AllegroGraph Named to DBTA Top 100 That Matter Most in Data

Franz Inc., an early innovator in Artificial Intelligence (AI) and leading supplier of Graph and Document Database technology for Knowledge Graphs, today announced that it has been named to Database Trends and Applications (DBTA) – 2019 Top 100 That Matter Most in Data.

“We’re excited to announce our seventh annual list, as the industry continues to grow and evolve,” remarked Thomas Hogan, Group Publisher at Database Trends and Applications. “Today, more than ever, businesses are looking to increase their efficiency, agility and ability to innovate by managing and leveraging data in new and novel ways. This list seeks to highlight those companies that have been successful in establishing themselves as unique resources for data professionals and stakeholders.”

“We are honored to receive this acknowledgement for our efforts in delivering Enterprise Knowledge Graph Solutions,” said Dr. Jans Aasman, CEO, Franz Inc. “In the past year, we have seen demand for Enterprise Knowledge Graphs take off across industries along with recognition from top technology analyst firms that Knowledge Graphs provide the critical foundation for artificial intelligence applications and predictive analytics. Our AllegroGraph Knowledge Graph Platform Solution offers a unique comprehensive approach for helping companies accelerate the creation of Enterprise Knowledge Graphs that deliver new value to their organization.”

Franz’s Knowledge Graph Platform Solution includes both technology and services for building industrial strength

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, 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.

Companies Across the Globe Use Franz Knowledge Graph Solutions

Organizations in customer service, healthcare, life science, publishing and technology have relied on Franz to help develop their knowledge graph solutions.

Global B2B technology firm N3 Results has utilized Franz's Knowledge Graph Solution to build an 'Intelligent Sales Organization,' which uses graph based technology for taxonomy driven entity extraction, speech recognition, machine learning and predictive analytics to improve quality of conversations, increase sales and improve business visibility.

"In a typical sales organization, the valuable content within the online chat or voice conversation between the agent and customer goes into a black hole," said Shannon Copeland, COO of N3. "Franz helped us build a modern Intelligent Sales Organization (ISO) by creating a real-time Knowledge Graph that knows everything about customers and agents and provides the raw data for machine learning to improve doing the

business of ISO. Now we use the rich information between agents and customers to improve the quality of the interaction in real time, which ultimately creates more sales and provides far better analytics for management."

In 2015, Dr. Parsa Mirhaji, his colleagues and industry partners, including Franz Inc. embarked on a project to bring Knowledge Graph technology to Montefiore, a Bronx-based medical center. "Our strategy at Montefiore is to build a data-driven and evidence-based health system – essentially a learning healthcare system – that can understand its own population thoroughly, understand and improve its practices, and develop the highest quality of services for the people it serves," said Parsa Mirhaji, MD, PhD, Director of the Center for Health Data Innovations at Montefiore and the Albert Einstein College of Medicine. "In order to accomplish that goal, we have created a system that harvests every piece of data that we can possibly find, from our own EMRs and devices to patient-generated data to socioeconomic data from the community. It's extremely important to use anything we can find that can help us categorize our patients more accurately." (Health IT Analytics, At Montefiore, Artificial Intelligence Becomes Key to Patient Care, September 10, 2018)

Wolters Kluwer is using graph analytic techniques to accelerate the knowledge discovery process for its clients. "What we're really interested in is achieving insights that today take a person to analyze and that are prohibitive computationally," said Greg Tatham, Wolters Kluwer CTO of Global Platforms. "We're providing this live feedback. As you're typing, we're providing question and suggestions for you live. AllegroGraph gives us a performant way to be able to just work our way through the whole knowledge model and come up with suggestions to the user in real time." (Datanami, How AI Boosts Human Expertise at Wolters Kluwer, June 6, 2018)

Gartner Identifies Knowledge Graphs and Semantics as Key Technologies for AI

Gartner recently recognized knowledge graphs as a key new technology in both their Hype Cycle for Artificial Intelligence and Hype Cycle for Emerging Technologies. Gartner's Hype Cycle for Artificial Intelligence 2018 states, "The rising role of content and context for delivering insights with AI technologies, as well as recent knowledge graph offerings for AI applications have pulled knowledge graphs to the surface."

Semantics has also been identified by Gartner as critical for effectively utilizing enterprise data assets. "Unprecedented levels of data scale and distribution are making it almost impossible for organizations to effectively exploit their data assets. Data and analytics leaders must adopt a semantic approach to their enterprise data assets or face losing the battle for competitive advantage." (Gartner, How to Use Semantics to Drive the Business Value of Your Data, Guido De Simoni, November 27, 2018) For more information about the Gartner report, visit the Gartner Report Order Page.

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. 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.

About Database Trends and Applications
Database Trends and Applications (DBTA), published by Information Today, Inc., is a bimonthly magazine that delivers advanced trends analysis and case studies in data management and analysis developed by a team with more than 25 years of industry experience. Visit www.dbta.com for subscription

information. DBTA also delivers groundbreaking market research exclusively through its Unisphere Research group.

