GRAKN LABS

Leveraging Grakn for Data Lineage & Metadata Management

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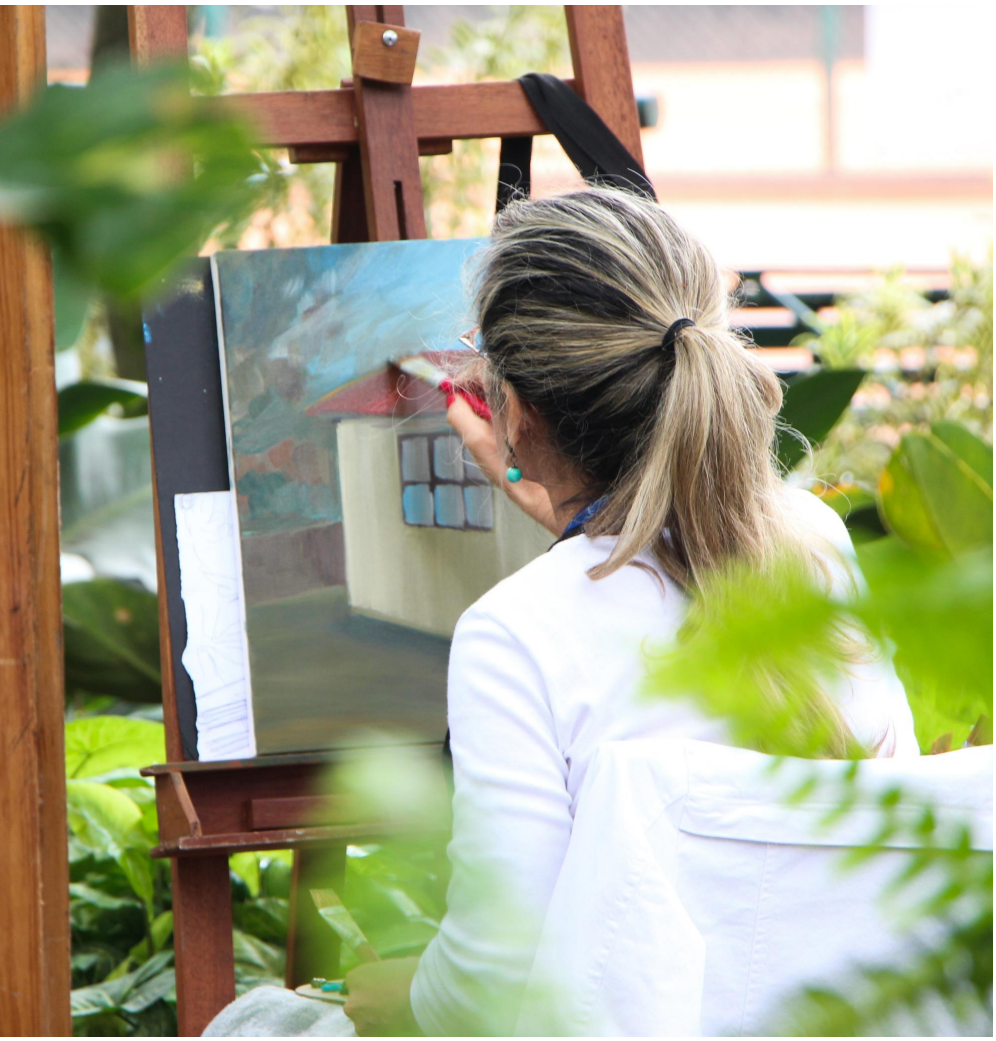
DATA LINEAGE & METADATA MANAGEMENT



Use Case:

For Infosys's Data Governance Workbench, Grakn was leveraged as a hyper-relational knowledge base to store integrated metadata in graph format.

"This enables ontology-based cognitive metadata search with NLP, which is continuously improved with AI, which allows connecting the unconnected, such as how weather affects store sales." says Rajan Padmanabhan, AVP & Senior Principal Technology Architect

Industry:

IT Services

Use Case:

Metadata Management

Challenge:

IT To model complex meta data that requires a hyper graph structure

Solution:

Storing integrated metadata in graph format with Grakn

Result:

An application that enables internal users of large organisations to find their required data with certification information and cognitive linkages

"Grakn enables users to find their required data with certification information and cognitive linkages. The use of Grakn for such linkages enable users to discover unknown relationships and dark data."

Rajan Padmanabhan, AVP & Senior Principal Technology Architect, Infosys

Infosys is a global leader in next-generation digital services and consulting. They enable clients in 45 countries to navigate their digital transformation. With over three decades of experience in managing the systems and workings of global enterprises, they expertly steer their clients through their digital journey. Infosys does this by enabling the enterprise with an AI-powered core that helps prioritise the execution of change.

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Challenge:
Infosys Consumption Workbench (CWB) including the Data Café module and the Infosys Data Governance Workbench (DGW), including the Metadata Hub module, are Infosys solutions that leverage Grakn. For this, Rajan and his team built a data model that required the modelling of unlimited relationships and nodes in order to realistically depict the meta data of an organisation, including technical, business, and operational metadata. The complexity of the model is derived from the complex many to many relationships between datasets, entities and attributes.

"This data model approach makes querying easier and gives compatibility with visualisation tools such as Tableau/QlikView and Linkurius."

Rajan Padmanabhan, AVP & Senior Principal Technology Architect, Infosys

To represent and query this type of meta data, Rajan & his team recognised the challenges they faced when working with traditional database systems, for example relational or property graph databases. To address these challenges, the Infosys team chose to use Grakn.

Why Grakn:
Infosys chose Grakn because it can have a flexible yet well-defined data model based on hyper-relationships, which makes it possible to define metadata of an organisation in terms of data sets,
attributes, entities, code components, and so on, and to further extend it to depict their relationships with each other, with enterprise applications & systems, and also users.

They further chose Grakn because the data model ensures support for dynamic ontologies, where business terms and hierarchies may change over time and contexts. Grakn's built-in AI-functions enabled the Infosys team to orchestrate complex relationships easier, such as parent-child based metadata searches, and bring out the unknown relationship within the data, it allows them to connect unconnected data.

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"The use of Grakn for such linkages enable users to discover unknown relationships and dark data."

Impact:

Using Grakn enabled the Infosys team to provide cognitive search via a portal to internal users of any organisation who need different data sets for various purposes, like reporting, analytics, regulatory compliance etc. As Rajan explains: "Grakn enables users to find their required data with certification information and cognitive linkages, i.e. what are the related data sets and the data set they are searching, just like Google Search..."

Finally, Grakn enabled Infosys to build a Data Marketplace Solution to find related data and manage its publication, subscription, and monetising data assets better.

About Grakn:

Grakn is a distributed knowledge graph: a logical database to organise large and complex networks of data as one body of knowledge. Grakn provides the knowledge engineering tools for developers to easily leverage the power of Knowledge Representation and Reasoning when building complex systems. Our enterprise product, Grakn Cluster, is available on any cloud provider and on premise.

Grakn is used in numerous applications from tax automation bots to complex use cases in drug discovery via protein pathways, a knowledge network of drones and robots, cybersecurity and financial services. Users include organisations such as AstraZeneca, Cisco, the French Intelligent Services, Bayer and Nestlé.