

The Importance of FAIR Data in Earth Science

Franz's CEO, Jans Aasman's recent Marine Technology News:

Data's valuation as an enterprise asset is most acutely realized over time. When properly managed, the same dataset



supports a plurality of use cases, becomes almost instantly available upon request, and is exchangeable between departments or organizations to systematically increase its yield with each deployment.

These boons of leveraging data as an enterprise asset are the foundation of G0 FAIR's Findable Accessible Interoperable Reusable (FAIR) principles profoundly impacting the data management rigors of geological science. Numerous organizations in this space have embraced these tenets to swiftly share information among a diversity of disciplines to safely guide the stewardship of the earth.

According to Dr. Annie Burgess, Lab Director of Earth Science Information Partners (ESIP), the "most pressing global challenges cannot be solved by a single organization. Scientists require data collected across multiple disciplines, which are often managed by many different agencies and institutions." As numerous members of the earth science community are realizing, the most effectual means of managing those disparate data according to FAIR principles is by utilizing the semantic standards underpinning knowledge graphs.

Read the full article at [Marine Technology News](#)

Turn Customer Service Calls into Enterprise Knowledge Graphs

Franz's CEO, Jans Aasman's recent Destination CRM article:

The need for text analytics and speech recognition has broadened over the years, becoming more prevalent and essential in the sales, marketing, and customer service departments of various types of businesses and industries. The goal is simple for these contact center use cases: provide real-time assistance to human agents interacting with potential customers to close sales, initiate them, and increase customer satisfaction.

Until fairly recently, the rich array of unstructured data encompassing client texts, chats, and phone calls was obscured from contact centers and organizations due to the sheer arduousness of speech recognition and text analytics. When readily integrated into knowledge graphs, however, these same sources become some of the most credible for improving agent interactions and achieving business objectives.

Powered by the shrewd usage of organizational taxonomies, machine learning, natural language processing (NLP), and semantic search, knowledge graphs make speech recognition and text analytics immediately accessible, enabling real-time customer interactions that can maximize business objectives—and revenues.

Taxonomies

Taxonomies are the foundation of the knowledge graph approach

to rapidly conveying results of speech recognition and text analytics for timely customer interactions. Agents need three types of information to optimize customer interactions: their personas (such as an executive or a purchase department representative, for example), their reasons for contacting them, and their industries. Taxonomies are instrumental to performing these functions because they provide a hierarchy of relevant terms to organizations.

Read the full article at [Destination CRM](#)

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

Webcast – Speech Recognition, Knowledge Graphs, and AI for Intelligent Customer Operations – April 3, 2019

Presenters – Burt Smith, N3 Results and Jans Aasman, Franz Inc.

In the typical sales organization the contents of the actual chat or voice conversation between agent and customer is a black hole. In the modern Intelligent Customer Operations center (e.g. N3 Results – www.n3results.com) the

interactions between agent and customer are a source of rich information that helps agents to improve the quality of the interaction in real time, creates more sales, and provides far better analytics for management.

Join us for this Webinar where we describe a real world Intelligent Customer Operations center that 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.

View the recorded webinar.

What is the Answer to AI Model Risk Management?

Algorithm-XLab – March 2019

Franz CEO Dr. Jans Aasman Explains how to manage AI Modelling Risks.

AI model risk management has moved to the forefront of contemporary concerns for statistical Artificial Intelligence, perhaps even displacing the notion of ethics in this regard because of the immediate, undesirable repercussions of tenuous machine learning and deep learning models.

AI model risk management requires taking steps to ensure that the models used in artificial applications produce results that are unbiased, equitable, and repeatable.



The objective is to ensure that given the same inputs, they produce the same outputs.

If organizations cannot prove how they got the results of AI risk models, or have results that are discriminatory, they are subject to regulatory scrutiny and penalties.

Strict regulations throughout the financial services industry in the United States and Europe require governing, validating, re-validating, and demonstrating the transparency of models for financial products.

There's a growing cry for these standards in other heavily regulated industries such as healthcare, while the burgeoning Fair, Accountable, Transparent movement typifies the horizontal demand to account for machine learning models' results.

AI model risk management is particularly critical in finance.

Financial organizations must be able to demonstrate how they derived the offering of any financial product or service for specific customers.

When deploying AI risk models for these purposes, they must ensure they can explain (to customers and regulators) the results that determined those offers.

Read the full article at [Algorithm-XLab](#).

Gartner Identifies Top 10 Data and Analytics Technology Trends for 2019

According to Donald Feinberg, vice president and distinguished analyst at Gartner, the very challenge created by digital disruption – too much data – has also created an unprecedented opportunity. The vast amount of data, together with increasingly powerful processing capabilities enabled by the cloud, means it is now possible to train and execute algorithms at the large scale necessary to finally realize the full potential of AI.

“The size, complexity, distributed nature of data, speed of action and the continuous intelligence required by digital business means that rigid and centralized architectures and tools break down,” Mr. Feinberg said. “The continued survival of any business will depend upon an agile, data-centric architecture that responds to the constant rate of change.”

Gartner recommends that data and analytics leaders talk with senior business leaders about their critical business priorities and explore how the following top trends can enable them.

Trend No. 5: Graph

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.

