NOVARTIS

Associate Director, Semantic & Knowledge Engineering (2 Openings)

Job ID
REQ-10086338

八月 23, 2026

USA

摘要

#LI-Hybrid

Reporting to the Executive Director, Semantic and Knowledge Engineering, the Associate Director, Semantic and Knowledge Engineering designs, builds, and governs enterprise semantic models, ontologies, taxonomies, business vocabularies, knowledge graphs, metadata services, and semantic APIs. The role enables AI, analytics, enterprise search, interoperability, retrieval-augmented generation (RAG), agentic AI, contextual search, and reasoning engines by embedding reusable semantic capabilities into products and workflows across Strategy, Platforms & Transformation.

The ideal location for this role is East Hanover but remote work may be possible (there may be some restrictions based on legal entity). Please note that this role would not provide relocation as a result. If associate is remote, all home office expenses and any travel/lodging to specific East Hanover for periodic live meetings will be at the employee ' s expense. The expectation of working hours and travel (domestic and/or international) will be defined by the hiring manager. This position will require 10% travel.

There are 2 positions available.

About the Role

Key Responsibilities:

Enterprise semantic modeling and knowledge engineering

- Design, develop, and maintain enterprise ontologies, taxonomies, business vocabularies, and semantic models that establish consistent meaning across products, data, and AI capabilities.

- Build and enhance knowledge graphs, metadata services, and semantic APIs that support AI, analytics, enterprise applications, and commercial decision enablement.

Semantic capabilities for AI and product workflows

- Collaborate with Product, Applied AI, Analytics Engineering, and Platform Engineering teams to embed semantic capabilities into products, workflows, platforms, and reusable solution patterns.

- Support semantic foundations for RAG, agentic AI, contextual search, reasoning engines, enterprise search, analytics, and interoperability initiatives.

Metadata governance and knowledge lifecycle management

- Implement metadata governance, semantic quality controls, stewardship practices, and lifecycle management for enterprise knowledge assets.

- Promote quality, consistency, reuse, transparency, and governed evolution of semantic assets across the SPT ecosystem.

Technology evaluation and architecture evolution

- Evaluate emerging semantic technologies, standards, graph capabilities, and knowledge engineering approaches to inform the evolution of the enterprise knowledge architecture.

Contribute reusable engineering patterns and technical guidance that reduce duplication and improve scalability across semantic and knowledge engineering work.

Technical mentorship and cross-functional collaboration

Mentor semantic and knowledge engineers while promoting reusable engineering patterns, technical excellence, disciplined documentation, and pragmatic implementation.

Communicate technical trade-offs, risks, dependencies, and recommendations clearly to product, engineering, analytics, AI, and business stakeholders.

Essential Requirements:

- Education: Bachelor's degree in Computer Science, Information Science, Artificial Intelligence, Data Science, Bioinformatics, or a related discipline; advanced degree preferred.
- 6+ years of progressive experience in semantic technologies, knowledge engineering, metadata management, data/information architecture, data product engineering, or AI-enabling data platforms.
- Hands-on experience designing and maintaining ontologies, taxonomies, controlled vocabularies, business glossaries, semantic models, RDF/OWL, SKOS, SPARQL, graph databases, knowledge graphs, metadata catalogs, data lineage, and semantic APIs/services.
- Experience building semantic assets that enable AI grounding, RAG/GraphRAG, enterprise search, contextual search, reasoning engines, analytics consistency, interoperability, and reusable product capabilities.
- Working knowledge of data governance, stewardship models, provenance, quality controls, access/security controls, lifecycle management, privacy, and compliance expectations for enterprise knowledge assets.
- Ability to translate complex business/domain concepts into reusable semantic models and partner effectively with Product, Applied AI, Analytics Engineering, Platform Engineering, Architecture, and business domain experts.
- Strong engineering delivery discipline, including documentation, versioning, validation/testing of semantic assets, standards adherence, backlog execution, reusable patterns, and pragmatic implementation in agile/product teams.

- Strong analytical, communication, stakeholder management, and collaboration skills, with the ability to explain semantic design choices, technical trade-offs, risks, and dependencies to technical and non-technical stakeholders.

Desirable Requirements:

- Experience applying semantic technologies in pharmaceutical, healthcare, life sciences, commercial, clinical, medical, real-world data, or another regulated data environment.

- Experience supporting generative AI, agentic AI, LLM-powered products, RAG/GraphRAG, vector databases, graph-enhanced retrieval, knowledge graph embeddings, enterprise search, or AI-ready semantic layers.

- Familiarity with FAIR data principles, master/reference data modernization, metadata platform roadmaps, ontology governance forums, stewardship operating models, and enterprise knowledge architecture practices.

- Experience with cloud-based data and AI ecosystems, graph/vector tooling, semantic layer technologies, API-based semantic services, and integration with enterprise search or analytics platforms.

- Experience mentoring junior semantic/knowledge engineers, shaping reusable engineering patterns, and contributing to technical standards or communities of practice.

- Advanced degree or relevant certification in Computer Science, Information Science, Data Science, Artificial Intelligence, Bioinformatics, Knowledge Engineering, Ontology Engineering, or a related discipline.

