Gartner Case Study: Entity-Event Knowledge Graph for Powering AI Solutions (Montefiore)

Gartner featured Franz’s customer, Montefiore Medical Center, in a research report on Montefiore’s Entity-Event Knowledge Graph:

“AI solutions are often hindered by fragmented data and siloed point solutions,” according to Gartner’s Chief Data and Analytics Officer Research Team. “Montefiore’s data and analytics leader used semantic knowledge graphs to power its AI solutions and achieved considerable cost savings as well as improvements in timeliness and the prediction accuracy of AI models.” Source: Gartner Case Study: Entity-Event Knowledge Graph for Powering AI Solutions (Montefiore)

KMWorld 100 Companies that Matter Most – Franz Inc.

Franz Inc., is proud to announce that it has been named to The 100 Companies That Matter in Knowledge Management by KMWorld. The annual list reflects the urgency felt among many organizations to provide a timely flow of targeted information. Among the more prominent initiatives is the use of AI and cognitive computing, as well as related capabilities such as machine learning, natural language processing, and text analytics.
“Flexibility, agility, and the ability to pivot are attributes that have become critical to forward-thinking companies—and that is particularly the case now. Successful organizations don’t want to merely survive; they want to dominate their market sectors. But to do that, they need the right tools and products,” said Tom Hogan, Group Publisher at KMWorld. “Amidst the dramatic changes taking place today, innovative organizations are seeking new approaches to improve their processes. The 2021 KMWorld 100 is a list of leading-edge knowledge management companies that are helping their customers to expand access to information, leverage new opportunities, and accelerate growth.”

Read More about Franz Inc.

Data Fabrics and Knowledge Graphs — A Symbiotic Relationship

Dr. Jans Aasman’s recent article in Dzone.

The data fabric notion is gaining credence throughout the analyst community, in much the same way knowledge graphs have done so for years. Both technologies link all relevant data for a specific business purpose, which is why the most successful companies in the world employ them.
Amazon’s knowledge graph retains metadata about its vast product array; Google’s captures data about an exhaustive list of web entities of interest. Lesser-known organizations regularly deploy these mechanisms for everything from comprehensive customer views to manufacturing processes.

Data fabrics have a unique, symbiotic relationship with the knowledge graph movement because they substantially streamline the processes to extract data from the myriad sources that populate these platforms. In turn, knowledge graphs provide some of the fundamental capabilities enabling data fabrics to accomplish this objective.

Read the Full Article at Dzone.

Sharing Ontologies Globally To Speed Science And Healthcare Solutions – OntoPortal

International Ontology Sharing Is Becoming A Reality

A consortium of researchers recently formed an organization dedicated to standardizing how scientists define their ontologies, which are essential for retrieving datasets as well as understanding and reproducing research. The group called OntoPortal Alliance is creating a public repository of
internationally shared domain-specific ontologies. All the repositories will be managed with a common OntoPortal appliance that has been tested with AllegroGraph Semantic Knowledge Graph software. This enables any OntoPortal adopter to get all the power, features, maintainability, and support benefits that come from using a widely adopted, state-of-the-art semantic knowledge graph database.

Read the full article at HealthIT Outcomes –

As Dr. Jans Aasman, CEO of Franz Inc. explains, “When building a Knowledge Graph as your enterprise’s single source of truth, it’s critical to include ontologies and taxonomies. AI applications and complex reasoning analytics require information from both databases and knowledge bases that contain domain information, taxonomies, and ontologies to solve complex questions. To make this possible, we developed a novel hybrid sharding technology called FedShard, which facilitates the combination of data and knowledge required by applications like Montefiore’s PALM. But this approach is not unique or specific to Healthcare, it is applicable in many other industries, which is why we are excited about OntoPortal’s plans to bring sharing of domain ontologies to a broad audience.”
Gartner Hype Cycle for AI – Knowledge Graphs

According to Gartner’s 2020 Hype Cycle for Artificial Intelligence – Despite the global impact of COVID-19, 47% of artificial intelligence (AI) investments were unchanged since the start of the pandemic and 30% of organizations actually planned to increase such investments, according to a Gartner poll. Only 16% had temporarily suspended AI investments, and just 7% had decreased them.

“AI is starting to deliver on its potential and its benefits for businesses are becoming a reality”

Gartner’s – AI Hype Cycle Article

The Hype Cycle growth is consistent with Franz’s customer interest in our Enterprise Knowledge Graph Solutions – Read our recent White Paper.
Future of AI in the Enterprise

The Future of AI in the Enterprise:

Entity-Event Knowledge Graphs for Data-Centric Organizations

Presented by: Dr. Jans Aasman

Register:
https://enterprise-kg-cdl-online-meetup.heysummit.com/

Personalized medicine. Predictive call centers. Digital twins for IoT. Predictive supply chain management, and domain-specific Q&A applications. These are just a few AI-driven applications organizations across a broad range of industries are deploying.