The application of graph processing and graph DBMSs will grow at 100 percent annually through 2022 to continuously accelerate data preparation and enable more complex and

adaptive data science.

Graph data stores can efficiently model, explore and query data with complex interrelationships across data silos, but the need for specialized skills has limited their adoption to date, according to Gartner.

Graph analytics will grow in the next few years due to the need to ask complex questions across complex data, which is not always practical or even possible at scale using SQL queries.

<https://www.gartner.com/en/newsroom/press-releases/2019-02-18-gartner-identifies-top-10-data-and-analytics-technolo>

The Semantic Knowledge Graph: A Tribute



Dataversity – January 2019

Noam Chomsky, the philosopher, cognitive scientist, historian, social critic, and father of modern linguistics, has authored over 1,000 articles and 130 books. The 89-year-old intellectual also has written films and appeared in many documentaries. The substantial work he has done in linguistics and politics has earned him the title of “most cited living author.”

Now his work is the subject of the Noam Chomsky Knowledge Graph, the first Semantic Knowledge Graph for a public figure.

“Doing a Semantic Project of all he has written or said is a fabulous tribute to a man who has made a big contribution to the study of language and its meaning,” says Fred Davis, Executive Director of the Chomsky Knowledge Graph project.

Dr. Jans Aasman was quoted:

“A good thing about Semantic Technology is that it’s easier to add new information than if you have a highly structured database. That’s because of the way things are stored in triples – where you have a subject, predicate, and object relationship—so you can bring in new information that instantly connects to other information,” says Dr. Jans Aasman, CEO of Franz.

Read the full article at [Dataversity](#)

ГРАФОВЫЕ БАЗЫ: ПРИНЦИП РАБОТЫ И ПРИМЕНЕНИЕ — GRAPH BASES: PRINCIPLE OF OPERATION AND APPLICATION

Всеволод Дёмкин удаленно работает во Franz Inc. над графовой базой AllegroGraph. Преподает в Projector курс «Natural Language Processing». В свободное время делает open-cors для обработки природных текстов на Lisp’е.

Мы рассмотрим создание программы для агрегации текстов из

разных источников, таких как twitter, блоги, reddit и т.д., – их автоматической, а затем ручной обработки для формирования дайджеста новостей по определенной теме. На этом примере мы анализируем, какие преимущества дает использование графовых баз данных, обсудим их возможности и ограничения.

В качестве конкретной БД будет использована система Franz AllegroGraph и мы ознакомимся с ее экосистемой, включающей возможности построения API и веб-приложений, а также со средой Allegro Common Lisp, на которой она построена. Особое внимание будет уделено использованию машинного обучения и NLP при решении задач работы с текстом, в частности, внутри AllegroGraph.

Обсудим:

- В чем особенности, как работают, преимущества/недостатки графовых БД;
- Как решать базовые задачи обработки текстов с использованием инструментария ML/NLP;
- Как построить полноценное приложение с ядром обработки текста на основе графовой БД и ML/NLP технологий;
- Как устроена экосистема Common Lisp и как можно задействовать ее для создания серверных приложений.

Лекция будет полезна: разработчикам, которые интересуются темой графовых баз данных и/или ML/NLP.

Semantic Web and Semantic

Technology Trends in 2019

Dataversity – January 2019

What to expect of Semantic Web and other Semantic Technologies in 2019? Quite a bit. DATAVERSITY engaged with leaders in the space to get their thoughts on how Semantic Technologies will have an impact on multiple areas.

Dr. Jans Aasman, CEO of Franz Inc. was quoted several times in the article:

Among the semantic-driven AI ventures next year will be those that relate to the healthcare space, says Dr. Jans Aasman, CEO of Semantic Web technology company Franz, Inc:

“In the last two years some of the technologies were starting to get used in production,” he says. “In 2019 we will see a ramp-up of the number of AI applications that will help save lives by providing early warning signs for impending diseases. Some diseases will be predicted years in advance by using genetic patient data to understand future biological issues, like the likelihood of cancerous mutations – and start preventive therapies before the disease takes hold.”

If that's not enough, how about digital immortality via AI Knowledge Graphs, where an interactive voice system will bring public figures in contact with anyone in the real world? “We'll see the first examples of Digital Immortality in 2019 in the form of AI Digital Personas for public figures,” says Aasman, whose company is a partner in the Noam Chomsky Knowledge Graph:

“The combination of Artificial Intelligence and Semantic Knowledge Graphs will be used to transform the works of scientists, technologists, politicians, and scholars like

Noam Chomsky into an interactive response system that uses the person's actual voice to answer questions," he comments.

"AI Digital Personas will dynamically link information from various sources – such as books, research papers, notes and media interviews – and turn the disparate information into a knowledge system that people can interact with digitally." These AI Digital Personas could also be used while the person is still alive to broaden the accessibility of their expertise.

On the point of the future of graph visualization apps, Aasman notes that:

"Most graph visualization applications show network diagrams in only two dimensions, but it is unnatural to manipulate graphs on a flat computer screen in 2D. Modern R virtual reality will add at least two dimensions to graph visualization, which will create a more natural way to manipulate complex graphs by incorporating more depth and temporal unfolding to understand information within a time perspective."

Read the full article at [Dataversity](#).