NOVARTIS

Senior Data Scientist Gen AI/NLP

Job ID
REQ-10010854
Jan. 28, 2025
USA

Zusammenfassung

Location: Cambridge, MA #LI-Hybrid

The AI & Computational Science (AICS) team at Biomedical Research, Novartis is at the forefront of innovating drug discovery with AI. Our mission is to accelerate the development of transformative medicines for patients worldwide. AICS is looking for a highly motivated technical and scientific leader in the field of Generative AI to push the boundaries of disease understanding and drug discovery. In this role, you will have the opportunity to create impact at the intersection of scientific research, drug discovery, and AI.

About the Role

Key Responsibilities
•Designing, developing, implementing, training, testing, and refining modern deep learning AI models for data that is typically represented as sequences, such as text, graphs, or biological sequences (e.g., DNA, RNA, or proteins).
•Applying a deep understanding of foundation models, including pre-trained and large language models, to build generative AI applications in the domains of biology, chemistry, and text.
•Designing and developing innovative AI model architectures that leverage principles from encoder/decoders, jointly trained models, Siamese-twin models, VAEs, GANs, etc. You will also be involved in advanced training methods such as GPT and Diffusion, and developing/refining learning objectives including self-supervision.
•Taking a hands-on role and delivering on highly visible projects.
•Conducting applied AI experiments using scientific, rigorous, and reproducible methodologies on internal and public datasets to ensure publishable results.
•Serving as an ambassador for AI/Data Science by presenting and publishing articles.
•Building bridges between academia, technology, and industry partners.
•Keeping up-to-date with the latest developments in the field and mentoring associates.
•Being part of a unique organization and working with an interdisciplinary team of highly accomplished scientists to push the frontiers of AI in disease understanding and drug discovery.

This opportunity is located at the Novartis Cambridge (MA) site and will not have the ability to be located remotely. Relocation assistance is not available.

The pay range for this position at commencement of employment is expected to be between $112,800 and $169,200 per year; however, while salary ranges are effective from 1/1/24 through 12/31/24, 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.

Role Requirements:
•Deep knowledge of standard AI models, such as Transformers, RNNs, and CNNs, used in NLP and other sequence data domains.
•Extensive experience with Large Language Models (LLMs), including prompt engineering, use of embeddings, RAG, LangChain, and application architectures using LLMs.
•Emerging uses of AI for biology and chemistry, leveraging models from NLP.
•Experience with knowledge graphs and Graph Neural Networks.
•Expert-level Python programming skills.
•Ability to work effectively in a team and elevate the team's performance in all aspects.
•Cloud computing optimization for high-performance AI model training.
•Understanding of explainability, bias, and ethics in applying AI models.
•Statistical methods necessary to analyze results for AI models, including statistical significance testing.
•An advanced degree (master's or doctoral) in computer science or a closely related computational field.
•Three or more years of relevant leadership and publication track record in deep learning and applied AI research and application.
•3+ years of experience in end-to-end AI model development for realistic, large-scale datasets.
•Experience in the tech industry is highly relevant, and any experience in pharma, biotech, or healthcare is a plus.

Why Novartis?
766 million lives were touched by Novartis medicines in 2021, and while we're proud of this, we know there is so much more we could do to help improve and extend people's lives.

We believe new insights, perspectives and ground-breaking solutions can be found at the intersection of medical science and digital innovation. That a diverse, equitable and inclusive environment inspires new ways of working.
We believe our potential can thrive and grow in an unbossed culture underpinned by integrity, curiosity and flexibility. And we can reinvent what's possible, when we collaborate with courage to aggressively and ambitiously tackle the world's toughest medical challenges. Because the greatest risk in life, is the risk of never trying!

Imagine what you could do here at Novartis!

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: Individuals in need of a reasonable accommodation due to a medical condition or disability for any part of the application process, or to perform the essential functions of a position, please send an e-mail to tas.nacomms@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.

Join our Novartis Network: If this role is not suitable to your experience or career goals but you wish to stay connected to hear more about Novartis and our career opportunities, join the Novartis Network here: https://talentnetwork.novartis.com/network

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

Join our Novartis Network: Not the right Novartis role for you? Sign up to our talent community to stay connected and learn about suitable career opportunities as soon as they come up: https://talentnetwork.novartis.com/network

Benefits and Rewards: Read our handbook to learn about all the ways we'll help you thrive personally and professionally: https://www.novartis.com/careers/benefits-rewards

EEO Statement:

The Novartis Group of Companies are Equal Opportunity Employers who are focused on building and advancing a culture of inclusion that values and celebrates individual differences, uniqueness, backgrounds and perspectives. We do not discriminate in recruitment, hiring, training, promotion or other employment practices for reasons of race, color, religion, sex, national origin, age, sexual orientation, gender identity or expression, marital or veteran status, disability, or any other legally protected status. We are committed to fostering a diverse and inclusive workplace that reflects the world around us and connects us to the patients, customers and communities we serve.

Accessibility & 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 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.

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Company / Legal Entity
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Functional Area

Data and Digital

Job Type

Full time

Employment Type

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No

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