Semantic Technologies Lead

Job ID
REQ-10042894

3   20, 2025

India

- 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? https://www.novartis.com/about/strategy/people-and-culture

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Biomedical Research

Business Unit
Innovative Medicines

India

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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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.

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