February 2024

EMPOWERING TIMES

THINKING ALOUD

Leveraging AI and Big Data for Bigger Success

Jay

PODIUM

Sai Krishnan Mohan
Vice President
(Data & Analytics),
Bajaj Auto Ltd

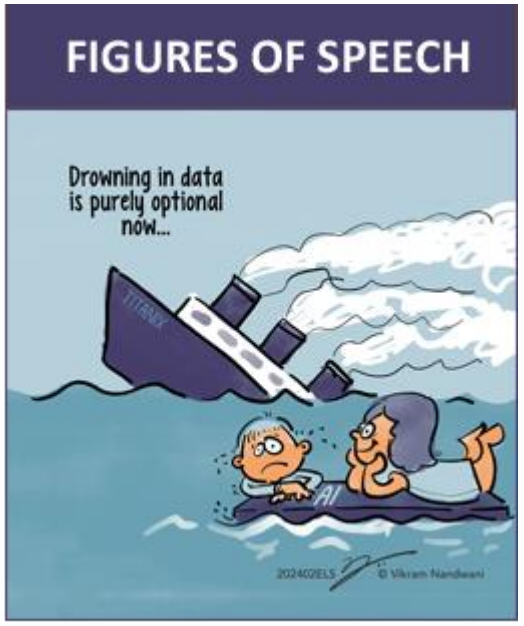
WE RECOMMEND

All-in On AI

Nitin Mittal &

Thomas H. Davenport

Dear Reader,



In today's digital age, businesses find themselves inundated with a deluge of data. From customer information to market trends, the sheer volume of data can overwhelm even the most seasoned organizations. However, amidst this sea of information lies immense potential for growth and innovation, waiting to be unlocked through the strategic application of artificial intelligence (AI).

One of the key roles of AI in business is in data management. Traditional methods of manual data analysis are no longer sufficient in the face of ever-expanding datasets. AI-powered tools and platforms can automate data processing tasks, streamline workflows, and identify patterns and correlations that may have otherwise gone unnoticed.

Moreover, AI has the potential to revolutionize customer engagement and experience. By analyzing customer data in real-time, AI algorithms can personalize marketing campaigns, anticipate consumer needs, and deliver tailored product recommendations, thereby enhancing customer satisfaction and loyalty.

In addition to improving operational efficiency and customer satisfaction, AI can also drive innovation and product development. By analysing market trends and consumer preferences, AI algorithms can identify new opportunities for product innovation, optimize supply chain management, and forecast demand with greater accuracy.

However, as businesses embrace AI-driven solutions, they must also be mindful of the ethical and societal implications. Concerns surrounding data privacy, algorithmic bias, and job displacement loom large, highlighting the need for responsible AI deployment and regulatory oversight.

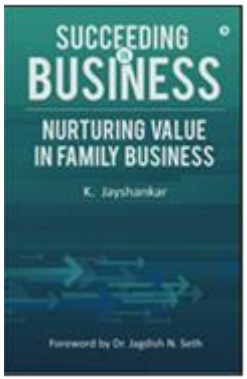
ET this month looks at '**Drowning in Data: The role of AI in business.**'

In the **Thinking Aloud** section, **Jay** acknowledges the transformative potential of AI, while underscoring the urgent need for ethical considerations and regulatory frameworks to mitigate risks associated with advancing AI technologies. On the **Podium**, **Sai Krishnan Mohan, VP (Data & Analytics) at Bajaj Auto**, emphasizes AI's role in enhancing data quality and advises caution in its adoption, while also stressing the strategic importance of analytics in a company's digital transformation journey. In the **We Recommend** section, we review **All-in on AI** by Nitin Mittal and Thomas H. Davenport who explore how legacy companies are leveraging AI to drive innovation, operational transformation, and customer engagement.

In **Figures of Speech**, **Vikram's** toon stays afloat amidst the data deluge!

Please also **Click Here** to check out our Special issue of ET, which is a collation of selected themes that were featured over the years highlighting the changing landscape of the business world. This special edition has been well received and can be **Downloaded Here** for easy reading and is a collector's item.

