

Why Is JSON-LD Important To Businesses?

Forbes – February 2019

Although you may not have heard of JavaScript Object Notation Linked Data (JSON-LD), it is already affecting your business. Search engine giant Google has mentioned JSON-LD as a preferred means of adding structured data to webpages to make them considerably easier to parse for more accurate search engine results. The Google use case is indicative of the larger capacity for JSON-LD to increase web traffic for sites and better guide users to the results they want.



Expectations are high for JSON-LD, and with good reason. It effectively delivers the many benefits of JSON, a lightweight data interchange format, into the linked data world. Linked data is the technological approach supporting the World Wide Web and one of the most effective means of sharing data ever devised.

In addition, the growing number of enterprise knowledge graphs fully exploit the potential of JSON-LD as it enables organizations to readily access data stored in document formats and a variety of semi-structured and unstructured data as well. By using this technology to link internal and external data, knowledge graphs exemplify the linked data approach underpinning the growing adoption of JSON-LD – and the demonstrable, recurring business value that linked data consistently provides.

Read the full article at Forbes.

Unraveling the Quandary of Access Layer versus Storage Layer Security

InfoSecurity – February 2019

Dr. Jans Aasman was quoted in this article about how AllegroGraph's Triple Attributes provide Storage Layer Security.

With horizontal standards such as the General Data Protection Regulation (GDPR) and vertical mandates like the Fair Credit Reporting Act increasing in scope and number, information security is impacted by regulatory compliance more than ever.

Organizations frequently decide between concentrating protection at the access layer via role-based security filtering, or at the storage layer with methods like encryption, masking, and tokenization.

The argument is that the former underpins data governance policy and regulatory compliance by restricting data access according to department or organizational role. However, the latter's perceived as providing more granular security implemented at the data layer.

A hybrid of access based security and security at the data layer—implemented by triple attributes—can counteract the weakness of each approach with the other's strength,

*resulting in information security that **Franz** CEO Jans Aasman characterized as “fine-grained and flexible enough” for any regulatory requirements or security model.*

*The security provided by this semantic technology is considerably enhanced by the addition of **key-value pairs** as JSON objects, which can be arbitrarily assigned to triples within databases. These key-value pairs provide a second security mechanism “embedded in the storage, so you cannot cheat,” Aasman remarked.*

When implementing HIPPA standards with triple attributes, “even if you’re a doctor, you can only see a patient record if all your other attributes are okay,” Aasman mentioned.

“We’re talking about a very flexible mechanism where we can add any combination of key-value pairs to any triples, and have a very flexible language to specify how to use that to create flexible security models,” Aasman said.

Read the full article at InfoSecurity.

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](#).

What is the most interesting use of a graph database you

ever seen? PWC responds.

From a Quora post by Alan Morrison – Sr. Research Fellow at PricewaterhouseCoopers – November 2018

The most interesting use is the most powerful: standard RDF graphs for large-scale knowledge graph integration.

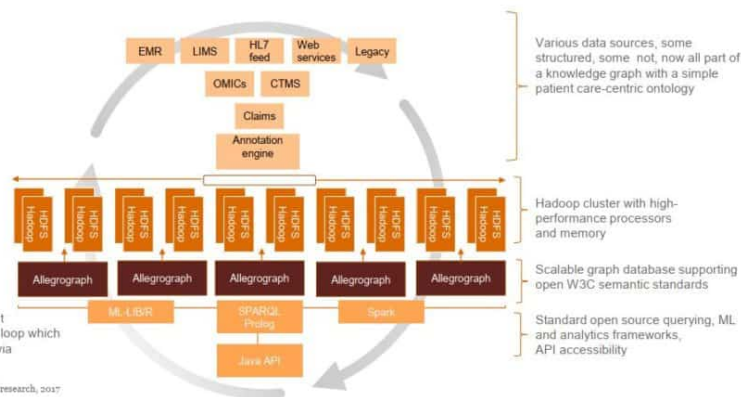
*From my notes on a talk Parsa Mirhaji of Montefiore Health System gave in 2017. **Montefiore uses Franz AllegroGraph, a distributed RDF graph database.** He modeled a core patient-centric hospital knowledge need using a simple standard ontology with a 1,000 or so concepts total.*

That model integrated data from lots of different kinds of heterogeneous sources so that doctors could query the knowledge graph from tablets or phones at a patient's bedside and get contextualized, patient-specific answers to questions for diagnostic purposes.

