

Answering the Question Why: Explainable AI



The statistical branch of Artificial Intelligence has enamored organizations across industries, spurred an immense amount of capital dedicated to its technologies, and entranced numerous media outlets for the past couple of years. All of this attention, however, will ultimately prove unwarranted unless organizations, data scientists, and various vendors can answer one simple question: can they provide Explainable AI?

Although the ability to explain the results of Machine Learning models—and produce consistent results from them—has never been easy, a number of emergent techniques have recently appeared to open the proverbial ‘black box’ rendering these models so difficult to explain.

One of the most useful involves modeling real-world events with the adaptive schema of knowledge graphs and, via Machine Learning, gleaning whether they’re related and how frequently they take place together.

When the knowledge graph environment becomes endowed with an additional temporal dimension that organizations can traverse forwards and backwards with dynamic visualizations, they can understand what actually triggered these events, how one affected others, and the critical aspect of causation necessary for Explainable AI.

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

Improving Data Processes with Knowledge Graphs

AllegroGraph Thought Leadership Article from Big Data Quarterly



Knowledge graphs link together data of any variety, structure, or format in business terms via uniform data models. Organizations can then join and traverse all of their data, semantically tagged with unique machine-readable identifiers, making the platform ideal for intelligent systems, machine learning analytics, interoperability, and an array of other benefits influential for AI applications.

The technology is gaining the attention of research firms and consultancies. In 2018 and 2019, knowledge graphs appeared on Gartner's Hype Cycle for Emerging Technologies, acknowledged for their hearty connections to pertinent data. According to Gartner, "These ecosystems developed as digitalization morphed traditional value chains, enabling more seamless, dynamic connections to a variety of agents and entities across geographies and industries. In the future these will include decentralized autonomous organizations (DAOs), which operate independently of humans and rely on smart contracts."

Download the Full White Paper.

100 Companies That Matter in Knowledge Management

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.

“Knowledge management software and services providers are embracing a fresh wave of technological innovation to address heightened expectations—among both customers and employees—for the right information to be delivered to the right people at the right time, said Tom Hogan, Group Publisher at KMWorld. “To showcase organizations that are advancing their products and capabilities to meet changing requirements, KMWorld created the annual list of 100 Companies That Matter in Knowledge Management.”

“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.”

How To Avoid Another AI Winter

Forbes published the following article by Dr. Jans Aasman, Franz Inc.'s CEO.



Photo: Getty

Although there has been great progress in artificial intelligence (AI) over the past few years, many of us remember the AI winter in the 1990s, which resulted from overinflated promises by developers and unnaturally high expectations from end users. Now, industry insiders, such as Facebook head of AI Jerome Pesenti, are predicting that AI will soon hit another wall—this time due to the lack of semantic understanding.

“Deep learning and current AI, if you are really honest, has a lot of limitations,” said Pesenti. “We are very, very far from human intelligence, and there are some criticisms that are valid: It can propagate human biases, it’s not easy to explain, it doesn’t have common sense, it’s more on the level of pattern matching than robust semantic understanding.”



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

Franz Inc. to Present at The Global Graph Summit and Data Day Texas

Dr. Jans Aasman, CEO, Franz Inc., will be presenting, "Creating Explainable AI with Rules" at the Global Graph Summit, a part of Data Day Texas. The abstract for Dr. Aasman's presentation:



"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."

"The fundamental necessity for explainable AI spans regulatory compliance, fairness, transparency, ethics and lack of bias – although this is not a complete list. For example, the effectiveness of counteracting financial crimes and increasing revenues from advanced machine learning predictions in financial services could be greatly enhanced by deploying more accurate deep learning models."

But all of this would be arduous to explain to regulators. Translating those results into explainable rules is the basis for more widespread AI deployments producing a more meaningful impact on society.”

The Global Graph Summit is an independently organized vendor-neutral conference, bringing leaders from every corner of the graph and linked-data community for sessions, workshops, and its well-known before and after parties. Originally launched in January 2011 as one of the first NoSQL / Big Data conferences, Data Day Texas each year highlights the latest tools, techniques, and projects in the data space, bringing speakers and attendees from around the world to enjoy the hospitality that is uniquely Austin. Since its inception, Data Day Texas has continually been the largest independent data-centric event held within 1000 miles of Texas.

2020 Trend Setting Products – AllegroGraph

Franz Inc. is proud to announce that it has been named to the 2020 Trend Setting Products in Data Management by Database Trends and Application Magazine.

Database Trends and Applications (DBTA) magazine announced its seventh annual list of trend-setting products in data management and analysis. The list, “DBTA Trend-Setting Products for 2020,” recognizes products in the marketplace that are both innovative and effective in helping customers address evolving challenges and opportunities. In all, 100 products are highlighted in the special December edition of *Database Trends and Applications* magazine and on the DBTA

website, www.dbta.com.

