



Learning to manage machine learning

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Four trends that are shaping the better application of artificial intelligence in your business

Slowly but inevitably machine learning is starting to influence our daily lives. Whether you ask your home virtual assistant to check the weather forecast or cede some of the planning (and even driving) of your daily commute to your 'smart' automobile, it is machine learning that is making life easier.

Yet while we seem to have embraced machine learning at home, understanding and embracing its potential in the enterprise remains challenging. Judging by the experience I've had with our clients, the desire is there, experiments are happening, but there is difficulty in getting real change into production. Many organizations are not yet making the transformational changes driven from machine learning that will be needed in order to succeed in the coming years.

However, organizations are starting to make moves that act as building blocks for future change and transformation. With that in mind, here are four current trends that demonstrate how machine learning is bringing real value to the workplace.

Unearthing the value hidden in your documents

Several studies have estimated that nearly 80 percent of a typical organization's data is 'unstructured' — mainly text

contained in emails and documents.ⁱ Within that data mass exists a trove of highly important and useful information. Traditionally, the only way of making this data useful was for humans to read and process it. Because the volume is so high and the effort to utilize the data is so laborious organizations can process just a small fraction of available data manually — often only the most basic information required by regulatory bodies for compliance purposes.

Increased regulatory compliance is an area where machine learning and natural language processing/understanding are radically changing the data landscape (especially in the financial services and life sciences sectors). When applied in this way, machine learning is helping to increase the speed and effectiveness in compliance, manage risks and reduce the regulatory burden. Beyond compliance there is also a huge amount of untapped value in text processing — offering fast and deep insight into the wealth of unstructured data about customers and contracts, for example.

Planning beyond automation

Executives are eager to see how machine learning can increase automation. Yet, it would be a mistake to limit the potential of machine learning in the enterprise purely to better automation. It really comes into its own when it is applied to data that is difficult for humans or traditional analytics to process. Many processes have data that is so large, so complex and so high velocity, that machine learning and even

deep learning are needed to make sense of it. Processes where companies are monitoring enormous amounts of data for specific trends and patterns to identify anomalies or rogue behavior are ripe for the application of machine learning. This might be for things like anti-money laundering, revenue leakage, customer segmentation, and more. This is where machine learning is uncovering insights that couldn't be identified before at a pace that is exponentially faster and more effective than historical approaches.

Helping machine learning find its voice

By 2020 an estimated 80 percent of business-to-customer conversations will be conducted by a machine or bot.ⁱ That will have enormous implications for all organizations both in terms of business processes and also future staffing needs. Executives will need to have a clear vision and also a strong culture in order to effectively plan and manage this shift to machine driven intelligent interaction.

Take the case of one financial services company that we've been working with recently. Historically they depended purely on humans for customer interactions. Now though the organization is looking to automate up to 75 percent of that work. You might think that such a big transition could have a very disruptive impact on company culture due to large numbers of layoffs. However, by studying the employee turnover rate of the call center workforce, the company realized it could implement its machine learning automation strategy over time without having to lay off a single employee while also reducing the risk of burnout (a consistent problem in call centers) for those who are retained.

Other financial services companies are looking at machine learning voice technologies to create virtual assistants with deep expertise in financial planning and forecasting while other organizations are experimenting with voice technologies to document board meetings — recording the minutes while offering a searchable transcript based on the contribution of each individual board member.

Scaling machine learning strategy

Machine learning offers organizations the chance to gain deep insight into large volumes of unstructured data, automate and accelerate existing business analysis as well

as streamline and bring greater consistency to customer interaction. But organizations will only realize those benefits if they have a strategy that both scales across business processes and units, and is aligned to the wider business strategy.

Too often organizations approach machine learning with a combination of bespoke technologies and algorithms. Often what they are left with are incompatible solutions that don't scale. This isn't a technology that can be bought off the shelf like software of old. It has to be built and developed to meet the challenge of delivering insight and perspective in a repeatable and scalable way. For this to happen, companies need to stop looking at machine learning as individual and isolated technologies and instead align it to the business as a whole. This comes together through building an enterprise machine learning architecture and strategy that has the ability to help address the wide issues and opportunities of a business, rather than small singular areas of application.

As an example, KPMG member firms are no stranger to the changing landscape and need to use machine learning for clients and ourselves. KPMG Ignite (our artificial intelligence platform and capabilities portfolio) looks to do just that by applying a modular and component-based approach combined with leading open source and vendor-supported functionality to a scalable machine learning platform. KPMG Ignite also leverages a formal governance structure to help ensure development opportunities for machine learning are based on wide client value, and have a standardized development framework to help bring consistency to solution creation without stifling innovation.

Each of these four areas provides value to an organization seeking to move forward with machine learning and add incremental value that can scale to be truly transformational. Machine learning is here to stay; so let's embrace the early incremental value areas now, to scale to real change in the future.

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ⁱ <https://www.ibm.com/blogs/watson/2016/05/biggest-data-challenges-might-not-even-know/>

ⁱⁱ <https://chatbotsmagazine.com/2018-the-year-of-the-chatbot-fc5a5f780a31>

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Designed by Evalueserve. Publication name: Learning to manage machine learning. Publication number: 135865c-G. Publication date: November 2018