

Data Scientist, Multimodal Data & Analytics in Clinical Development

Job ID
REQ-10052855
May 22, 2025
USA

Summary

The Multimodal Data and Analytics group in Advanced Quantitative Sciences, Novartis Development is searching for a Data Scientist to support the design and hands-on execution of modeling strategies using patient-level -omics, imaging and clinical outcomes data. As part of interdisciplinary drug development teams, your work will influence development decisions and inform late phase trials and regulatory submissions. Your focus will be on combining your domain knowledge of drug development, trials and disease biology with cutting-edge methodologies (from survival models to machine learning/AI) and technologies (imaging and multi-omics) to create tangible impact on clinical trials and patients.

About the Role

Your Key Responsibilities:

- Perform hands-on modeling of integrated clinical, outcomes and high-dimensional, patient-level biomarker data from clinical trials (genomics, transcriptomics, proteomics, flow cytometry, medical imaging, etc.) to generate fit-for-purpose evidence that is applied for decision making in drug development programs.
- Contribute to planning, execution, interpretation, validation and communication of innovative exploratory biomarker and AI analyses, to facilitate internal decision making, and support submissions of candidate drug and associated companion diagnostics packages.
- In collaboration with cross-functional partners, provide quantitative, scientific and strategic input to as well as hands-on execution of the integrated data science and AI strategies for one or more clinical programs in drug development.
- Collaborate with other line functions. Explain statistical concepts in an easily understandable way to non-statisticians and provide adequate statistical justifications and interpretation of analysis results for actions/decisions/statements, when required.
- Contribute to departmental initiatives (e.g., infrastructure/ process-related or scientific activities)
- Contribute to the scientific content of materials for internal decision boards/regulatory/submission documents: Briefing Books, decision criteria, trial design(s), responses to Health Authority questions

Video Link <https://www.youtube.com/watch?v=vUAhCMIZbys>

This position will be located at Cambridge, MA site and will not have the ability to be located remotely.

Role Requirements:

Essential Requirements:

- Advanced degree in computational biology, statistics, data science or other quantitative discipline with extensive exposure to clinical trials and drug development. MS with 5+ years relevant work experience or PhD with 2+ years of relevant work experience in the pharma/biotech industry; level will commensurate with experience.
- Strong knowledge and understanding of (multivariate implementations of) statistical methods such as time to event analysis, machine learning, meta-analysis, mixed effect modeling, longitudinal modeling, Bayesian methods, variable selection methods (e.g., lasso, elastic net, random forest), design of clinical trials. Experience applying machine learning or deep learning in a clinical trial context is useful.
- Hands-on familiarity with statistical and analytical methods for genetics and -omics data analysis and working knowledge of high dimensional biomarker platforms (e.g., next generation sequencing, transcriptomics, proteomics, flow cytometry, etc.).
- Good understanding of clinical study design principles and familiarity working with patient-level clinical data in a clinical trial (GxP) setting
- Strong programming skills in R and Python. Demonstrated knowledge of data visualization, data engineering, exploratory analysis and predictive modeling.
- Good interpersonal and communication skills (verbal and writing)
- Ability to leverage technical and scientific information from a variety of sources in order to effectively enable data analysis and the scientific interpretation of analysis results.
- Ability to develop and deliver clear and concise presentations for both internal and external meetings in key decision-making situations.

Desired Requirements:

- Experience with modern data science methods and designing machine learning or other AI architectures for applications in healthcare
- Additional expertise in big data, web-based applications, good coding practice, source code management (Git, bitbucket)
- Exposure to and hands-on experience with various forms of RWE is a plus.
- Experience analyzing and using models built based on PET-CT/MRI scans, H&E digital pathology, IHC, OCR, physiological sequence data (ECGs) or other non-canonical data formats a plus.

Novartis Compensation and Benefit Summary:

The pay range for this position at commencement of employment is expected to be between: \$119,700-\$222,300/year or \$132,300-\$245,700/year; however, while salary ranges are effective from 1/1/25 through 12/31/25, fluctuations in the job market may necessitate adjustments to pay ranges during this period. Further, final pay determinations will depend on various factors, including, but not limited to geographical location, experience level, knowledge, skills, and abilities. The total compensation package for this position may also include other elements, including a sign-on bonus, restricted stock units, and discretionary awards in addition to a full range of medical, financial, and/or other benefits (including 401(k) eligibility and various paid time off benefits, such as vacation, sick time, and parental leave), dependent on the position offered. Details of participation in these benefit plans will be provided if an employee receives an offer of employment. If hired, employee will be in an “at-will position” and the Company reserves the right to modify base salary (as well as any other discretionary payment or compensation program) at any time, including for reasons related to individual performance, Company or individual department/team performance, and market factors.

Why Novartis:

Our purpose is to reimagine medicine to improve and extend people's lives and our vision is to become the most valued and trusted medicines company in the world. How can we achieve this? With our people. It is our associates that drive us each day to reach our ambitions. Be a part of this mission and join us! Learn more here: <https://www.novartis.com/about/strategy/people-and-culture>

You'll receive:

You can find everything you need to know about our benefits and rewards in the Novartis Life Handbook.

<https://www.novartis.com/careers/benefits-rewards>

Commitment to Diversity & Inclusion: Novartis is committed to building an outstanding, inclusive work environment and diverse teams' representative of the patients and communities we serve.

Accessibility and Reasonable Accommodations: The Novartis Group of Companies are committed to working with and providing reasonable accommodation to individuals with disabilities. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the application process, or in order to perform the essential functions of a position, please send an e-mail to tas.nacomms@novartis.com call +1(877)395-2339 and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Join our Novartis Network: If this role is not suitable to your experience or career goals but you wish to stay connected to learn more about Novartis and our career opportunities, join the Novartis Network here:

<https://talentnetwork.novartis.com/network>

Novartis is unable to offer relocation support for this role: please only apply if this location is accessible for you.

Why Novartis: Helping people with disease and their families takes more than innovative science. It takes a community of smart, passionate people like you. Collaborating, supporting and inspiring each other.

Combining to achieve breakthroughs that change patients' lives. Ready to create a brighter future together?

<https://www.novartis.com/about/strategy/people-and-culture>

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<https://talentnetwork.novartis.com/network>

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The Novartis Group of Companies are committed to working with and providing reasonable accommodation to individuals with disabilities. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the application process, or to perform the essential functions of a position,

please send an e-mail to us.reasonableaccommodations@novartis.com or call +1(877)395-2339 and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Division

Development

Business Unit

Innovative Medicines

Location

USA

State

Massachusetts

Site

Cambridge (USA)

Company / Legal Entity

U014 (FCRS = US014) Novartis Pharmaceuticals Corporation

Functional Area

Data and Digital

Job Type

Full time

Employment Type

Regular

Shift Work

No

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