

NEW Business Intelligence Buyer's Guide – GET IT!

Business Intelligence  
**Solutions Review**



- News
- Best Practices
- Best Selling Books
- Solutions Directories ▾
- Buyer's Guides ▾
- Matrix Report
- Resources
- Contact Us

# 31 Data Science and Analytics Predictions from 19 Experts for 2022

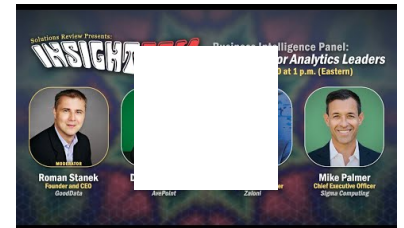
Posted on December 9, 2021 by Timothy King in Best Practices



*We polled 19 experts and received 31 data science and analytics predictions for 2021, in an attempt to help you make the best business decisions.*

As part of Solutions Review's third-annual [#BIInsightJam](#), we called for the industry's best and brightest to share their data science and analytics predictions for 2022. The experts featured here represent the top [data science](#) and [analytics solution providers](#) with experience in this niche. Data science and analytics predictions have

## Featured Video



▶ Subscribe

**Bold BI**  
By Syncfusion

**Embed BI dashboards in your apps.**

LEARN MORE

LEARN ABOUT THE TOP VENDORS

**BUSINESS INTELLIGENCE BUYER'S GUIDE**

FREE DOWNLOAD

been vetted for relevance and ability to add business value as well. These are the best predictions from the dozens we received. We believe these are actionable and may impact a number of verticals, regions, and organization sizes.

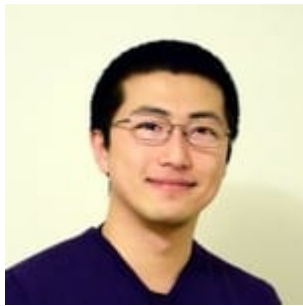
**Note:** Data science and analytics predictions are listed in the order we received them.



**Business Intelligence Buyer's Guide**  
Profiles of the Top Vendors from the Editors of Solutions Review

PDF icon, Adobe logo, Download Now! button, and a stack of report pages.

## Haoyuan Li, Founder and CEO at Alluxio



### *Mainstream AI and Deep Learning*

*“As the toolset for AI applications continues to evolve, machine learning and deep learning platforms have entered the mainstream and will attain the same level of maturity as specialized data analytics. Just like we currently see a plethora of fully integrated managed services based Apache Spark and Presto, in 2022, we will see vertical integrations emerging based on the likes of PyTorch and Tensorflow. MLOps for pipeline automation and management will become essential, further lowering the barriers and accelerating the adoption of AI and ML.”*

## Rik Chomko, Co-Founder and CEO at InRule Technology



### *Data in Motion is the Next Automation Holy Grail*

*“For automated decisions and machine learning, both AI technologies that rely on the input of data, the data itself remains far from malleable. All too often, massive amounts of enterprise data is difficult to scale, store, and use in an actionable way. Until AI and automation technologies can better master the flow of data, advancements will be slow-moving. In the years ahead, as enterprises master how to tap into data in motion, we will see greater innovation in automation that enables decision-making based off real-time, data-backed insights.”*



**Business Intelligence Vendor Report**  
A Side by Side Comparison of the Top Data & Analytics Solution Providers

Get the Report button and a stack of report pages.

## Most Viewed by Our Readers



31 Data Science and Analytics Predictions from 19 Experts for 2022



The Business Intelligence Industry is Stagnating, Here's Why



The 14 Best Power BI Training and Online Courses for 2021



The 16 Best Data Science and Machine Learning Platforms for 2022



The 3 Best Power BI Certifications Online to Consider in 2021



The 28 Best Data Analytics Software Tools for 2022



Solutions Review Names 6 Data Analytics and BI Vendors to Watch, 2022

## Nelson Petracek, CTO at TIBCO



### *Predictive Analytics Will Drive New, Emerging Use Cases Around the Next Generation of Digital Applications*

*“The technology will become more immersive and embedded, where predictive analytics capabilities will be blended seamlessly into the systems and applications with which we interact. Predictive analytics will drive use cases in next-gen apps like metaverse applications (convergence of digital and physical worlds, powered by technologies such as IoT, digital twins, AI/ML, and XR) and the next generation of composable applications.”*