Novartis Compensation Summary:

The salary for this position is expected to range between $176,400 and $327,600 per year.

The final salary offered is determined based on factors like, but not limited to, relevant skills and experience, and upon joining Novartis will be reviewed periodically. Novartis may change the published salary range based on company and market factors.

Your compensation will include a performance-based cash incentive and, depending on the level of the role, eligibility to be considered for annual equity awards.

US-based eligible employees will receive a comprehensive benefits package that includes health, life and disability benefits, a 401(k) with company contribution and match, and a variety of other benefits. In addition, employees are eligible for a generous time off package including vacation, personal days, holidays and other leaves.

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

Benefits and Rewards: Learn about all the ways we ' ll help you thrive personally and professionally. Read our handbook (PDF 30 MB)

EEO Statement:

The Novartis Group of Companies are Equal Opportunity Employers. We do not discriminate in recruitment, hiring, training, promotion or other employment practices for reasons of race, color, religion, sex, national origin, age, sexual orientation, gender identity or expression, marital or veteran status, disability, or any other legally protected status.

Accessibility & Reasonable Accommodations

The Novartis Group of Companies are 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 application process, or to perform the essential functions of a position, please send an e-mail to us.reasonableaccommodations@novartis.com or call +1(877)395-2339 and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

部门
US

Business Unit
General Management

地点
USA

状态
New Jersey

站点
East Hanover

Company / Legal Entity
U014 (FCRS = US014) Novartis Pharmaceuticals Corporation

Alternative Location 1
Distant Employee - Distant Working Arrangement (DWA) (USA), Distant Working Arrangement, US, USA

Functional Area
Data and Digital

Job Type
Full time

Employment Type
Regular

Shift Work
No

var kPlayer = KalturaPlayer55802022 || KalturaPlayer; var config = { targetId: "kalturaplayer6af1dbabd1d44550466755", provider: { widgetId: "10m7rm1pm", partnerId: "2076321", uiConfId: "55802022" }, playback: { autoplay: false, autopause: false, muted: false, loop: false }, sources: { options: {}, startTime: 0 }, disableUserCache: "true", plugins: {}, sources: { options: {}, startTime: 0 }, ui: { showCCButton: false, settings: { showQualityMenu: true, showSpeedMenu: false }, components: { fullscreen: { disableDoubleClick: false } }, uiComponents: [{ presets: ['Playback', 'Live'], area: 'BottomBarRightControls', replaceComponent: 'Fullscreen', get: kPlayer.ui.components.Remove }] } }; // Check and add plugins only if they exist if (kPlayer.plugins["download"]) { config.plugins.download = { disable: true }; } if (kPlayer.plugins["transcript"]) { config.plugins["playkit-js-transcript"] = { position: "right", // Default: bottom;('left', 'right', 'top', 'bottom') to enable transcript. expandMode: "over", // Default: alongside;('alongside', 'hidden', 'over') expandOnFirstPlay: false, showTime: true, downloadDisabled: false, printDisabled: false, disable: true }; } if (kPlayer.plugins["preventSeek"]) { config.plugins.preventSeek = { preventSeekForward: false, preventSeek: false }; } config.plugins.floating = { disable: true }; if (kPlayer.plugins["navigation"]) { config.plugins.navigation = { position: "right", expandMode: "over", expandOnFirstPlay: false, visible: false }; } if (kPlayer.plugins["hotspots"]) { config.plugins['playkit-js-hotspots'] = { disable: true }; } if (kPlayer.plugins["moderation"]) { config.plugins['playkit-js-moderation'] = { disable: true }; } if (kPlayer.plugins["info"]) { config.plugins['playkit-js-info'] = { disable: true }; } if (kPlayer.plugins["share"]) { config.plugins.share = { disable: true }; } config.ui.uiComponents = []; if (kPlayer.plugins["googleAnalytics"]) { config.plugins.googleTagManager = {}; config.plugins.googleTagManager.customEventsTracking = {}; config.plugins.googleTagManager.containerId = 'GTM-57RJQ5'; config.plugins.googleTagManager.customEventsTracking.custom = []; config.plugins.googleTagManager.customEventsTracking = { preset: { coreEvents: true, UIEvents: false, playlistEvents: false, castEvents: false } }; }

// Ensure the global player registry array always exists, regardless of embed type. window.kalturaPlayerVideos = window.kalturaPlayerVideos || []; try { var thumbEmbedPromise = thumbnailEmbed({config, mediaInfo: {entryId: "1dgfvmafo"}}); // thumbnailEmbed() returns a Promise that resolves with the player instance // when the user clicks the thumbnail. Use .then() to capture the player directly. thumbEmbedPromise .then(function(player) { window.kalturaPlayerVideos.push(player); // Notify kaltura datalayer.js that a new player is ready so it can // attach custom event listeners immediately, regardless of when // the user clicked the thumbnail relative to page load. document.dispatchEvent(new CustomEvent('kalturaPlayerReady', { detail: { player: player } })); }) .catch(function(error) { console.error(error); }); } catch (e) { console.error(e.message) }

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