

AI Technical Lead / Architect

Job ID

REQ-10039512

Feb 26, 2025

Spain

Summary

We are looking for an experienced AI Technical Lead / Architect with strong skills in machine learning and generative AI. In this role you will offer technical direction, promote new ideas, and ensure the successful rollout of advanced AI solutions to enhance our drug development capabilities.

The ideal candidate will guide our AI projects, offer technical direction, promote new ideas, and ensure the successful rollout of advanced AI solutions. Ultimately, you will have a critically important positive impact on the lives of patients.

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.
- AI Infrastructure: Design GenAI solutions leveraging cloud platforms (AWS, Azure, GCP) or on-premises 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 exploitability.
- 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.
- 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.

- Strong proficiency in Generative AI, large language models (LLMs), multimodal AI, and deep learning for pharma applications, including experience leading the deployment of a Lightweight LLM on a SaaS Platform.
- Exposure to 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.).
- Solid knowledge of cloud AI services (AWS Bedrock, Azure OpenAI).
- Strong familiarity with CI/CD, containerization (Docker, Kubernetes), vector databases, and real-time model monitoring.
- Proficiency in English (oral & written).

Preferred Qualifications:

- Experience deploying LLMs in a Pharma SaaS Platform
- Experience in AI/GenAI applications within a LifeScience, Pharmaceutical or Biomedical field
- AI/ML certifications from AWS, Google, or Microsoft.

How can we achieve this?

With our people. It is our associates that drive us each day to reach our ambitions. Be a part of this mission and join us! Learn more here: <https://www.novartis.com/about/strategy/people-and-culture>

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:

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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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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>

Division

Operations

Business Unit

CTS

Location

Spain

Site

Barcelona Gran Vía

Company / Legal Entity

ES06 (FCRS = ES006) Novartis Farmacéutica, S.A.

Functional Area

Data and Digital

Job Type
Full time
Employment Type
Regular
Shift Work
No
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Novartis is committed to building an outstanding, inclusive work environment and diverse teams' representative of the patients and communities we serve.

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