

# Director, AI Engineering

Job ID  
REQ-10047114  
Jun 09, 2025  
USA

## Summary

This position will be located at the East Hanover, NJ location and will not have the ability to be located remotely.

## About the Role

The Insights and Decision Science (IDS) team is dedicated to enabling improved decision making at Novartis by leveraging superior data to identify actionable insights that drive enhanced performance. We collaborate closely with the US business, bringing insights and challenging ideas to empower smarter, data-driven decision-making. Reporting into Executive Director of AI and Innovation Data Science, the Director of AI Engineering is crucial in defining and promoting best practices in AI model development and deployment.

This position is pivotal in identifying and incubating cutting-edge AI technologies that align with the strategic goals of the company, enhancing the capabilities in data-driven decision-making. The Director of AI Engineering, through their forward-thinking, ensure seamless integration of innovative AI solutions into existing frameworks, ensuring they are scalable, reliable, and tailored to meet the unique demands of the pharmaceutical industry. They will contribute to our mission of advancing healthcare through technology, ultimately improving patient outcomes and driving business success.

## Key Responsibilities:

- Architect and develop end-to-end Gen AI and machine learning solutions, focusing on scalability, performance, and modularity.
- Design, train, and fine-tune Large Language Models (LLMs) like GPT, Claude, or Cohere for various applications or pilots
- Optimize AI systems for deployment on cloud platforms such as AWS, Azure, Snowflake or Databricks ensuring high performance and cost efficiency.
- Develop APIs and integrate AI models into existing enterprise systems for seamless business adoption.
- Collaborate with data scientists, software engineers, IDS colleagues, and business teams to turn complex requirements into pilot AI solutions.
- Stay updated on the latest advancements in AI, especially in LLM architectures, generative AI, and model optimization techniques.

- Conduct technical reviews, ensure code quality, and enforce best practices in AI development and deployment.
- Maintain the analytics workbench along with the data science team

### **Essential Requirements:**

Novartis seeks individual with a robust background in data science and machine learning, with a proven track record of identifying and implementing innovative modelling approaches that drive significant impact. A deep understanding of both supervised and unsupervised machine learning, as well as advanced techniques such as deep learning, natural language processing, and generative AI, is essential. Experience in developing comprehensive model performance testing plans, monitoring for performance degradation, and recalibrating models as necessary is crucial.

**Education:** Bachelor's degree in Computer Science, Engineering, or a related field; Master of Science or PhD preferred.

- Minimum of 5+ years of experience in AI/ML engineering (data engineering could be appropriate depending on experience), with at least 2 years focusing on designing and deploying LLM-based solutions.
- Strong proficiency in building AI/ML architectures and deploying models at scale.
- Deep knowledge of LLMs (e.g., GPT, BERT, Cohere) and experience in fine-tuning and applying them in business contexts.
- Knowledge of containerization technologies (Docker, Kubernetes) and CI/CD pipelines Hands-on experience with cloud platforms (AWS, Azure, GCP) and MLOps tools for scalable deployment.
- Solid understanding of distributed computing frameworks and system design principles and experience with API development, integration, and model deployment pipelines.
- Strong problem-solving skills and a proactive, hands-on approach to challenges.
- Ability to work effectively in cross-functional teams and communicate technical concepts clearly.
- Excellent organizational skills and attention to detail in managing complex systems.

### **Novartis Compensation and Benefit Summary:**

The pay range for this position at commencement of employment is expected to be between: \$160,300.00 and \$297,700.00/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:** 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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