

Assoc. Dir. DDIT Dev. Data, Analyt, DS&AI

Job ID
REQ-10049678
Apr 23, 2025
India

Summary

We are seeking a highly skilled an AI Technical Delivery Lead (Associate Director) with a proven track record in machine learning, generative AI, and hands-on architecture. The successful candidate will lead our AI initiatives, providing technical leadership, driving innovation, and ensuring the successful implementation of advanced AI solutions.

The role is to lead the design, development and deployment of cutting-edge machine learning and generative AI solutions to tackle business challenges.

The responsibility includes architect robust and scalable AI systems, ensuring best practices in design, coding, testing, and maintenance.

Work with cross-functional teams to translate requirements into scalable AI systems while ensuring best practices in design, coding, and maintenance.

Stay updated on AI advancements, drive continuous improvement, and mentor team members.

Collaborate closely with data scientists, engineers, platform architects/engineering teams 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) 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.

Essential Requirements

- Bachelor's or Master's degree in Computer Science, AI, Data Science, Bioinformatics, or a related field.
- **Experience:** 10+ years' experience in Big data, 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.).
 - Knowledge of cloud AI services (AWS Bedrock, Azure OpenAI).
 - Lead the deployment of 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.

Desirable Requirement

- 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

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Division

Operations

Business Unit

CTS

Location

India

Site

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

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