“The world of data management and analytics continues to evolve rapidly with new technologies and strategies,” remarked Thomas Hogan, Group Publisher of *Database Trends and Applications*. “Cutting through the hype and identifying products that deliver results in the real world is more important than ever. This list highlights products that are truly transformative in bringing greater agility, efficiency and innovation to market.”

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AllegroGraph – KMWorld Readers Choice Finalist

KMWorld 2019 Readers' Choice Awards: Best Knowledge Graph

AllegroGraph – Finalist

The ability for knowledge graphs to amass information and relationships and connect those facts allows companies to find

context in data, which is important for extracting value as well as complying with new data regulations.

The concept of the enterprise knowledge graph (EKG) is fairly new and made possible by machine learning and big data technologies, including automated text analysis and graph engines, explained analyst Amy Stapleton in an Opus Research article. “An IA [intelligent assistant] that taps into an EKG can infer the context and intent of questions, generate direct answers, make recommendations, and automatically expand its understanding as the knowledge graph adds new content,” she noted.

KMWorld Readers Choice

Three Necessities For Maximizing Your Digital Twins Approach

The digital twin premise is arguably the most viable means of implementing equipment asset management throughout the industrial internet. It's an exceptionally lucrative element of the internet of things (IoT), with an applicability that easily lends itself to numerous businesses. Its real-time streaming data, simulation capabilities and relationship awareness may well prove to be the “killer app” that makes the IoT mainstream.

Digital Twins Types

There are presently three types of digital twins: those for individual assets, operations and predictions. In this

article, we will focus on individual assets. Examples of these assets include drilling machines in the oil and gas industry or assembly line equipment. Each type of digital twin creates a three-dimensional simulation of the real-world features it models based on relationships of IoT data. The simulated models capture and contextualize this low-latent data about each asset for vital visibility into its performance. This real-time data provides a blueprint for diminishing downtime, scheduling maintenance and monitoring other factors that impact overall asset productivity and ROI. At scale, each factor translates into significant savings, increased performance and greater chances for optimization.

The crux of the digital twin's expansive capabilities is almost entirely predicated on solving one of the more time-honored data management difficulties: data modeling. But the schema issues complicating downstream data modeling processes such as transformation, integration and predictive analytics can be swiftly redressed by knowledge graphs that simplify this vital prerequisite. The standards-based data models of semantic knowledge graphs deliver unparalleled flexibility, interoperability and low latency for which IoT deployments are renowned. *(Full disclosure: My company specializes in semantic knowledge graphs.)*

Read the Full Article at Forbes.

Graphorum — Dr. Aasman

Presenting

Graph-Driven Event Processing for Intelligent Customer Operations

Wednesday, October 16, 2019

10:15 AM – 11:15 AM

Level: Case Study



Dr. Jans Aasman, CEO, Franz Inc.

In the typical 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, 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. The Intelligent Customer Operations center is enabled by a taxonomy of the products and services sold, speech recognition to turn conversations into text, a taxonomy-driven entity extractor to take the important concepts out of conversations, and machine learning to classify chats in various ways. All of this is stored in a real-time Knowledge Graph that also knows (and stores) everything about customers and agents and provides the raw data for machine learning to improve the agent/customer interaction.

In this presentation, we describe a real-world Intelligent Customer Organization 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.

Big Data 50 – Companies Driving Innovation in 2019

Franz Inc. is proud to announce that it has been named to Database Trends and Application (DBTA) – Big Data 50, Companies Driving Innovation in 2019



Today, more than ever, businesses rely on data to deliver a competitive edge. The urgency to compete on analytics has spread across industries, fueled

by the need for greater efficiency, agility and innovation,” remarked Thomas Hogan, Group Publisher at Database Trends and Applications. “This list seeks to highlight those companies that are really driving innovation and serve as a guide to businesses navigating the rapidly changing big data landscape.”

A new generation of tools is making it possible to leverage the wealth of data flowing into organizations from a previously unimaginable range of data sources. Machine learning, AI, Spark, and object storage are just some of the

next-generation approaches gaining traction, according to recent surveys conducted by Unisphere Research, a division of Information Today, Inc.

But, it is also increasingly clear that there is no single way to approach data-driven innovation today. Open source-based technologies have gained strong adoption in organizations alongside proprietary offerings, data lakes are increasingly being implemented but data warehouses continue in widespread use, and hybrid deployments spanning cloud and on-premise are commonly accepted.

Organizations are seeking to use data-driven innovation for better reporting and analytics, real-time decision making, enhanced customer experience and personalization, and reduced costs. But with data coming in from more places than ever, being stored in more systems, and accessed by more users for a wider array of use cases, there is greater recognition that security and governance must be addressed intelligently.

Evaluating new and disruptive technologies, and then identifying how and where they can be useful, can be challenging.

To contribute to the discussion each year, Big Data Quarterly presents the “Big Data 50,” a list of forward-thinking companies that are working to expand what’s possible in terms of capturing, storing, protecting, and deriving value from data.

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