

Future Insight

A Vision into the Future
of Data Analytics

DISCOVERY IS THE JOURNEY PROFIT IS THE DESTINATION

Data, like the rest of modern life, is getting more and more complex. Merely trying to keep up with the volume and velocity of data is a losing battle. During this age of digital transformation, it's imperative to pause and focus on the insights driving change now.

Our mission is to help you find insights that have a profound impact on your business but are hard to see because they're hidden inside your complex data. We use AI to help you uncover these previously unseen insights now and prepare for what's to come.

As part of this mission, we decided to seek out industry experts, thought leaders, and business thinkers. Their predictions on the changes in technology, data and cultural evolution provides insightful, inspiring direction for embracing the future of the industry.

We're thrilled to introduce you to Bill, Lillian, Michael, Ronald, and Sally.

→ Read on – and embrace your opportunity to make a dose of their wisdom your own.

Quant Hub estimates a shortage of more than **85 million data scientists by 2030**. This talent gap makes it even more critical for organizations to undergo digital transformation and build a long-term data strategy now to be successful in the long run.

Bill Hoffman

CEO | TRADECRAFT

Companies that adopt a “Quick Start Analytics” approach will find this move to be their primary driver of success – and survival – in the “Next Normal.” Leading organizations from Apple and Amazon to the CIA and U.S. Navy SEALs to Zara and Zappos all have analytics functions with three primary characteristics that set them apart: they are fast, flexible, and aware. But what does this mean for analytics functions and for analytics professionals?

First, it means you can’t be fast if you are big and bulky. **Companies must focus on an agile, use case-driven approach** while also getting analytics staff closer

to the business and rethinking how analytical insights flow across the business. Next comes **flexibility**. Data Analysts have always been about getting right answers. But often, they have the questions wrong. A key question for analytics in a post COVID-19 world is: “Will our key challenges be more data and technology related or more change management related?” Last comes **awareness**. Companies need to build internal capabilities to wire up their analytics “network” (their analytics capabilities across people, process, technology, culture, and operational drivers). This allows them to truly – and finally – unleash their two most important assets: **Data and People**.



Bill Hoffman is Founder and CEO of Tradecraft, an analytics consultancy with a team of award-winning data scientists focused on helping clients generate revenue via Quick Start Analytics while building their internal analytics capabilities. Bill served as U.S. Bank’s Chief Analytics Officer and had responsibility for Customer Relationship Management (CRM) strategy, execution, and governance at the leading financial services company. Prior to this, he was Senior Vice President of Customer Insight & Strategy for Best Buy, where he created and led the Consumer Insights Unit (CIU) responsible for the Customer Analytics, Customer Research, Competitive Strategy/Market Intelligence, Market Analytics, and VOCE (Voice of the Customer through the Employee) teams.

According to Forbes, 97% of enterprises say all their employees now work from home. And approximately 3/4 of working professionals expect working remotely to become the norm.

Lillian Pierson, P.E.

CEO & MENTOR TO WORLD-CLASS DATA LEADERS AND ENTREPRENEURS

COVID-19 has pushed the entire data world to move to an online work model, inadvertently removing a degree of separation between business operations and outsourcing to lower-income economies.

With data implementation work being very easy to outsource online for lower costs, we'll be seeing many companies hire globally and source talent from developing countries as a way to try to keep their margins up.

The good news is that regardless of whether you're from an Eastern or Western economy, this shift actually represents a market opportunity for all of us who decide to pivot and prepare ourselves now.

For Western data professionals, it represents an opportunity to operate in a more robust data leadership capacity. For Eastern data professionals, it represents a greater level of opportunity and earnings than was previously available.

Lillian Pierson is a CEO and data leader that supports data professionals to evolve into world-class leaders and entrepreneurs. To date, she's trained over 1 million workers on the topics of AI and data science.

Lillian has authored 4 data books with Wiley & Sons Publishers as well as 5 data courses with LinkedIn Learning. She has supported a wide variety of organizations across the globe, from the United Nations and National Geographic to Ericsson and Saudi Aramco, and everything in between.

She is a licensed Professional Engineer with the Florida Board of Professional Engineers. She's an elected Microsoft Regional Director, and she occasionally volunteers her expertise at global summits and forums on data privacy and ethics.



Natural Language Processing (NLP) has emerged as one of the most popular forms of analytics and AI. It is broadly defined as the automatic manipulation and interpretation of speech and text by software. For example, sentiment analysis allows an AI algorithm to analyze text and determine whether it is negative or positive to help people understand the tone and direction of the text.

Michael Housman

CTO | POINTPREDICTIVE

In 2021 the world will experience the collision of two massive data trends that have been gaining speed for some time.

The first trend is the explosion of **algorithms that have been driving increasingly impressive NLP outcomes**. For example, there have been major advances in text classification and generation by BERT (Google), RoBERTa (Facebook), and GPT2 (OpenAI). Meanwhile, the tools used to leverage those algorithms have been democratized to the point that they can now be deployed easily by data scientists, and AutoML tools like DataRobot and H2O.ai deliver these capabilities to companies without needing any data scientists at all.