As always, we value your opinion, so do let us know how you liked this issue. To read our previous issues, do visit the Resources section on the website or simply **Click Here**. You can also follow us on **Facebook**, **LinkedIn**, **X**, **Threads** & **Instagram** - where you can join our community to continue the dialogue with us!



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THINKING ALOUD

Leveraging AI and Big Data for Bigger Success

Jay

Satya Nadella was in India this month and exuded his usual quiet confidence that 'all's right with the world', at a time when there is general apprehension that technological change is running amok, disrupting the world as we know it. But then, that is Nadella, brimming with positivity as he steers his firm, Microsoft, to stratospheric heights, with the firm's valuation crossing USD 3 trillion recently, second only to Apple, a rise of over 1000% over the 10 years that Nadella has helmed the firm. An apostle of the power of Artificial Intelligence (AI), having diplomatically resolved the Sam Altman turmoil at OpenAI last year, Nadella has 'co-piloted' (pun intended) the power of AI into Microsoft's portfolio of products to deliver financial benefits for the firm, a task that many companies have not been able to succeed in yet. His mission in India included an announcement of the ADVANTA(I)GE INDIA initiative to train 2 million in AI skills by 2025.

Underlying this bold declaration is a subtle recognition that the technological transformation underway due to the powers of AI will make many traditional job roles redundant. Riding the wave of change is better than being swept away by the tide, is Nadella's version, and much like Britain's investment in railroads giving benefits in the industrial revolution, he is evangelizing that harnessing the power of AI would be wiser to leapfrog into the future.

What is the future of mankind? Well, this is a developing story, with Cassandras warning of the dire fate of our planet. It appears that if climate change or pandemics won't get you, 'AI devils' will do the damage. But does it have to be so? While there are some votaries for suspending advanced work on AI, or for going slow on it, the reality is that competitive forces in business will not rest easy - witness the power of Google's Gemini. In fact, from

the time that the ChatGPT phenomenon swept the world just over a year ago, there have been a plethora of Large Language Models (LLMs) that have been unveiled, in multiple fields.

Let's also turn to the other side and see the benefits that technology provides us. The world of Big Data has been welcomed as it offers tremendous advantages, be it for predictive analysis, detecting fatal anomalies, revealing trends, generating efficiencies, scaling revenues, enhancing customer relationships, and myriad other gains. Some might argue that this is not really a new idea, but given the superfast world we live in, a technological edge is necessary to cope with the volume, velocity and variety of events that are hurtling towards us every moment. The marriage of AI and Big Data is a natural outcome that generates better decision making – and leaders (not just in business) who appreciate this have a better chance of success.

There is no going back, and the challenge now is to ensure that the 'AI devils' do not get unleashed. A big concern is the potential of Artificial General Intelligence (AGI), which can be simplistically explained as a situation where a machine can autonomously undertake intellectual tasks that normal humans or animals can perform and perhaps do them more efficiently too. If that sounds like science fiction, the sober assessment is that the days of AGI are almost upon us. How close are we to making this a reality? Well, as near as 2028, some say, or more certainly within the next two decades, say most others. Either way, the message is clear, technological or AI singularity will not be science fiction any longer. Hence, the urgency to create guard rails of safety in the use of AI is now compelling both industry players and government regulators to begin a dialogue, lest the world repeats historical errors made during the nuclear race. However, this is a journey full of fits and starts, even though it is estimated that since 2016, about 37 countries have passed AI related laws. But the increasing discourse on AI ethics points to the rising concern in society.

A correct assessment would be to recognize that we are living in the grey zone of transition from a time when the world of personal computing is diminishing in importance (though they are not irrelevant in any manner yet) to a world where mobiles will thrive on a platform that the cloud offers (though we are not there yet). What the world has yet to take cognition of is that this transition is aided and abetted by the friendly use of AI which has crept into our social media and e-commerce use. This subtle interface is currently non-threatening but has mostly reared its head in the business world, where there is a re-balancing of workforces, particularly in the IT sector where one has already witnessed layoffs of staff that has not readjusted or reskilled to the demands of the new world.