## Mark Palmer, SVP of Data, Analytics and Data Science Products at TIBCO

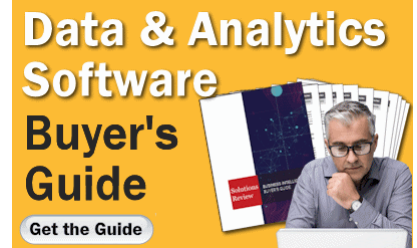


### *Enterprises Will Employ Adaptive Learning in BotVille*

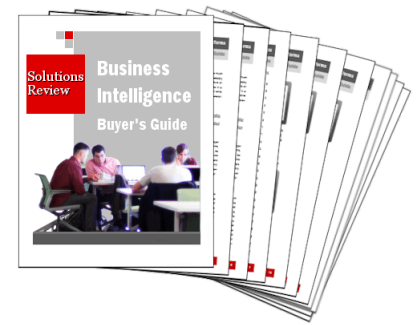
*“Bots and automation are all the rage. However, while many companies have become pretty good at automating existing processes, few have learned from that automation. You need a heads-up display for RPA with AI-driven insights. Adaptive, incremental, dynamic learning techniques are growing fields of AI/ML that, when applied to the RPA’s exhaust, can make observations on the fly. Patterns of behavior are continuously observed. These dynamic learning technologies help business users see and act on AHA moments and make smarter decisions.”*

### *Enterprises Will Discover the Big AI Lie*

*“92% of companies are invested more in AI in 2021, yet just 12% are deploying it at scale, down from last year. What’s going on? How can companies be spending MORE on AI but getting LESS from it? There are many non-obvious factors at play: culture, tools, bias concerns, fear, and automation grace the top of the list. In 2022, firms must meet these challenges head-on with a cultural approach to model operationalization to*



Data Analytics, Predictive Modeling, Data Mining – Get the Answers to the Questions Everyone is Asking



*better manage, track and optimize algorithms. Only then will data science move from the playground to the battleground.”*

---

## **Michael O’Connell, Chief Analytics Officer at TIBCO**



### ***ModelOps is Hot***

*“Working from home in the pandemic has accelerated collisions and collaborations between teams of data scientists, DevOps, and model ops developers – to get data science apps into production. Emerging from this is a focus on converting ad-hoc processes into a controlled environment – for managing low code and code first components, processes for data flows and model connections, along with rules, actions and decisions. Continuous analysis of models actually in operations is also in focus – to assess ROI of the data science app, model drift and model rebasing.*

*ML Engineers are now in the middle of this – configuring deployment scenarios in hybrid cloud environments, working with data scientists, data engineers, business users and devops teams; and with app dev and design teams.”*

### ***Analytics Must Move Beyond Insights and Into Actions and Decisions***

*“Today’s fast-changing business climate demands real-time visibility and up-to-the-minute recommendations from data and analytics. To survive the post-pandemic world, organizations need to be able to predict what’s going to happen next based on the data they have; and develop more discipline around decisions and actions. Processes for measuring impact and closing the decision intelligence loop will sharpen their focus.”*

---

## **Dipti Borkar, Co-Founder and Chief Product Officer at Ahana**

### ***More Open-Source Behind Analytics & AI***

*“As the momentum behind the Open Data Lake Analytics stack to power Analytics & AI applications grew over the past year, we’ll see a bigger focus on leveraging Open*



*Source to address the limitations around flexibility and cost when it comes to traditional enterprise data warehouses. Open source cloud-native technologies like Presto, Apache Spark, Superset, and Hudi will power AI platforms at a larger scale, opening up new use cases and workloads that aren't possible on the data warehouse."*

---

## **Rakesh Jayaprakesh, Product Manager at ManageEngine**



### ***Augmented BI Will Make Data Democratization a Reality***

"The biggest barrier to data democratization was allowing business and non-technical users to access raw data for analysis. Augmented analytics capabilities such as Natural Language Processing (NLP) and

Natural Language Querying (NLQ) will allow business users to get answers to important questions without having to work with the data directly. This helps companies bypass complexities in issuing and managing user-level permissions to raw data."

### ***Contextual Embedded Analytics Will be Key to Successful Analytics Implementation***

"The chances of an organization acting upon insight is much higher when presented directly within the business application than when it is presented in a standalone BI software. This is mainly because of two aspects—contextual availability and short reach to the decision-making audience. For example, when insight on project efficiency is present right within a project management software, it makes it easy for project managers to relate it to their daily work and put measures in place to fix inefficiencies."

