

Semantic Technologies Lead

Job ID

REQ-10042894

Mar 09, 2025

India

Summary

- Lead data42's implementation of "Semantics and Metadata standards" and be responsible of their quality across all data processing pipelines (Pre-Clinical, Clinical, Omics & RWD) from ingest to making data accessible for disease-centric multimodal analysis & investigation.
- Enable "Data Findability" through a data FAIRification process by providing the required structured data with integrating advanced ontology management and metadata standardization (e.g., MedDRA, SDTM, ADaM, WHODrug & ISO taxonomies) enabling advanced patient cohorting & analytical functionalities.
- Maintain data42 data catalog
- Design and develop metadata management systems
- Shape data42's vision for how semantics can transform the landscape of multimodal & multidimensional data utilization in the R&D and medical continuum.

About the Role

Major accountabilities:

- Interface seamlessly with semantic experts across the company including the Biomedical Research (BR), Development (Clinical Operations & Analytics) and others. Establish and implement the multimodal data roadmap for data42 contributing to identify novel drug targets and therapeutic strategies.
- Apply all FAIR principles ensuring that all data assets are properly tagged, governed and aligned with business objectives and make any data understandable for data42 end users
- Maintain data catalog of all data assets managed across the data42 ecosystem
- Brings expertise and supports the implementation of the standardization of data models and reference data across all master data defined by each data assets owner.
- Maintain AI-enabled metadata tools to facilitate data findability and metadata management across all data assets and expose them to data42 end users.
- Lead and coordinate pipelines teams towards implementing data42's vision for enabling disease-centric multimodal investigation.
- Coordinate closely with teams working on semantics and metadata standards across Novartis.
- In conjunction with a scrum master, run the team through an agile methodology

Key performance indicators:

- Support the vision of releasing a disease-centric multimodal investigation across RDC continuum.
- Business value measures (cost savings, data rationalization, storage costs, etc.).
- Demonstration of improved speed to TAs insights generation through semantics implementations.

Impact on the organization:

- Success in building a large, scalable, and integrated data platform redefining the role of data in building disease-centric assets & insights across R&D continuum.
- Enabling multimodal & multidimensional data framework to represent, organize, and analyze complex biomedical data, enhancing R&D efficiency and innovation.

Minimum Requirements:

Education:

- A Master's degree or higher (PhD preferred) in Computer Science, Engineering, Ontology, Semantics, Artificial Intelligence (AI) with applications in the pharmaceutical or biotechnology or healthcare sectors.

Work Experience:

- Cross Cultural Experience.
- People Leadership.
- Project Management.

Skills:

- 10+ years of professional experience in metadata management, semantic technologies, ontology, Artificial Intelligence (AI), and insights generation, within the pharmaceutical, biotechnology, or a related industry.
- In-depth knowledge of industry standardization like CDISC (SDTM, ADaM, SEND), HL7 FHIR, NCI, MedDRA, and WHODrug.
- Demonstrated experience in leading and implementing large-scale data projects and initiatives, particularly those involving semantic technologies, ontologies, and knowledge graphs.
- Proficiency in FAIR (Findable, Accessible, Interoperable, and Reusable) data principles and their application in a business/biomedical context.
- Experience with regulated environments such as GDPR and/or GxP when working with products, tools, and medical & pharmaceutical data sources.
- In-depth knowledge of Ontological authoring & engineering e.g. ontology development process, ontology life cycle, methodologies, tools and languages required for building ontologies.
- Knowledge of Generative AI and Large Language Models (LLM), with a focus on leveraging these technologies to transform unstructured and unharmonized data sources into insightful and actionable information.
- Semantic Web Technologies (Web 2.0/3.0, RDF/OWL/SKOS, SPARQL...) and their application to the biomedical domain (OBO).
- Good knowledge of Master Data Management (MDM) & Reference Data Management (RDM) and Data Catalog (DC) concepts/technologies.
- Palantir Foundry experience preferable

Languages :

- Fluent in English (oral and written)

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?

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Division

Biomedical Research

Business Unit

Innovative Medicines

Location

India

Site

Hyderabad (Office)

Company / Legal Entity

IN10 (FCRS = IN010) Novartis Healthcare Private Limited

Functional Area

Research & Development

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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