Fast forward to 2018, and nine out of ten of the most value-creating companies in the world are using standard knowledge graphs in a comparable fashion, either as a base for multi-domain intelligent assistants a la Siri or Alibot or Alexa, or to integrate and contextualize business domains cross-enterprise, or both. The method is preparatory to what John Launchbury of DARPA described as the Third Wave of AI.....

Montefiore's semantic data lake

Doctors can query the graph or harness ML + analytics and receive answers from the system at the point of care via their handhelds.



Montefiore Health, Franz, Intel and PwC research, 2017

PwC | Collapsing the IT stack

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Read the full article over at Quora

2019 Trends in Data Governance: The Model Governance Question

From an AI Business Article by Jelani Harper – November 2018

The propagation of the enterprise's ability to capitalize on data-driven processes—to effectively reap data's yield as an organizational asset, much like any other—hinges on data governance, which arguably underpins the foundation of data management itself.

There are numerous trends impacting that foundation, many of which have always had, and will continue to have, relevance as 2019 looms. Questions of regulatory compliance, data

lineage, metadata management, and even data governance will all play crucial roles.

Franz's CEO, Dr. Jans Aasman was quoted:

Still, as Aasman denoted, "It's extremely complicated to make fair [machine learning] models with all the context around them." Both rules and human supervision of models can furnish a fair amount of context for them, serving as starting points for their consistent governance.

Read the full article at [AI Business](#).

AI Requires More Than Machine Learning

From Forbes Technology Council – October 2018

This article discusses the facets of machine learning and AI:

Lauded primarily for its automation and decision support, machine learning is undoubtedly a vital component of artificial intelligence. However, a small but growing number of thought leaders throughout the industry are acknowledging that the breadth of AI's upper cognitive capabilities involves more than just machine learning.

Machine learning is all about sophisticated pattern recognition. It's virtually unsurpassable at determining relevant, predictive outputs from a series of data-driven inputs. Nevertheless, there is a plethora of everyday, practical business problems that cannot be solved with input/output reasoning alone. The problems also require the

multistep, symbolic reasoning of rules-based systems.

Whereas machine learning is rooted in a statistical approach, symbolic reasoning is predicated on the symbolic representation of a problem usually rooted in a knowledge base. Most rules-based systems involve multistep reasoning, including those powered by coding languages such as Prolog.

Read the full article over at Forbes

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Transmuting Machine Learning into Verifiable Knowledge

From AI Business – August 2018

This article covers machine learning and AI:

According to Franz CEO Jans Aasman, these machine learning deployments not only maximize organizational investments in them by driving business value, but also optimize the most prominent aspects of the data systems supporting them.

“You start with the raw data...do analytics on it, get interesting results, then you put the results of the machine learning back in the database, and suddenly you have a far more powerful database,” Aasman said.

Dr. Aasman is further quoted:

For internal applications, organizations can use machine learning concepts (such as co-occurrence—how often defined concepts occur together) alongside other analytics to monitor employee behavior, efficiency, and success with customers or certain types of customers. Aasman mentioned a project management use case for a consultancy company in which these analytics were used to “compute for every person, or every combination of persons, whether or not the project was successful: meaning, done on time to the satisfaction of the customer.”

Organizations can use whichever metrics are relevant for their businesses to qualify success. This approach is useful for determining a numerical rating for employees “and you could put that rating back in the database,” Aasman said. “Now you can do a follow up query where you say how much money did I make on the top 10 successful people; how much money did I lose on the top 10 people I don’t make a profit on.”

Read the full article over at [AI Business](#).