Graph databases and Knowledge Graphs are now viewed as a must-have by Enterprises serious about leveraging AI and predictive analytics within their organization.

See how Franz Inc. is helping organizations deploy novel Entity-Event Knowledge Graph Solutions to gain a holistic view of customers, patients, students or other important entities, and the ability to discover deep connections, uncover new patterns and attain explainable results.

Description:

To support ubiquitous AI, a Knowledge Graph system will have to fuse and integrate data, not just in representation, but in context (ontologies, metadata, domain knowledge, terminology systems), and time (temporal relationships between components of data). Building from ‘Entities’ (e.g. Customers, Patients, Bill of Materials) requires a new data model approach that unifies typical enterprise data with knowledge bases such as industry terms and other domain knowledge.
Entity-Event Knowledge Graphs are about connecting the many dots, from different contexts and throughout time, to support and recommend industry-specific solutions that can take into account all the subtle differences and nuisances of entities and their relevant interactions to deliver insights and drive growth. The Entity-Event Data Model we present puts core entities of interest at the center and then collects several layers of knowledge related to the entity as ‘Events’.

Franz Inc. is working with organizations across a broad range of industries to deploy large-scale, high-performance Entity-Event Knowledge Graphs that serve as the foundation for AI-driven applications for personalized medicine, predictive call centers, digital twins for IoT, predictive supply chain management and domain-specific Q&A applications—just to name a few.

During this presentation we will explain and demonstrate how Entity-Event Knowledge Graphs are the future of AI in the Enterprise.

Franz Inc. Named an AI 50 Company by KMWorld

AllegroGraph Powering Intelligent Knowledge Graph Solutions

Franz Inc., an early innovator in Artificial Intelligence (AI) and leading supplier of Semantic Graph Database technology for Knowledge Graph Solutions, today announced that it has been named to The AI 50 – Companies Empowering Intelligent Knowledge Management Companies by KMWorld. The annual list
reflects the urgency felt among many organizations to provide a timely flow of targeted information. Among the more prominent initiatives is the use of AI and cognitive computing, as well as related capabilities such as machine learning, natural language processing, and text analytics. This list recognizes companies based on their presence, execution, vision and innovation in delivering products and services to the marketplace.

“As the drive for digital transformation becomes an imperative for companies seeking to compete and succeed in all industry sectors, intelligent tools and services are being leveraged to enable speed, insight, and accuracy,” said Tom Hogan, Group Publisher at KMWorld. “To showcase organizations that are incorporating AI and an assortment of related technologies—including natural language processing, machine learning, and computer vision—into their offerings, KMWorld created the “AI 50: The Companies Empowering Intelligent Knowledge Management.”

“Franz Inc. has a rich history in AI and we are honored to receive this acknowledgement for our efforts in delivering AI Knowledge Graph Solutions,” said Dr. Jans Aasman, CEO, Franz Inc. “In the past year, we have seen demand for Intelligent Data Fabrics take off across industries along with recognition from top technology analyst firms that Knowledge Graphs provide the critical foundation for Enterprise Wide Data Fabrics. Our recent launch of AllegroGraph 7 with FedShard, a breakthrough that allows infinite data integration to unify all data and siloed knowledge into an Entity-Event Knowledge Graph solution will catalyze Data Fabric deployments across the Enterprise.”

Gartner’s Top 10 Trends in Data and Analytics for 2020 noted “Relationships form the foundation of data and analytics value. By 2023, graph technologies will facilitate rapid contextualization for decision making in 30% of organizations worldwide. Graph analytics is a set of analytic techniques
that allows for the exploration of relationships between entities of interest such as organizations, people and transactions. Data and analytics leaders need to evaluate opportunities to incorporate graph analytics into their analytics portfolios and applications to uncover hidden patterns and relationships. In addition, consider investigating how graph algorithms and technologies can improve your AI and ML initiatives.” (Source: Gartner, Top 10 Trends in Data and Analytics for 2020, June 9, 2020).

“Graph databases and knowledge graphs are now viewed as a must-have by enterprises serious about leveraging AI and predictive analytics within their organization,” said Dr. Aasman “We are working with organizations across a broad range of industries to deploy large-scale, high-performance Entity-Event Knowledge Graphs that serve as the foundation for AI-driven Data Fabrics for personalized medicine, predictive call centers, digital twins for IoT, predictive supply chain management and domain-specific Q&A applications – just to name a few.”