Prescient leaders like Nadella are therefore sending a message to the large volume of young Indian workforce that the era of the horse-carriage is over, and the world of high-speed railroads (driven by AI) is here. The message is still in small font and hence not visible to the vast population: move over or be run over.

Time now to revisit Darwin, '*It is not the strongest of the species that survives, not the most intelligent that survives. It is the one that is the most adaptable to change.*'

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Podium

Sai Krishnan Mohan

Vice President (Data & Analytics), Bajaj Auto Ltd

Sai Krishnan Mohan is an accomplished Data Management, Analytics, and Digital Transformation leader with over 20 years of experience across diverse industries, including Technology, Manufacturing, Banking, Logistics, Supply Chain, and IT-enabled services. Currently serving as the Vice President (Data & Analytics) at Bajaj Auto Ltd in Pune, Maharashtra, he spearheads the establishment of the Analytics Center of Excellence, focusing on data-driven strategies to drive business impact.

Sai Krishnan Mohan is currently a Doctoral (GDBA) Research Scholar at Rennes School of Business, focusing on Artificial Intelligence & Data Sciences with a specific emphasis on connecting Data Science & Management Accounting. He also holds a

Post Graduate Diploma in Data Analytics from the International Institute of Information Technology Bangalore & Post Graduate Certification in Big Data Analytics from Indian Institute of Management Bangalore, specializing in Business Analytics and Big Data Analytics. He earned an Executive Post Graduate Diploma in International Business from the Indian Institute of Foreign Trade in 2010, actively participating in activities related to International Business and completed his Bachelor of Engineering in Instrumentation Technology from Visvesvaraya National Institute of Technology in 2003.

Sai Krishnan Mohan has demonstrated leadership in key roles such as Director of Data Management and Global Leader of Finance BI COE at Honeywell. His notable achievements include the establishment of analytics and business intelligence centers of excellence, driving functional transformation initiatives, robust data management frameworks, implementation of master data management capabilities, and driving comprehensive Enterprise Performance Management.

ET: Can you share examples of innovative AI-driven applications in data management that have transformed businesses or industries?

SM: AI is extensively used in analytics, such as in the form of machine learning, neural network / deep learning and generative AI models. AI is being increasingly used in data management and analytics, and across businesses and functions for a variety of purposes across industries and businesses. While the applications and pitfalls of AI in businesses has garnered a lot of attention and is well documented, application of AI in data management is an understated, yet significant area.

Data Management can be thought to have three main priorities, i.e., data governance, data development and data quality. Data governance deals with the structuring, and organization of data with consistency in understanding the meaning of data elements for relevant business applications. Defining data elements and resolving inconsistencies in interpretation of data to establish consistency in data use requires subject matter experts in organizations. Companies are becoming more aware of the need of data stewardship; according to the Trends in Data Governance and Data Stewardship research report (2022), 90% of the respondents indicated that data governance and data stewardship were now more important than they were ten years ago. These data stewardship roles have assumed significance in the last decade as can be seen in the growth of data stewardship roles. Data quality and data governance are nowadays considered table stakes for successful AI enabled digital-business transformation programs. As an example, augmented data management which uses machine learning to

learn data patterns, detect and enhance data quality in master data management is a leading practice in pharmaceutical companies.

ET: How can businesses strike the right balance between leveraging AI for data-driven insights and maintaining human oversight and decision-making?

SM: Organizations are supplementing their internal data with external datasets to enrich perspectives, such as from agencies like Bloomberg, IHS Global Insights, Nielsen, etc. Utilization of internal and external datasets for delivering insights through AI applications improved with the creation of data features (feature engineering) enabled by AI. While feature engineering largely remains a human expert led exercise, the expert's role in reviewing features created by AI to enhance the organization's analytical insights continues to remain important.

