Director, Semantic Technologies Lead

Job ID
REQ-10060801

9   12, 2025

Switzerland

At data42, our vision is to inspire collaborative, groundbreaking data and AI initiatives that reimagine drug discovery at Novartis and accelerate time to market—ultimately transforming healthcare and improving lives. We are a dynamic team committed to this mission by enabling secondary research and data-driven decisions through scientific support and analysis-ready data, all within a secure, governed, AI-enabled platform.

The Semantic Technologies Lead (Director Level) is responsible for setting the strategic vision and leading the implementation of semantics and metadata standards within data42. This role is accountable for the integrity, scalability, and impact of semantic frameworks across data42's Pre-Clinical, Clinical, Omics, and Real-World Data pipelines, enabling disease-centric multimodal analysis and investigation. The Director ensures that all semantic initiatives within data42 are closely aligned with Novartis's broader R&D and enterprise data strategies, while driving innovation and excellence from within the data42 organization through structured metadata and advanced ontology management (e.g., MedDRA, SDTM, ADaM, WHODrug, ISO taxonomies), driving data FAIRification and supporting sophisticated patient cohorting and analytical capabilities.

In addition to overseeing the evolution of metadata systems and the data42 data catalog, this position

plays a critical role in enhancing AI-driven projects and guiding the transformation of data42 into a next-generation AI-enabled program and will act as a strategic enabler of semantic technologies to unlock the full potential of multimodal and multidimensional data across the R&D and medical continuum, while maintaining strong alignment with enterprise-wide standards and objectives.

About the Role

Major Accountabilities

- Advise data42 and Novartis R&D leadership on data and AI strategy, risk, and investment, and communicate complex technical concepts to non-technical stakeholders.
- Manage large, cross-functional teams and budgets within data42, fostering a culture of innovation, collaboration, and high performance.
- Represent data42 in cross-functional and enterprise-wide working groups, standards bodies, and relevant external forums, ensuring data42's needs and innovations are well integrated and recognized.
- Lead the development and deployment of AI-enabled metadata tools and knowledge graphs to facilitate data findability, semantic enrichment, and advanced analytics within data42.
- Champion the adoption and operationalization of FAIR data principles within data42, ensuring all data assets are properly tagged, governed, and aligned with both data42 and enterprise business and scientific objectives.
- Oversee the strategic evolution and governance of the data42 data catalog and metadata systems, ensuring comprehensive coverage, accessibility, and regulatory compliance of all managed data assets.
- Lead the design, build, and operationalization of scalable, cloud-based data and analytics platforms—including data lakes, catalogs, and ontology management solutions—within data42, supporting the full drug development lifecycle.
- Serve as the primary liaison between data42 and enterprise-level data and semantic governance bodies, ensuring that data42's frameworks, standards, and tools are interoperable and consistent with company-wide objectives.
- Set and execute the semantic and metadata strategy for data42, ensuring all initiatives are fully aligned with the broader Novartis R&D and enterprise data strategy, while proactively fostering a culture of innovation within data42 to deliver transformative, next-generation solutions.

Experience / Professional Requirements

- Advanced degree (PhD or equivalent) and 15+ years of progressive experience in metadata management, semantic technologies, ontology engineering, AI, and insights generation within the pharmaceutical, biotechnology, or related industry, including at least 5 years in a senior leadership role.
- Deep expertise in industry standards such as CDISC (SDTM, ADaM, SEND), HL7 FHIR, MedDRA, and WHODrug, with a proven track record of applying these in large-scale, complex data environments within R&D or clinical settings.
- Demonstrated leadership in designing, building, and operationalizing department-level or cross-functional data initiatives involving semantic technologies, ontologies, and knowledge

graphs, with a focus on driving innovation and aligning with broader enterprise data strategies as the most senior semantic technologies leader within data42.

- Strong proficiency in FAIR data principles and their operationalization in biomedical and business contexts, with experience championing FAIR adoption within a department or program.
- Advanced knowledge of ontology authoring and engineering, including lifecycle management, methodologies, tools, and languages for building and maintaining ontologies at scale.
- Proven ability to lead and inspire multidisciplinary teams, manage budgets, and influence stakeholders at all levels, including executive and enterprise partners.
- Familiarity with Generative AI and Large Language Models (LLMs), with a focus on transforming unstructured and unharmonized data into actionable insights and enabling AI-driven innovation within a department or program.
- Expertise in Semantic Web technologies (e.g., RDF, OWL, SKOS, SPARQL) and their application to biomedical domains, including OBO Foundry ontologies.
- Experience serving as a liaison between a department/program and enterprise-level data governance or standards bodies, ensuring alignment and interoperability.
- Exceptional communication, stakeholder management, and change leadership skills.

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

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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Biomedical Research

Business Unit

Pharma Research

Switzerland

Basel (City)

Company / Legal Entity
CO28 (FCRS = CHO28) Novartis Pharma AG

Alternative Location 1
Dublin (NOCC), Ireland

Functional Area
Research & Development

Job Type
Full time

Employment Type
Regular

Shift Work
No

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