**Forrester Shortlists AllegroGraph**

AllegroGraph was shortlisted in the February 3, 2020 Forrester Now Tech: Graph Data Platforms, Q1 2020 report, which recommends that organizations “Use graph data platforms to accelerate connected-data initiatives.” Forrester states, “You can use graph data platforms to become significantly more productive, deliver accurate customer recommendations, and quickly make connections to related data.”

**Bloor Research covers AllegroGraph with FedShard**

Bloor Research Analyst, Daniel Howard noted “With the 7.0 release of AllegroGraph, arguably the most compelling new capability is its ability to create what Franz refers to as “Entity-Event Knowledge Graphs” (or EEKGs) via its patented FedShard technology.” Mr. Howard goes on to state “Franz
clearly considers this a major release for AllegroGraph. Certainly, the introduction of an explicit entity-event graph is not something I’ve seen before. The newly introduced text to speech capabilities also seem highly promising.”

**AllegroGraph Named to DBTA’s 100 Companies That Matter Most in Data**

AllegroGraph was also recently named to DBTA’s 100 Companies That Matter Most in Data. The DBTA 100 showcases organizations that delivering solutions for customers to meet the need for real-time, data-driven insights.

**Franz Knowledge Graph Technology and Services**

Franz’s Knowledge Graph Solution includes both technology and services for building industrial strength Entity-Event Knowledge Graphs based on best-of-class tools, products, knowledge, skills and experience. At the core of the solution is Franz’s graph database technology, AllegroGraph with FedShard, which is utilized by dozens of the top F500 companies worldwide and enables businesses to extract sophisticated decision insights and predictive analytics from highly complex, distributed data that cannot be uncovered with conventional databases.

Franz delivers the expertise for designing ontology and taxonomy-based solutions by utilizing standards-based development processes and tools. Franz also offers data integration services from siloed data using W3C industry standard semantics, which can then be continually integrated with information that comes from other data sources. In addition, the Franz data science team provides expertise in custom algorithms to maximize data analytics and uncover hidden knowledge.

**About Franz Inc.**

Franz Inc. is an early innovator in Artificial Intelligence
(AI) and leading supplier of Semantic Graph Database technology with expert knowledge in developing and deploying Knowledge Graph solutions. The foundation for Knowledge Graphs and AI lies in the facets of semantic technology provided by AllegroGraph with FedShard and Allegro CL. The ability to rapidly integrate new knowledge is the crux of the Knowledge Graph and Franz Inc. provides the key technologies and services to address your complex challenges. Franz Inc. is your Knowledge Graph technology partner.

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Knowledge graphs enhance customer experience through speed and accuracy

KMWorld’s recent article covers AllegroGraph and Franz’s customer N3 Solutions.

The Full Article – KMWorld

Knowledge graphs are a way to model enterprise knowledge and represent complex interrelationships in data. Information stored in a graph database can enable rapid retrieval of well-targeted results and provide insights into customers’ interests and needs. Gartner predicts a 100% per-year growth in applications for graph analytics and databases for the next
several years. Although knowledge graphs have been deployed by major companies such as Google, Amazon, and LinkedIn due to their ability to incorporate relationships in their analyses as well as their speed, only in the last 5 years has their use become more widespread.

N3 is an outsourced sales company for major organizations that sell complex B2B software, hardware, and tech solutions. It supports businesses in 92 countries, provides services in 25 languages, and holds thousands of hours of conversations every month with customers and prospects. “In today’s world of complex products, it takes a well-educated team to tell the story about how this technology can help a company become more competitive,” said Shannon Copeland, COO of N3. “The sales team needs to be able to instantly access the information they need to do their job.”

Faster insights

The company has been operating for 16 years, and in the last few years began an initiative to manage its knowledge in a more intentional way. “We generate a great deal of data,” noted Copeland, “and we wanted to make more effective use of it to understand our customers. And because of the speed at which business is transacted now, we needed to get insights right away, not a month later in a report.”

N3 built a data model to reflect the essential data elements and the associations among them and decided that a knowledge graph was the best way to represent the information. After looking into partner options, N3 chose to work with Franz, Inc., which provides a semantic graph database called AllegroGraph. “We decided to work with Franz because of its extensive experience and the fact that it had worked with a variety of industries,” Copeland said.