---

## **Ryan Splain, Director of Global Partnerships at ZL Technologies**



### **Unstructured Analytics**

*“In 2022, with powerful technologies available to them, organizations will invest more in unstructured analytics. To date, most business intelligence has been conducted using structured data; however, there are countless problems that cannot be answered by these clean-cut numbers. Burgeoning people analytics teams are*

*offered a new means of assessing uniquely human situations—talent acquisition, workforce sentiment, productivity, etc.—by analyzing the textual, conversational, and communicative data created by the workforce each day. These emails, files, and collaboration data speak to the human side of the enterprise that has long remained out of reach. “*

---

## **Krishna Subramanian, COO at Komprise**



### **Unstructured Data Analytics Workflow Solutions Will Emerge**

*“Processing and indexing petabytes of unstructured data is today largely a manual effort. Large organizations employ legions of data professionals to search, catalogue and move this data so it can be ingested by analytics tools and manipulated. There’s a*

*dire need to simplify and automate these processes. Solutions that index files easily across multiple file and cloud silos and automate the systematic data movement will be on the rise.*

*Also, data analytics solutions for unstructured data might be verticalized, so they are sector specific or applications specific. For instance, medical images and how you interpret them is a contextual event requiring specific knowledge of clinical data sets. Organizations are creating custom workflows consisting of cloud-based analytics tools like Amazon Comprehend for PII detection along with manual data movement and data lakes. The time is ripe for commercial data management solutions which can enable easy search of specific data sets across a global enterprise and stream this data continually to systematically automate the workflow of unstructured data analytics.”*

---

## Nick Elprin, CEO at Domino Data Lab



### ***The CAO Will Eclipse the CDO***

*“While many companies today have a chief data officer, in 2022 we will see more enterprises establish “chief analytics officer” or “chief data and analytics officer” roles. Elevating analytics reflects an evolving understanding of data science and machine learning as the ultimate functions that turn data into business value,*

*and increasingly core to company-wide strategy.”*

### ***Democratization of ML Through Up-Skilling Will Make More Analysts***

#### ***Comfortable with Code***

“For over 20 years, different products have promised to enable advanced analytics with “no-code” or “drag-and-drop” user interfaces. The latest wave of this trend will lose enthusiasm in favor of companies investing to upskill their workforce. Analytical programming languages like Python and R will become more table stakes (especially with the rise of data science degree programs in secondary education), just as Excel and SQL became a decade ago.”

### ***Unpredictable Business Conditions Will Accelerate Adoption of Model***

#### ***Monitoring***

*“Model monitoring, already critical in a post-pandemic economy, will become essential. The continued volatility of unpredictable business factors, from supply chains to extreme weather, will greatly accelerate the need for businesses to continuously monitor how well their models reflect the real and rapidly changing world of their customers.”*

---

## Ashley Kramer, Chief Product Officer at Sisense

### ***Organizations Will Redefine What it Means to Build a “Culture of Analytics”***

*“For too long, business leaders have assumed that upskilling their workforce with data classes/certifications and investing in self-service tools would lead to a data-driven organization. They are finally ready to admit that it’s not working. Self-service BI does not “close the skills gap.” Not everyone has time or interest in becoming a data analyst*



or data literate, especially now in today's post-COVID landscape where teams are understaffed and people are valuing their time differently in and outside of work. In 2022, organizations will redefine what it means to build a “culture of analytics” and change the paradigm by bringing insights to workers in a more digestible way – turning to methods and solutions like embedded analytics that won't require them to learn new skills or

invest additional time.”

### **The Most Data-Driven Organizations Will Combat Tool Fatigue by Bringing Data to Workers Where They Are**

“The rise of work-from-home and the digital acceleration brought on by the pandemic means that more people than ever are using different tools in different places to do their jobs – from email to collaboration software like Slack and Teams to the many point solutions needed to get work done across departments. As a result, workers everywhere are experiencing tool fatigue, distractions and inefficiencies from jumping around from software to software or being forced to use tools that don't fit into their personal workflow. Rather than investing in data/analytics solutions that add yet another tool to the mix, we'll start to see more organizations in 2022 delivering insights to employees directly within their workflows via embedded analytics (for example, directly within Slack, Teams, etc.). In this environment, workers can make data-driven decisions without thinking twice and without any disruptions.”

### **Automation Turns Prescriptive Analytics Into Prescriptive Guidance**

“For years we heard that the future of analytics will go beyond descriptive analytics (what happened) and predictive analytics (what will happen) to prescriptive guidance (what to do about it). AI combined with automation will finally make this possible by dynamically combining relevant data and alerting knowledge workers to take action, in advance, before an event occurs. Customer Service reps will be notified to reach out to potentially angry customers before they even call in. Sales leaders will react immediately to dips in revenue pipeline coverage due to upstream activities without waiting until the end of the quarter. Retail managers can optimize inventory before items sell out by combining more than just sales data, such as purchasing patterns of other items, external market trends, and even competing promotional campaigns. Prescriptive analytics will finally evolve from telling us just where the numbers are going, to helping us make smarter, proactive decisions.”

