

Dir. DDIT Dev. Data, Analyt, DS&AI (AI Architect)

Job ID
REQ-10038858

2月 26, 2025

India

摘要

We are seeking a highly skilled AI Architect to design and implement cutting-edge Generative AI (GenAI) solutions tailored for the pharmaceutical and life sciences industry. This role will be responsible for defining AI strategies, selecting and fine-tuning generative AI models, and ensuring seamless integration with enterprise systems to enhance drug discovery, clinical trials, regulatory compliance, and patient-centric solutions. The AI/GenAI Architect will collaborate closely with data scientists, engineers, and business stakeholders to develop scalable, compliant, and high-performance AI applications that leverage large language models (LLMs), multimodal AI, and AI-driven automation.

About the Role

Key Responsibilities

- GenAI Strategy & Roadmap: Define and implement a generative AI architecture and roadmap

aligned with business goals in pharma and life sciences.

- **Solution Design:** Architect scalable GenAI solutions for drug discovery, medical writing automation, clinical trials, regulatory submissions, and real-world evidence generation.
- **LLM Development & Optimization:** Work with data scientists and ML engineers to develop, fine-tune, and optimize large language models (LLMs) for life sciences applications, such as scientific literature analysis, regulatory intelligence, and patient engagement.
- **Cloud & On-Prem AI Infrastructure:** Design GenAI solutions leveraging cloud platforms (AWS, Azure, GCP) or on-premise infrastructure while ensuring data security and regulatory compliance.
- **MLOps & Deployment:** Implement best practices for GenAI model deployment, monitoring, and lifecycle management within GxP-compliant environments.
- **Compliance & Governance:** Ensure GenAI solutions comply with regulatory standards (FDA, EMA, GDPR, HIPAA, GxP, 21 CFR Part 11) and adhere to responsible AI principles, including bias mitigation and explainability.
- **Performance Optimization:** Drive efficiency in generative AI models, ensuring cost optimization and scalability while maintaining data integrity and compliance.
- **Stakeholder Collaboration:** Work with cross-functional teams, including platform teams, and Drug Development teams, to align GenAI initiatives with enterprise and industry-specific requirements.
- **Research & Innovation:** Stay updated with the latest advancements in GenAI, multimodal AI, AI agents, and synthetic data generation to incorporate emerging technologies into the company's AI strategy.

Required Qualifications

- Bachelor's or Master's degree in Computer Science, AI, Data Science, Bioinformatics, or a related field.
- Experience: 8+ years in AI/ML development with at least 2 years in an AI Architect or GenAI Architect role in pharma, biotech, or life sciences.
- Technical Expertise:
 - Strong proficiency in Generative AI, large language models (LLMs), multimodal AI, and deep learning for pharma applications.
 - Hands-on experience with AI/ML frameworks (TensorFlow, PyTorch, Hugging Face, LangChain, Scikit-learn, etc.).
 - Experience with data engineering, ETL pipelines, and big data technologies (Spark, Kafka, Databricks, etc.).
 - Proficiency in programming languages such as Python, R, or Java.
 - Knowledge of cloud AI services (AWS Bedrock, Azure OpenAI, Google Vertex AI).
 - Deploy a Lightweight LLM in a Pharma SaaS Platform
- MLOps & DevOps: Familiarity with CI/CD, containerization (Docker, Kubernetes), vector databases, and real-time model monitoring.
- Regulatory & Ethical AI: Understanding of AI governance, responsible AI principles, and compliance requirements for GenAI in pharma.
- Problem-Solving: Strong analytical and problem-solving skills with the ability to design innovative GenAI solutions for life sciences use cases.
- Communication & Leadership: Excellent communication skills to articulate GenAI strategies and solutions to technical and non-technical stakeholders.

Preferred Qualifications

- Experience in GenAI applications for medical writing, automated clinical trial protocols, drug discovery, and regulatory intelligence.
- Knowledge of AI explainability, retrieval-augmented generation (RAG), knowledge graphs, and synthetic data generation in life sciences.
- AI/ML certifications from AWS, Google, or Microsoft.
- Understanding of biomedical ontologies, semantic AI models, and federated learning.
- Exposure to fine-tuning the LLM models will be a big plus
- Exposure to SLM or domain LLM model will be a big plus
- BioGPT & PubMedBERT: NLP for biomedical literature and clinical trial analysis
- Custom SLMs: Fine-tune Mistral 7B, Phi-2, or Gemma on pharma datasets

Commitment to Diversity and Inclusion:

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

Accessibility and accommodation

Novartis is 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 recruitment process, or in order to perform the essential functions of a position, please send an e-mail to diversityandincl.india@novartis.com and let us know the nature of your request and your contact information. Please include the job requisition number in your message

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>

部门

Operations

Business Unit
CTS

地点
India

站点
Hyderabad (Office)

Company / Legal Entity
IN10 (FCRS = IN010) Novartis Healthcare Private Limited

Functional Area
Data and Digital

Job Type
Full time

Employment Type
Regular

Shift Work
No

[Apply to Job](#)

Accessibility and accommodation

Novartis is 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 recruitment process, or in order to perform the essential functions of a position, please send an e-mail to diversityandincl.india@novartis.com and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Novartis is committed to building an outstanding, inclusive work environment and diverse teams'

representative of the patients and communities we serve.



Job ID
REQ-10038858

Dir. DDIT Dev. Data, Analyt, DS&AI (AI Architect)

[Apply to Job](#)

Source URL:

<https://prod1.novartis.com.cn/careers/career-search/job/details/req-10038858-dir-ddit-dev-data-analyt-dsai-ai-architect>

List of links present in page

1. <mailto:diversityandincl.india@novartis.com>
2. <https://www.novartis.com/about/strategy/people-and-culture>
3. <https://talentnetwork.novartis.com/network>
4. <https://www.novartis.com/careers/benefits-rewards>
5. <https://novartis.wd3.myworkdayjobs.com/en-US/NovartisCareers/job/Hyderabad-Office/Dir-DDIT-Dev-Data--Analyt--DS-AI--AI-Architect-REQ-10038858>
6. <mailto:diversityandincl.india@novartis.com>
7. <https://novartis.wd3.myworkdayjobs.com/en-US/NovartisCareers/job/Hyderabad-Office/Dir-DDIT-Dev-Data--Analyt--DS-AI--AI-Architect-REQ-10038858>