The system built by N3 allows sales teams to organize signals from the market in a way that allows them to better explain
the products to prospective buyers. “We build relationships with tech buyers on behalf of our clients,” continued Copeland. “Our employees are typically college graduates who would like to begin their careers in sales and marketing in tech solutions. They take ownership of their territory and we help them be as sophisticated as a future CMO would be.” The resources supplied by the knowledge graph provide the support the sales team needs to tailor information to each prospective customer.

The specific expertise required by the team varies depending on the products being sold, the geographic region, and other factors, and the knowledge graph supports these needs. For example, if a team in southern Portugal needs to know the preferences of that market, the associations built into the graph database can provide the information that is essential for them. “The information we can access helps customers understand the answers to their questions very quickly,” Copeland commented. “We believe the experience that the customers have helps them scope out what they need and what the road map might be.”

The strength of graph databases

A graph databases is a type of NoSQL database that stores data according to associations among data elements rather than in the rows and columns of a relational database. Because graph databases use a dynamic schema rather than a fixed, table-based one, adding new data types and categories is much easier. And because they are semantics-based, graph databases have strengths in inferring intent, producing answers to questions, and making recommendations. They can also make inferences about possible associations from existing associations.

A graph database also provides much more context than a relational database and therefore can return more relevant results when a user is searching; they also integrate data
from multiple sources. “At one telecom company we worked with, customer service reps might have [had] to open 15 databases to find out what went wrong and what the solution was,” said Jans Aasman, CEO of Franz. “We took their core customer data, billing information, every CRM call, and every action and put them into AllegroGraph, and the customer service reps were finally able to respond in a meaningful way, whether that was to make an offer to the customer or provide appropriate technical support.” The capability of graph databases to overcome silos and provide an integrated view of the customer is one of its strengths.

In order to create the graph database on which the knowledge graph is built, the relationships among entities need to be mapped. In the case of a hospital patient, the patient is the core entity, and the events are medical encounters or lab results, which may come out of different databases or a data warehouse. “The mapping is a major project, but it only needs to be done once,” Aasman pointed out. “After that, the relationships do not need to be regenerated during the search because they are indexed in AllegroGraph, which makes retrieval very rapid.”

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**Advanced Knowledge Graph Visualization with New Gruff v8**

*High Performance Data Visualizations Accelerate Graph Search and Query Building — Driving Data Discoveries for Banks, Healthcare Providers and Enterprises Globally*

OAKLAND, Calif., May 12, 2020 — Franz Inc., an early innovator
in Artificial Intelligence (AI) and leading supplier of Semantic Graph Database technology for Knowledge Graph Solutions, today announced Gruff 8, a browser-based graph visualization software tool for exploring and discovering connections within enterprise Knowledge Graphs. Gruff 8, which has been integrated into AllegroGraph 7, enables users to visually build queries and visualize connections between data without writing code, which speeds discoveries and enhances the ability to uncover hidden connections within data.

“By augmenting Knowledge Graphs with visualizations, users can determine insights that would otherwise elude them,” said Jans Aasman, CEO of Franz Inc. “Gruff’s dynamic data visualizations increase users’ understanding of data by instantly illustrating relevant relationships, hidden patterns and data’s significance to outcomes. Gruff also helps make data actionable by displaying it in a way that decision-makers can see the significance of data relative to a business problem or solution.”

“Few tools exist that can quickly turn arbitrary RDF graph pattern matches into clear visualizable results,” said Michael Pool, Global Head of Semantic Modeling and Engineering, Senior Director at BNY Mellon Bank. “Gruff is invaluable in turning our knowledge graph data into useful and actionable analytic insights.”

Gruff enables users to create visual Knowledge Graphs that display data relationships in views that are driven by the user. Ad hoc and exploratory analysis can be performed by simply clicking on different graph nodes to answer questions. Gruff’s unique ‘Time Machine’ feature provides the capability to explore temporal context and connections within data. The visual query builder within Gruff empowers both novice and expert users to create simple to highly complex queries without writing any code.

Browser-based Graph Visualization – Gruff 8 is a browser-based
application that does not require an additional download or application installation once AllegroGraph is installed. All AllegroGraph users need is a web browser and internet connection to login. This approach gives users the convenience to access Gruff from anywhere on any type of system, while also simplifying deployment and streamlining updates within enterprise environments.

Louis Rumanes at UnitedHealth Group Research and Development recognizes the value of using Gruff as a browser-based app and commented, “Nice job on Gruff in a browser and I think this will be a gamechanger.”

**Accelerated Visual Graph Rendering** – Visual renderings within Gruff are now up to 3X faster. Users can dynamically lay out cyclical graphs, display tables of properties and build SPARQL or Prolog queries as visual diagrams.