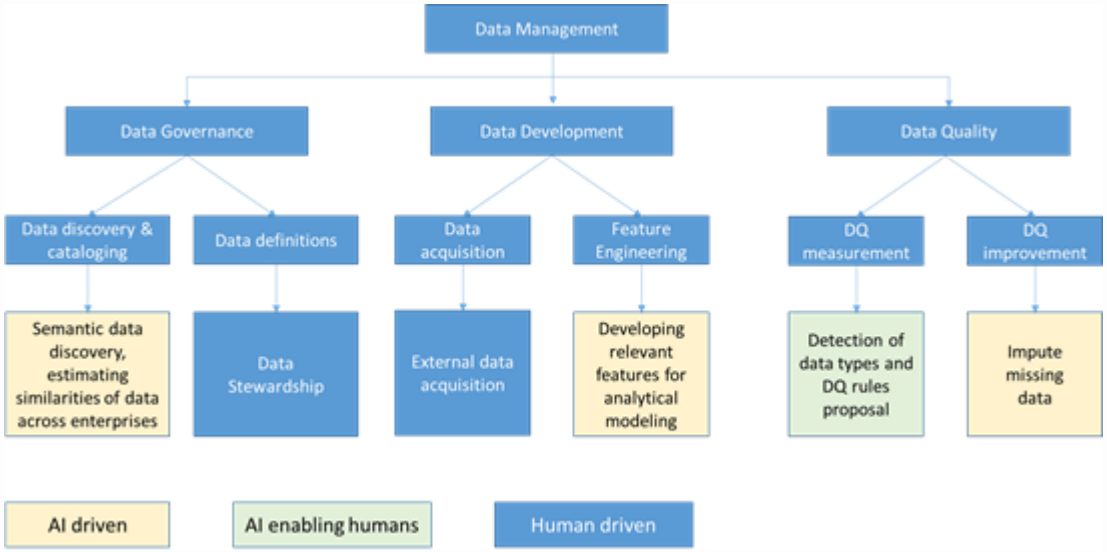

Figure 1: Data Management Priorities

Organizations are creating data catalogues to improve visibility and reuse of data assets. Data features created by AI as part of analytical modelling exercises along with internal datasets are catalogued in a data dictionary. Organizations with a legacy of multiple IT systems often face challenges with data siloes, redundancy in application

functionality and data landscape. AI enabled semantic data discovery technologies enable organizations to reduce the time taken in discovering data assets across their systems landscape, cataloguing and linking them to create meaning.

Establishing data quality benchmarks and continuous improvements are important enterprise initiatives to provide high quality inputs and improve adoption of AI applications. Domain subject matter expertise is required to define data quality rules by data element. Detection of data types for classification and measurement of data quality is enabled by AI (semantic data discovery). The application of data quality rules to measure data quality is enabled through software automation.

ET: What are the potential risks and pitfalls that organizations should be aware of when adopting AI for data management and analytics?

SM: Data stewards and data owners in businesses are expected to review the data quality results and take the required actions to improve the state of data quality in enterprises. Automatically imputing missing data values through AI enabled techniques (such as based on nearest neighbours, measure of central tendencies and others) need to be approached with caution and oversight of business experts.

ET: What advice would you give to business leaders who are just starting to explore the possibilities of AI in data management for their organizations?

SM: Given the evolution of AI and Data Sciences, business leaders who are starting to explore possibilities of AI in data management would be well served to consider the following: -

1. Establish a data center of excellence to support the business and connect data governance objectives, priorities to business objectives: Examples can be:
    a. Increased sales through digital channels better enabled through customer data management and customer analytics. Similar examples are applicable across other functions.
    b. Acquire external datasets where applicable to drive analytics aligned to business impact.
2. Establish data stewardship roles in the business: Give smart data savvy professionals in business roles the responsibility to develop data assets for the company.

3. Establish a data catalogue and practice to measure and improve data quality to improve business decision making.

ET: In your current role at Bajaj Auto Ltd, what is the strategic importance of establishing an Analytics Center of Excellence?

