

Expert II Data Science, Cargo Design

Job ID
REQ-10050728
Jul 15, 2025
USA

Summary

This position will be located at the San Diego site and will not have the ability to be located remotely. Please note that this role would not provide relocation and only local candidates will be considered.

Internal Title: Expert II Data Science

We are recruiting a highly motivated and innovative Bioinformatics/Data Scientist, to join our multidisciplinary team advancing next-generation gene therapy programs. This role offers a unique opportunity to drive the design, optimization, and evaluation of gene therapy payloads, working at the intersection of computational biology, high-throughput experimentation, and therapeutic discovery. The successful candidate will contribute to projects that integrate cutting-edge bioinformatics, machine learning, and functional genomics to accelerate the development of transformative gene therapies.

About the Role

Key Responsibilities:

- Designing, implementing, and maintaining custom computational pipelines for analysis of bulk and single-cell sequencing data, including but not limited to RNA-Seq, smRNA-seq, scRNA-seq, and scATAC-seq.
- Applying machine learning, statistical modeling, and data integration approaches to guide large-scale functional screens with the goal of identifying and optimizing functional elements for gene therapy payloads.
- Developing scalable, reproducible, and well-documented pipelines for quality control, processing, and integrative analysis of diverse high-throughput sequencing datasets.
- Integrating publicly available and internal datasets to uncover actionable biological insights that inform payload design.
- Staying current with emerging technologies and advances in bioinformatics, gene therapy, and synthetic biology, and proactively propose innovative approaches to improve experimental design and analysis.
- Presenting results, methodologies, and key insights to multidisciplinary teams and stakeholders through clear visualizations, written reports, and scientific presentations.

Essential Requirements:

- Educational Background: Ph.D Bioinformatics, Computational Biology, Computer Science (recent Ph.D. welcome to apply) OR MS degree in bioinformatics, computational biology, computer science, structural biology or a related field with 4 years of relevant industry research experience
- Proficiency in developing and deploying NGS data analysis pipelines, with expertise in Python, R, and workflow management tools.
- Hands-on experience with single-cell data analysis and familiarity with key tools and algorithms in the field.

- Strong track record of applying machine learning to genomics problems, supported by peer-reviewed publications.
- Excellent interpersonal and written communication skills; capable of effectively engaging with collaborators across scientific and technical disciplines.
- Independent and critical thinker with strong problem-solving skills, a collaborative mindset, and the ability to thrive in a dynamic team environment.

Desired Requirements

- Solid understanding of gene therapy principles, including AAV vector engineering, promoter/enhancer function, and payload design considerations.

Novartis Compensation and Benefit Summary: The pay range for this position at commencement of employment is expected to be between: \$103,600 and \$192,400/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

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know the nature of your request and your contact information. Please include the job requisition number in your message.

Division

Biomedical Research

Business Unit

Universal Hierarchy Node

Location

USA

State

California

Site

San Diego (California)

Company / Legal Entity

U175 (FCRS = US175) Novartis Institutes for BioMedical Research, Inc.

Functional Area

Data and Digital

Job Type

Full time

Employment Type

Regular

Shift Work

No

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