**Dynamic Graph Visualizations within AllegroGraph** – Gruff is fully integrated with AllegroGraph 7, Franz’s leading semantic knowledge graph solution, which seamlessly leverages Gruff’s advanced graph visualizations and graphical query builder to reveal hidden connections in knowledge graph data. AllegroGraph 7, with FedShard™, is a breakthrough Knowledge Graph solution that allows infinite data integration through a patented approach that unifies all data and knowledge base silos into an Entity-Event Knowledge Graph solution that can support massive big data analytics. AllegroGraph 7 utilizes unique federated sharding capabilities that drive 360-degree insights and enable complex reasoning across distributed Knowledge Graphs.

To support ubiquitous AI, a Knowledge Graph system needs to fuse and integrate data, not just in representation, but in context (ontologies, metadata, domain knowledge, terminology systems), and time (temporal relationships between components of data). The rich functional and contextual integration of multi-modal, predictive modeling, artificial intelligence
suitable for large scale analytics is what distinguishes AllegroGraph 7 as a modern, scalable enterprise analytic platform.

AllegroGraph 7 is the first big temporal Knowledge Graph technology that encapsulates a novel entity-event model natively integrated with domain ontologies and metadata with dynamic ways of setting the analytics lens on all entities in the system (patient, person, devices, transactions, events, and operations) as prime objects that can be the focus of an analytic (AI, ML, DL) process.

“AllegroGraph 7’s support of Entity-Event Data Modeling is the most welcome innovation and addition to our arsenal in reimagining healthcare and implementing Precision Medicine,” said Dr. Parsa Mirhaji, Director of Center for Health Data Innovations at the Albert Einstein College of Medicine and Montefiore Health System, NY. “Precision Medicine is about moving away from statistical averages and broad-based patterns. It is about connecting many dots, from different contexts and throughout time, to support precision diagnosis and to recommend the precision care that can take into account all the subtle differences and nuisances of individuals and their personal experiences throughout their life. This technology is about saving lives, by leveraging data, context and analytics and is what Franz’s Entity-Event Data Modeling brings to the table.”

**Gruff 8 Availability and Pricing**

Guff 8 is immediately available as a free download from AllegroGraph.com and is integrated as part of AllegroGraph’s cloud offering on the Amazon Marketplace.

**Gruff Webinar**

Join Franz’s webcast discussing Gruff 8 entitled “Visualizing and Exploring Knowledge Graphs with the New Browser based Gruff” – by registering for the May 14th Webinar.
About Franz Inc.

Franz Inc. is an early innovator in Artificial Intelligence (AI) and leading supplier of Semantic Graph Database technology with expert knowledge in developing and deploying Knowledge Graph solutions. The foundation for Knowledge Graphs and AI lies in the facets of semantic technology provided by AllegroGraph and Allegro CL. AllegroGraph is a database technology that enables businesses to extract sophisticated decision insights and predictive analytics from highly complex, distributed data that cannot be uncovered with conventional databases. Unlike traditional relational databases or other NoSQL databases, AllegroGraph employs semantic graph technologies that process data with contextual and conceptual intelligence. AllegroGraph is able run queries of unprecedented complexity to support predictive analytics that help organizations make more informed, real-time decisions. AllegroGraph is utilized by dozens of the top F500 companies worldwide. To learn more about Franz and AllegroGraph, go to www.franz.com.

Ubiquitous AI Demands A New Type Of Database Sharding

Forbes published the following article by Dr. Jans Aasman, Franz Inc.’s CEO.
The notion of sharding has become increasingly crucial for selecting and optimizing database architectures. In many cases, sharding is a means of horizontally distributing data; if properly implemented, it results in near-infinite scalability. This option enables database availability for business continuity, allowing organizations to replicate databases among geographic locations. It’s equally useful for load balancing, in which computational necessities (like processing) shift between machines to improve IT resource allocation.

However, these use cases fail to actualize sharding’s full potential to maximize database performance in today’s post-big data landscape. There’s an even more powerful form of sharding, called “hybrid sharding,” that drastically improves the speed of query results and duly expands the complexity of the questions that can be asked and answered. Hybrid sharding is the ability to combine data that can be partitioned into shards with data that represents knowledge that is usually un-shardable.

This hybrid sharding works particularly well with the knowledge graph phenomenon leveraged by the world’s top data-driven companies. Hybrid sharding also creates the enterprise scalability to query scores of internal and external sources for nuanced, detailed results, with responsiveness commensurate to that of the contemporary AI age.

Read the full article at Forbes.