Creating Explainable AI With Rules

Franz's CEO, Jans Aasman's recent Forbes article:

There's a fascinating dichotomy in artificial intelligence between statistics and rules, machine learning and expert systems. Newcomers to artificial intelligence (AI) regard machine learning as innately superior to brittle rules-based systems, while the history of this field reveals both rules and probabilistic learning are integral components of AI.

This fact is perhaps nowhere truer than in establishing explainable AI, which is central to the long-term business value of AI front-office use cases.

Granted, simple machine learning can automate backend processes. However, the full extent of deep learning or complex neural networks – which are much more accurate than basic machine learning – for mission-critical decision-making and action requires explainability.

Using rules (and rules-based systems) to explicate machine learning results creates explainable AI. Many of the far-reaching applications of AI at the enterprise level – deploying it to combat financial crimes, to predict an individual's immediate and long-term future in health care, for example – require explainable AI that's fair, transparent and regulatory compliant.

Rules can explain machine learning results for these purposes and others.

Read the full article at Forbes

New!!! AllegroGraph v6.5 – Multi-model Semantic Graph and Document Database

Download – **AllegroGraph v6.5 and Gruff v7.3**

AllegroGraph – **Documentation**

Gruff – **Documentation**

Adding JSON/JSON-LD Documents to a Graph Database

Traditional document databases (e.g. MongoDB) have excelled at storing documents at scale, but are not designed for linking data to other documents in the same database or in different databases. AllegroGraph 6.5 delivers the unique power to define many different types of documents that can all point to each other using standards-based semantic linking and then run SPARQL queries, conduct graph searches, execute complex joins and even apply Prolog AI rules directly on a diverse sea of objects.

AllegroGraph 6.5 provides free text indexes of JSON documents for retrieval of information about entities, similar to document databases. But unlike document databases, which only link data objects within documents in a single database, AllegroGraph 6.5 moves the needle forward in data analytics by semantically linking data objects across multiple JSON

document stores, RDF databases and CSV files. Users can run a single SPARQL query that results in a combination of structured data and unstructured information inside documents and CSV files. AllegroGraph 6.5 also enables retrieval of entire documents.

There are many reasons for working with JSON-LD. The big search engines force ecommerce companies to mark up their webpages with a systematic description of their products and more and more companies use it as an easy serialization format to share data.

A direct benefit for companies using AllegroGraph is that they now can combine their documents with graphs, graph search and graph algorithms. Normally when you store documents in a document database you set up your documents in such a way that it is optimized for certain direct retrieval queries. Performing complex joins for multiple types of documents or even performing a shortest path through a mass of object (types) is too complicated. Storing JSON-LD objects in AllegroGraph gives users all the benefits of a document database AND the ability to semantically link objects together, run complex joins, and perform graph search queries.

Another key benefit for companies is that your application developers don't have to learn the entire semantic technology stack, especially the part where developers have to create individual RDF triples or edges. Application developers love to work with JSON data as serialization for objects. In JavaScript the JSON format is syntactically identical to the code for creating JavaScript objects and in Python the most import data structure is the 'dictionary' which is also near identical to JSON.

Key AllegroGraph v6.5 Features:

- Support for loading JSON-LD and also some non-RDF data files, that is files which are not already organized

into triples or quads. See Loading non-RDF data section in the Data Loading document for more information on loading non-RDF data files. Loading JSON-LD files is described along with other RDF formats in the Data Loading document. The section Supported RDF formats lists all supported RDF formats.

- Support for two phase commits (2PC), which allows AllegroGraph to participate in distributed transactions compromising a number of AllegroGraph and non-AllegroGraph databases (e.g. MongoDB, Solr, etc), and to ensure that the work of a transaction must either be committed on all participants or be rolled back on all participants. Two-phase commit is described in the Two-phase commit document.

- An event scheduler: Users can schedule events in the future. The event specifies a script to run. It can run once or repeatedly on a regular schedule. See the Event Scheduler document for more information.

- AllegroGraph is 100 percent ACID, supporting Transactions: Commit, Rollback, and Checkpointing. Full and Fast Recoverability. Multi-Master Replication
- Triple Attributes – Quads/Triples can now have attributes which can provide fine access control.
- Data Science – Anaconda, R Studio
- 3D and multi-dimensional geospatial functionality
- SPARQL v1.1 Support for Geospatial, Temporal, Social Networking Analytics, Hetero Federations
- Cloudera, Solr, and MongoDB integration
- JavaScript stored procedures
- RDF4J Friendly, Java Connection Pooling

- Graphical Query Builder for SPARQL and Prolog – Gruff
- SHACL (Beta) and SPIN Support (SPARQL Inferencing Notation)
- AGWebView – Visual Graph Search, Query Interface, and DB Management
- Transactional Duplicate triple/quad deletion and suppression
- Advanced Auditing Support
- Dynamic RDFS++ Reasoning and OWL2 RL Materializer
- AGLoad with Parallel loader optimized for both traditional spinning media and SSDs.

Numerous other optimizations, features, and enhancements. Read the release notes – https://franz.com/agraph/support/documentation/current/release-notes.html