The second trend is that the **data itself** – the fuel for these algorithms – **is increasingly deemed sensitive and has become increasingly protected**. General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) are just the beginning. Meanwhile, companies like Facebook and Google are facing escalating levels of scrutiny for how they store and analyze personal data.

With greater data demand and the shrinking access to data, the value of data – especially high-quality data – is going to soar. As has been said before and rings ever more true with each passing month of 2021, data is already becoming the new oil of the digital economy.



Michael Housman is the Chief Technology Officer at PointPredictive, where he builds predictive models using artificial intelligence and machine learning techniques to stop fraud. Prior to PointPredictive, he was the Chief Data Science Officer at RapportBoost. AI and Evolv, Inc. (acquired by Cornerstone OnDemand, Inc.). He has published his work in a variety of peer-reviewed journals, presented his work at dozens of academic and practitioner-oriented conferences, and has had his research profiled by such media outlets as The New York Times, Wall Street Journal, The Economist, and The Atlantic. In fact, he was named a faculty member at Singularity University for the breadth and depth of his knowledge in the field of artificial intelligence. Dr. Housman received his A.M. and Ph.D. in Applied Economics and Managerial Science from The Wharton School of the University of Pennsylvania and his A.B. from Harvard University.

Gartner predicts, “Hyperautomation is irreversible and inevitable. Everything that can and should be automated will be automated.” In a world where digital acceleration is the name of the game, business leaders are clamoring for operational excellence.

Ronald Van Loon

CEO | PRINCIPAL ANALYST AT INTELLIGENT WORLD | TOP10 AI INFLUENCER

The most significant changes to data and analytics in 2021 will be a pronounced shift from “in-the-moment” analytics solutions to pervasive automation-driven efficiencies built around integrated AI and machine learning (ML) technologies. Decision intelligence will help organizations use AI and ML to maximize their real-time data and analytics-driven decision-making at scale.

Digital natives entering the workforce will contribute to a rise in ubiquitous data literacy cultures that will intertwine analytics skills with modern business models. Organizations will use this as a baseline for establishing smarter, iterative patterns across analytics, technology, people, and processes that accelerate tangible growth, innovation, and elasticity across the enterprise.



Ronald helps data-driven companies generate business value. He has been recognized as one of the top 10 Global Big Data, IoT, Data Science, Business Intelligence Influencer by Analytica, Data Science Central and Klout and Top 10 Predictive Analytics influencer by Dataconomy, is author for leading Big Data sites like The Economist, Datafloq, Data Science Central Dataconomy and is public speaker at leading Big Data, Data Science and IoT events.

Trust will increasingly affect the efficacy of data collection and use. Much like the EU's General Data Protection Regulation (GDPR), the California Consumer Protection Act (CCPA) mandates that California residents have control over how their data is used.

Sally Dominguez

FUTURIST | 10X INNOVATION STRATEGIST | SUSTAINABLE RESILIENCE EXPERT

A January 2021 survey of 33,000 people in 27 countries found 57% believe government leaders, business chiefs and journalists are spreading falsehoods or exaggerations. Disintegrating societal trust combined with tightening privacy laws will make trust a primary focus for the analytics industry. How does an organization obtain the trust of an individual in order to legally harvest valuable real-time data? Are the advantages of a digital twin compelling enough to persuade consumers to share necessary information

with trusted parties? Might proactively investing in software that allows individuals to "scrape back" shady data collection be a tool for gaining trust? [How can operators be more transparent to demonstrate authenticity and thus gain trust?](#) This new and important role of trust requires businesses to rethink their metrics - maybe even their purpose - as consumers better understand the value of their real-time data and require a higher level of accountability from the companies seeking to use it.

Sally Dominguez is a futurist, entrepreneur and multi-award-winning inventor operating at the leading edge of exponential technologies and innovation mindset. She was the sustainable resilience expert for IKEA's 2020 Life at Home report and is on faculty at Singularity University as a 10X Mindset expert. Sally designed the Adventurous Thinking innovation strategy used as a 10X Mindset tool by forward-facing organizations around the world. Sally's upcoming book *EPIC Resilience: Thriving through Chaos and Change* outlines a holistic resilience strategy for finding opportunities in the relentless disruption of the Fourth Revolution.



Sally has judged and hosted TV programs, including *The New Inventors*, *Aussie Inventions that Changed the World*, *Car of the Year* awards and the *NextBillionCars* podcast and her design work is featured in *Cool Green Hunting*, *Design Like You Give a Damn* and *Secrets of Top Designers*.

TRANSITIONING TO THE FUTURE

What does your organization's future hold? Our industry leaders have armed you with some powerful insights into what will shape the future of data and analytics. Businesses are already starting to adopt these trends and shifting towards democratizing data across the organization.

According to Gartner, by the end of 2024, 75% of enterprises will operationalize AI, driving a 5x increase in streaming data and analytics infrastructures. When we think about the future of AI, we focus on the idea of augmented intelligence. The idea that machines have the ability to complement and enhance our thinking as humans. We see a future where AI processes, implementations, software and operations will be the engine that makes the car go, and humans will be there to set the destination, keep it on track, and manage obstacles as they arise.

- We are just at the beginning of seeing what and how data and AI will influence our lives. We believe better decisions happen when humans and AI work together.