NOVARTIS

Data Scientist, AI for Biomedical Imaging

Job ID
REQ-10082558
Jul 09, 2026
LOC_US

About the Role

Internal Job Title: Senior Expert I/II, Data Science

Position Location: Onsite, Cambridge, MA #LI-Onsite

Role Responsibilities:

- Lead AI-enabled image analysis strategies for complex biological imaging workflows, acting as the embedded imaging-AI scientific partner working side-by-side with wet-lab scientists to understand emerging assay needs, align approaches with scientific priorities and platform standards, and explain advanced AI concepts in accessible terms.
- Identify high-impact opportunities where AI can deliver meaningful scientific value and define rigorous benchmarking and evaluation strategies to guide method selection.
- Develop, validate, and deploy robust image analysis algorithms to characterize cellular, organoid, tissue, and other complex biological phenotypes in high-throughput and high-content imaging data, generating reproducible outputs that support decision-making in drug discovery projects.
- Drive adoption of advanced AI methods for imaging, including deep learning, vision foundation models, embedding-based phenotyping, segmentation, classification, and multimodal integration, translating state-of-the-art methods into practical, validated workflows that augment expert review and enable scalable interpretation of large, high-dimensional datasets.
- Contribute to scalable, reusable image analysis workflows in partnership with other data scientists, data engineering, and platform teams, championing best practices across the workflow lifecycle.

Essential Requirements:

- PhD in computer science, AI, machine learning, biomedical image analysis, computational imaging, data science, or a related quantitative field, with 3+ years of applied experience in AI for bioimaging and computer vision.
- Demonstrated experience developing and validating image analysis algorithms for biological, biomedical, or pharmaceutical research applications, with practical experience in image segmentation, feature extraction, phenotypic profiling, object classification, or representation learning applied to high-content or high-throughput imaging data.
- Practical expertise in designing benchmarking and evaluation strategies to compare image analysis methods and guide rigorous, evidence-based model selection.
- Ability to work effectively in Linux-based high-performance computing, cloud, or large-scale data processing environments, with a strong commitment to reproducible research, version control, testing, and data provenance.
- Strong proficiency in Python and the scientific deep learning stack (e.g., PyTorch, Hugging Face, Lightning, MONAI), along with hands-on experience using image analysis tools such as scikit-image, OpenCV, napari, Cellpose, StarDist, InstanSeg, and OME-Zarr.
- Self-motivated experienced contributor who thrives in a collaborative, multidisciplinary environment with biologists, imaging scientists, software engineers, and bioinformatics partners, working with appropriate independence and helping shape project direction through both technical expertise and scientific judgment.
- Excellent scientific communication and stakeholder engagement skills, including the ability to explain complex AI and image analysis concepts to experimental scientists, project teams, engineers, and non-technical audiences.

Desirable Requirements:

- Experience developing or adapting foundation models, self-supervised learning approaches, multimodal AI models, or embedding-based analysis methods (e.g., DINO, CLIP, SAM) for biological imaging data.

- Familiarity with the drug discovery pipeline, phenotypic screening, translational biology models, or pharmaceutical research processes.
- Demonstrated success in turning project-specific solutions into reusable, scalable workflows or standardized analysis products integrated into enterprise platforms, production pipelines, or user-facing tools.
- Track record of scientific publication, conference presentations, open-source contributions, or internal technical leadership in AI, computer vision, biomedical image analysis, or related fields.
- Familiarity with agentic coding tools and AI-assisted development workflows (e.g., Claude Code, Copilot).

Compensation & Benefits:

The salary for this position is expected to range between $126,000 and $234,000 USD annually for Senior Expert I, Data Science, and $138,600 and $257,400 USD annually for Senior Expert II, Data Science. The final salary offered is determined based on factors like, but not limited to, relevant skills and experience, and upon joining Novartis will be reviewed periodically. Novartis may change the published salary range based on company and market factors.

Your compensation will include a performance-based cash incentive and, depending on the level of the role, eligibility to be considered for annual equity awards.

US-based eligible employees will receive a comprehensive benefits package that includes health, life and disability benefits, a 401(k) with company contribution and match, and a variety of other benefits. In addition, employees are eligible for a generous time off package including vacation, personal days, holidays and other leaves.

To learn more about the culture, rewards and benefits we offer our people click here.

Role Requirements

Division
DIV_RE
Business Unit
Research
Location
LOC_US
Site
Cambridge (USA)
Company / Legal Entity
U175 (FCRS = US175) Novartis Institutes for BioMedical Research, Inc.
Functional Area
FCT_DD
Job Type
Full time
Employment Type
Regular
Shift Work
No
Apply to Job

Job ID
REQ-10082558

Data Scientist, AI for Biomedical Imaging

Apply to Job

List of links present in page

1. https://jobapi.novartis.com/req-10082558-data-scientist-ai-biomedical-imaging
2. https://www.novartis.com/sites/novartis_com/files/novartis-life-handbook.pdf
3. https://novartis.wd3.myworkdayjobs.com/en-US/Novartis_Careers/job/Cambridge-USA/Data-Scientist--AI-for-Biomedical-Imaging_REQ-10082558-1
4. https://novartis.wd3.myworkdayjobs.com/en-US/Novartis_Careers/job/Cambridge-USA/Data-Scientist--AI-for-Biomedical-Imaging_REQ-10082558-1