SM: Bajaj Auto has a rich legacy of product excellence right from India's independence, with deep and affectionate brand connect & recall across generations. An analytics center of excellence can be a core capability and enabler for enterprise digital transformation as the industry and business models evolve.

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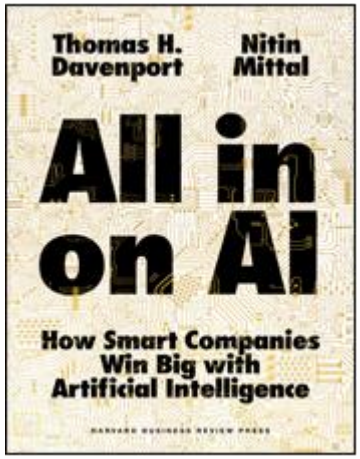
We Recommend

All-in On AI

Nitin Mittal & Thomas H. Davenport



All In On AI: How Smart Companies Win Big with Artificial Intelligence by Nitin Mittal and Thomas H. Davenport is a compelling exploration of how AI is reshaping industries and driving business success. Through a combination of insightful analysis and real-world examples, Mittal and Davenport provide a roadmap for companies looking to leverage AI effectively.

The authors begin by highlighting the strategic importance of AI integration in businesses, moving beyond the buzzword to showcase tangible benefits. They examine how companies like Alphabet (Google's parent company) have embraced AI to power popular services such as search, Maps, Assistant, and Gmail. However, they also emphasize the significance of legacy companies adapting to the AI revolution, citing examples like Ping An, a Chinese conglomerate that has implemented AI across its various divisions, particularly in healthcare.

Thomas H. Davenport, a distinguished professor and senior advisor, is recognized for his prolific contributions to academia and industry. Nitin Mittal, a principal at Deloitte Consulting LLP, specializes in guiding clients through data and AI-powered transformations, particularly in healthcare. Mittal and Davenport delve into specific industries to illustrate AI's transformative potential. They discuss DBS Bank, Singapore's largest bank, which views tech-first behemoths like Google and Tencent as its primary competitors. By adopting AI, DBS Bank aims to enhance its competitiveness and deliver innovative financial services tailored to customer needs. The book also explores innovative applications of AI in sectors such as insurance and manufacturing. For instance, CCC Intelligent Solutions, a Chicago-based insurtech company, utilizes AI-powered computer vision and Big Data analytics to

facilitate almost-instant pay-outs for car insurance claims based on photographs of vehicle damage. Similarly, Airbus leverages AI to optimize flight routes, fuel usage, and predictive maintenance, demonstrating how AI can revolutionize operations in the aerospace industry.

The book highlights the importance of cultivating an AI-driven culture within organizations. They provide examples of companies like Morgan Stanley, which has developed automated investment tools, and Shell, which uses AI-powered drones for pipeline and infrastructure analysis. These examples underscore how companies are embracing AI to drive innovation and operational efficiency across diverse sectors.

Ethical and societal considerations are also addressed, with the authors highlighting the need for responsible AI deployment. They discuss potential risks such as privacy concerns and algorithmic bias, urging companies to prioritize ethical considerations in their AI initiatives.

All In on AI offers valuable insights into how companies can harness the power of AI to gain a competitive edge and drive innovation. Through a combination of theoretical frameworks and real-world examples, Mittal and Davenport provide actionable guidance for businesses navigating the AI revolution. The book serves as a reckoner for business leaders, policymakers, and anyone interested in understanding the transformative potential of AI in today's digital age.

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THROUGH THE LENS

This month, in-house nature enthusiast, **Rupesh Balsara** spots the White-browed Piculet, which is a small woodpecker species found in parts of India. This bird is primarily found in the foothills of the Himalayas, especially in dense forests and wooded areas. It forages for insects and larvae by pecking and probing into bark crevices and dead wood. Despite being small and often inconspicuous, the White-browed Piculet adds to the rich avian diversity of India's forests.

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