---



## Ravi Shankar, SVP at Denodo



### ***Decision Intelligence Makes Inroads for Enterprise-Wide Decision Support***

*“Organizations have been acquiring vast amounts of data and need to leverage that information to drive business outcomes. Decision intelligence is making inroads across enterprises, as regular dashboards and BI platforms are augmented with AI/ML-driven decision*

*support systems.*

*In 2022, decision intelligence has the potential to make assessments better and faster, given machine-generated decisions can be processed at speeds that humans simply cannot. The caveat – machines still lack consciousness and do not understand the implications of the decision outcome. Look for organizations to incorporate decision intelligence into their BI stack to continuously measure the outcome to avoid unintended consequences by tweaking the decision parameters accordingly.”*

### ***Organizations Embrace Composable Data and Analytics to Empower Data Consumers***

*“Monolithic architectures are already a thing of the past but expect even smaller footprints. As global companies deal with distributed data across regional, cloud and data center boundaries, consolidating that data in one central location is practically impossible. That’s where composable data architecture becomes paramount and brings agility to data infrastructure. Data management infrastructure is extremely diverse and usually every organization uses multiple systems or modules that together constitute their data management environment. Being able to build a low-code, no code data infrastructure provides flexibility and user friendliness, as it empowers business users to put together their desired data management stack and makes them less dependent on IT.*

*In 2022, expect organizations to accelerate building composable data and analytics environments that can bring faster business value and outcomes.”*

### ***Small and Wide Data Analytics Begin to Catch On***

*“AI/ML is transforming the way organizations operate, but to be successful, it is also dependent on historical data analytics, aka big data analytics. While big data analytics*

*is here to stay, in many cases this old historical data continues to lose its value.*

*In 2022, organizations will leverage small data analytics to create hyper-personalized experiences for their individual customers to understand customer sentiment around a specific product or service within a short time window. While wide data analytics is comparatively a new concept and yet to find widespread adoption – given the pace at which organizations are making use of unstructured and structured data together – expect to see small and wide data analytics to gain better traction across organizations as we enter 2022.”*

---

## **Kendall Clark, Founder and CEO at Stardog**



### ***The Rise of the “Just in Time” Data Analytics Stack***

*“There’s a small, but fast growing, segment of the data analytics space that is focused on new approaches to the enterprise stack, including continuing to move all the things to the cloud. However, the hybrid multicloud imposes requirements of its own most notably the ability to manage and analyze data no matter where it lives in*

*the hybrid multicloud environment.*

*Startups like Starburst, Materialize.io, Rockset, and my own company Stardog develop platforms that are designed to query, search, connect, analyze, and integrate data where it lays without moving or copying it, in a just-in-time fashion. In a world where the number of places that data may be residing in storage is increasing, rather than decreasing, expect to see enterprises reach for data analytics solutions that are not coupled to where data lives. This trend will accelerate in 2022 as data movement between storage systems will continue to be removed from the stack in order to accelerate time to insight.”*

### ***Knowledge Graph-Enabled Data Fabrics Become the Connective Tissue for Maximizing Analytics Value***

*“Gartner indicates that data fabric is the foundation of the modern data management platform with capabilities for data governance, storage, analytics, and more. Relying on traditional integration paradigms involving moving data and manually writing code is no longer acceptable as data scientists and data engineers spend almost 80 percent of their time wrangling data before any analytics are performed. Shrewd*

organizations looking to adopt this approach are realizing that the centerpiece of a properly implemented data fabric is an enterprise knowledge graph, which compounds data fabric's value for better, faster, lower-cost analytics while hurdling the data engineering challenges obstructing them.

2022 will be the year organizations adopt enterprise knowledge graph platforms to support their data fabrics that use a combination of graph data models, data virtualization, and query federation—along with intelligent inferencing and AI—to eliminate this friction by simplifying data integration, reducing data preparation costs, and improving the cross-domain insights generated from downstream analytics.”

---

## Raj Gossain, Chief Product Officer at Alation



### ***Business Users Will be Empowered to Become Data Analysts***

“Enterprises will empower business users to become data analysts by applying well-trained natural language processing (NLP) and machine learning technologies, and implementing richly curated data catalogs to unleash the power of complex analytics. Organizations with integrated data strategies will provide their employees with the tools that allow them to gain data analyst “superpowers” by tapping into vast amounts of data and drive business results. This improves the productivity of business users’ and eliminates bottlenecks caused by the reliance on data analysts to find and analyze trusted data within their organizations, making the process more prolonged and arduous than necessary.”

