up to three autoimmune diseases.

Role Overview

Repertoire Immune Medicines is seeking a talented Data Scientist to enable the discovery of new insights from our extensive and growing DECODE immune synapse database. The successful candidate will work at the interface of data analytics, data mining, statistics, bioinformatics, and machine learning with broad impact across early discovery, candidate development, and biomarker discovery. In addition, this role is responsible for analyzing large, multi-dimensional datasets and developing methods to identify and visualize signal in noise.

The selected candidate will be a part of the Computational Analytics Team, working alongside Computational Engineering, and interfacing directly with experimentalists in Platform Discovery, Immunology, and Protein Sciences to scope, build, and implement computational solutions. The ability to work in a fast-paced, highly collaborative environment will be critical to success.

Key Responsibilities

- Work alongside computational biologists, computer science engineers, wet-lab scientists, and project managers, contributing to early discovery, lead identification, lead optimization, and biomarker development.
- Develop and implement robust analytical approaches/workflows/pipelines/apps as needed for in-house discovery and development.
- Use analytical methods to identify patterns, signals, and features in highly multiplexed experimental assay data.
- Assist in the development, optimization, and assessment of machine-learning models.
- Maintain familiarity with scientific literature to assist in the development and benchmarking of new methods.
- Build and deploy visualizations and user interfaces.
- Support various teams for the processing and interpretation of next-generation sequencing (NGS) data and ensure timely delivery of results.
- Assist in the conception, development, and validation of purpose-built AI/ML models.
- Influence experimental design to maximize future model learning potential.
- Maintain high-quality documentation of work and discoveries, creating written reports, electronic lab notebooks, technical presentations for internal or external audiences, internal database records, code comments, and software documentation.
- Communicate key data insights and to various audiences within R&D.
- Manage and execute multiple projects in across matrixed teams, working with leadership to meet short timelines while maintaining scientific rigor.
- Provide transparency and regular communication on project status, setbacks, and modification of strategy.
- Seek out external resource and expertise when required.

Qualifications/Experience

- Master's degree in data science/bioinformatics/computational biology/machine learning or related field. PhD preferred.
- Extensive experience working with multi-dimensional datasets.
- Extensive experience with Python analysis modules including pandas, numpy, scipy.

- Experience performing principal component analysis, multi-variate regressions, ANOVA, and/or other statistical methods to identify relevant parameters and/or outcomes.
- Preferred experience processing and/or building pipelines for next-generation sequencing data including gene expression, whole exome, TCR, single-cell.
- Preferred experience performing analysis on public datasets TCGA, GTEx, PCAWG, ICGC, AACR Genie etc.
- Familiarity with machine-learning model development, optimization, and assessment.
- Familiarity with the development of deep generative models (e.g., autoregressive models, VAEs, CNNs, GANs, etc.).
- Demonstrated expertise in core coding environments including Python, R, SQL, bash scripts.
- Experience working in cloud computing environments.
- Preferred experience with AI frameworks like TensorFlow, sklearn.
- Preferred experience with python Streamlit or R Shiny apps
- Preferred experience with data visualization packages like matplotlib, seaborn, plotly, altair, ggplot2.
- Team player with ability to contribute positively to group and company culture.
- Ability to communicate effectively across various teams of computational and non-computational scientists.
- Ability to take ownership of challenging projects and drive them to completion.
- Ability to approach problems systematically to achieve robust solutions.

Repertoire is committed towards social responsibility and developing an inclusive culture. Much as the power of the immune system lies in the diversity of T and B cells, we believe that our work requires the creativity and ingenuity of a diverse workforce, and we are committed to pursuing that in all facets of the work experience at Repertoire. We will continue to educate ourselves about the inequities and barriers present in our society and act as a company where we can make a difference.

Repertoire is proud to be an Equal Opportunity Employer.

Recruitment & Staffing Agencies: Repertoire Immune Medicines ("Repertoire") does not accept unsolicited resumes from any source other than candidates. The submission of unsolicited resumes by recruitment or staffing agencies to Repertoire or its employees is strictly prohibited unless contacted directly by Repertoire's internal Human Resources team. Any resume submitted by an agency in the absence of a signed agreement will automatically become the property of Repertoire, and Repertoire will not owe any referral or other fees with respect thereto.

REQUIRED *

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Attach resume or Paste resume

No answer 

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Are you authorized to work in the United States? *

-- No answer --

Will you now or in the future require sponsorship for employment visa status? (e.g., H-1B visa status?) *

-- No answer --

If you were referred by a current Repertoire employee, please provide the employee's name here:

We are only evaluating candidates who currently reside in reasonable commuting distance to our office in Cambridge, MA. Does your current location meet this requirement? *

☐ Yes

☐ No

The following questions are entirely optional.

To comply with government Equal Employment Opportunity and/or Affirmative Action reporting regulations, we are requesting (but NOT requiring) that you enter this personal data. This information will not be used in connection with any employment decisions, and will be used solely as permitted by state and federal law. Your voluntary cooperation would be appreciated. [Learn more \(https://www.eeoc.gov/employees-job-applicants\)](https://www.eeoc.gov/employees-job-applicants).

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Decline to answer

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