---

## Dhruba Borthakur, Co-Founder and CTO at Rockset



### ***Move from Dashboards to Data-Driven Apps***

“If humans, even augmented by real-time dashboards, are the bottleneck, then what is the solution? Data-driven apps that can provide personalized digital customer service and automate many operational processes when armed with real-time data. In 2022,

look to many companies to rebuild their processes for speed and agility supported by data-driven apps.”

---

## Bill Scudder, SVP, AIoT at Aspen Technology



### ***Industrial Data Scientists Emerge to Facilitate Industrial AI Strategy***

*“The generational churn occurring in the industrial workforce will inspire another trend: the widespread emergence of industrial data scientists as central figures in adopting and managing new technologies, like industrial AI – and just as importantly, the strategies for deploying and maximizing these technologies to their full potential. New research revealed that while 84 percent of key industrial decision-makers accepted the need for an industrial AI strategy to drive competitive advantage – and 98% acknowledged how failing to have one could present challenges to their business – only 35% had actually deployed such a strategy so far.*

*With one foot in traditional data science and the other in unique domain expertise, industrial data scientists will serve a critical role in being the ones to drive the creation and deployment of an industrial AI strategy.”*

---

## Yashar Behzadi, CEO at Synthesis AI



### ***The Conversation Around Data for AI Will be Prioritized***

*“The discussions around data for AI have started, but they haven’t nearly received enough attention. Data is the most critical aspect for building AI systems, and we are just now starting to talk and think about the systems to acquire, prepare, and monitor data to ensure performance and lack of bias. Organizations will have to prioritize a data-first approach within an enterprise architecture in 2022 to enable AI and analytics to solve problems and facilitate new revenue streams.”*

---

## Jason Beres, SVP Developer at Infragistics



### ***The Need for Data in Decision Making Has Never Been Greater***

*“As the demand for business intelligence (BI) software rises, so do new advancements – giving users the ability to analyze and make intelligent decisions without any programming knowledge. Not only can enterprises gain a competitive advantage, but today’s BI is being used to address supply chain issues and save lives. The pandemic emphasized the importance of relying on data, rather than hunches, as the world became dependent on COVID-19 visualizations to steer us out of the crisis. Government agencies and health experts are using big data analytics tools to understand, track, and reduce the spread of the virus. BI helps health experts identify vaccine supply chain issues, virus hotspots, COVID-19 rates, and more, all in real-time. The next-gen BI may change the way we determine trends and ultimately, it may even be able to predict the future.”*

---

## Matthew Halliday, Co-Founder and Executive Vice President at Incorta



### ***AI Technologies Associated with Data Science Will be Used Increasingly by Data Engineers***

*“Data engineers will increasingly use AI-based tools in their day-to-day work. To support this, more analytics vendors will incorporate AI programmatic capabilities in their platforms, opening up new opportunities for data engineers. This will also blur the line between data engineering and data science, providing new opportunities for innovation.”*

### ***The Most Transformational Analytics Use Cases Will Come From “Citizen Analysts”***

*“Due to their domain expertise, proximity to the business, and availability of new (tools|technologies), citizen data analysts will become the most important and influential individuals who work with data. This will lead to an explosion of new ideas and practical applications for data, marking the next big turning point for the industry.”*

## “Just-in-Time” Supply Chain Failures Will Fuel Meteoric Rise of “Just-in-Time”

### Data Analytics

“Faced with a full-blown supply chain crisis, companies will have to address long-standing issues in their data pipelines – bottlenecks and other fragilities – that prevent teams from gaining the visibility into supply chains they need to survive the decade. No longer held back by the gravity of legacy models, systems and approaches, companies will embrace innovative new solutions in a bid to make “just-in-time” data analytics a reality for their business.”

## Business Intelligence Vendor Report

A Side by Side Comparison of the Top Solution Providers

[Get the Guide](#)

Author

Recent Posts



Follow Tim

### Timothy King

Editorial Director at [Solutions Review](#)

Tim is Solutions Review's Editorial Director and leads coverage on big data, business intelligence, and data analytics. A 2017 and 2018 Most Influential Business Journalist and 2021 "Who's Who" in data management and data integration, Tim is a recognized influencer and thought leader in enterprise business software. Reach him via [tking](mailto:tking@solutionreview.com) at [solutionreview.com](http://solutionreview.com).

Share this:

[LinkedIn](#) [Twitter](#) [Facebook](#)

Tagged [2022 Predictions](#) [2022 Trends](#)

Previous

◀ [Solutions Review Releases 2022 Buyer's Guide for Analytics and BI Platforms](#)

Next

[The Business Intelligence Industry is Stagnating, Here's Why](#) ▶