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AI AND MACHINE LEARNING IN YOUR ORGANIZATION

GET STARTED AND REAP THE BENEFITS.

GET ANSWERS FROM YOUR MACHINE DATA

IN BRIEF

→ **AI and machine learning are going to play a critical role in your ability to get answers from your machine data.** Digital transformation has led to complex environments that continuously generate new data. Don't miss out on possible business insights for lack of the right solutions.

→ **Data is the fuel for your AI and machine learning-powered initiatives.** Having mountains of data points isn't enough. Ensure you're getting the insights you need for the most valuable business outcomes.

→ **You can improve detection and response time through smart, automated solutions,** allowing you to catch costly problems across your IT operations before they affect your bottom line.

→ **Use proactive monitoring and investigation** to get ahead of the curve and reduce costly incidents and downtime. Improve and replace resource-intensive tasks by shifting to a proactive approach.

BEHIND THE BUZZ: AI AND MACHINE LEARNING

In its simplest form, artificial intelligence (AI) can be defined as machines executing tasks in a near-human manner based on smart algorithms. It's the computational ability to learn and take action without explicitly being programmed to do so. Machines and software can now seemingly mimic the cognitive functions of humans, often through training on rich datasets and adapting their response as new data points are introduced. This is possible through the application of predictive modeling that is applied to large datasets, building models for making future decisions based on new data points. Also known as machine learning, this is how Google Maps knows you want to go home at the end of the day, how Netflix recommends the next movie you should watch and how autonomous vehicles are operated.

In short, the more information machines process, the more they learn. It's not quite human thought, but it's more than fancy automation.

Fortunately (or not), there aren't sentient robots yet, but the AI out there is already changing the way we work, play and communicate. As more and more data is generated, organizations recognize the value in tapping into their troves of data to make data-driven decisions. However, as data volumes increase, humans will struggle to keep up. Subsequently, it's becoming critical for organizations to leverage machine learning-powered AI, to harness their data and answer the questions that elevate them above the competition.

AI is generating a great deal of industry buzz, but the opportunity to reap the benefits of AI continues to elude organizations. It's time to clear up the confusion, so you can harness the power of AI for your organization.

MACHINE DATA: THE FUEL FOR AI

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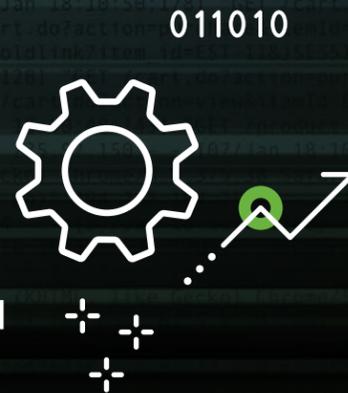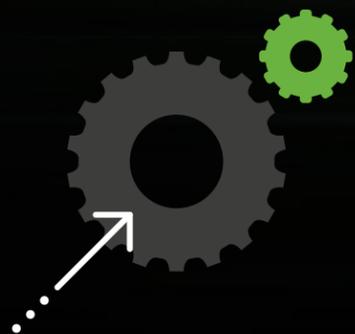
A Data-Centric Approach

Data is at the heart of what makes AI and machine learning work. To predict future outcomes, detect anomalies and cluster important events while filtering out noise, machine learning relies on historical and real-time data to detect patterns. However, this is often where organizations get stuck. They fail to realize the value of AI, as they're deterred by the time and manual effort spent refining large volumes of data. This includes having to move, aggregate and correlate data from disparate tools and systems, leading to the loss of precious time, resources and opportunities.

But it's not a step that can be skipped, as leveraging dirty or unrefined data for AI and machine learning leads to flawed outcomes. Conversely, effective data prep can provide powerful fuel for AI and machine learning, and delivers critical business insights, including helping to pinpoint where things went wrong, optimize customer experience and detect the fingerprints of fraud.

To do this effectively, organizations require a solution that both prepares data for analysis and applies machine learning to said data. With this type of approach, the more data you have, the better. Effective AI and machine learning means you are not bogged down by data; you are elevated by it. More data and complexity creates a greater context from which to calibrate and feed your models, leading to richer insights.

The result is an environment that saves organizations precious time and resources while maximizing the output—machine learning-driven insights that inform how to predict and respond to business events in real time.

So what does this look like? Let's take a look at how AI and machine learning can make an impact on IT and security.

AN
IT OPERATIONS
PERSPECTIVE

The IT world is often home to paradox. The same business unit supporting the latest and greatest apps is often lacking in that same technology. End users get to experience a refined product or platform, while those who make it possible are still dealing with legacy solutions, thousands of alerts and poor visibility into an environment that only continues to grow in complexity.

But this is finally beginning to change. Software systems are combining big data with AI and machine learning functionality to improve and replace a broad range of IT operations processes and tasks—including availability and performance monitoring, event correlation and analysis, IT service management and automation. The result is gaining back time and money for the business.

The marriage of big data and machine learning in IT, also known as Artificial Intelligence for IT Operations or AIOps, makes it easier than ever to better allocate resources and execute on tasks. Organizations can get answers for past, present and future patterns of IT systems and service performance. More specifically, organizations can quickly find and solve problems with predictive analytics coupled with automated incident response and resolution.

- Avoid costly downtime and improve customer satisfaction

- Dissolve IT silos and disjointed responses

- Eliminate tedious and manual tasks

- Better collaborate with peers

In short, streamlining current monitoring and management workflows gives IT professionals the opportunity to be proactive in their roles.

A SECURITY
PERSPECTIVE

The call for AI and machine learning in security is not entirely new and is showing promise to become mainstream within all security environments. The benefits of the transition speak for themselves. It can help organizations better analyze and respond to security incidents, better prepare for threats and minimize overall risk—all while reducing costs and stress on limited resources.

Machine learning in particular has taken great strides in security, becoming the perfect fit for uses like advanced threat detection and stopping insider threats, which require a more nuanced monitoring and response system. Advanced attacks involving lateral movement within a network, compromised privileged users and accidental access to sensitive information by unwitting users, can all be addressed by automated, machine learning-powered anomaly detection.

Organizations often need more than their existing security tools when dealing with sophisticated attacks. For small organizations, it may mean deploying deeper network defense or endpoint protection. For large and midsize organizations, it may translate into deploying tools and technology to collect, filter, integrate and link diverse types of security events to gain a more comprehensive view of their security posture.

Machine learning addresses these needs with a single "source of truth" for security insights—analysts and SOC teams can analyze all machine data, including log and event data from applications, endpoints and network devices with the help of smart technology. They can perform rapid investigations, find meaningful insights, determine the root cause of an incident, draw on historical trends and share findings without being bogged down by thousands of alerts and false alarms.

Put simply, organizations can improve detection speed, analyze impact and respond quickly to any security incident. This helps organizations minimize the negative impact of threats by allowing them to more actively manage their security posture— from continuous monitoring to deep forensic analysis and automated response.

THE MORE COMPLEX THE BETTER.

While it's not in the immediate future for AI capabilities to mature to match human skills and capacity, AI using machine learning can go a long way to help organizations make decisions based on their mountains of data.

Financial services organizations can apply AI and machine learning to identify anomalous behavior, protecting themselves and their customers against fraud. Healthcare and biotech organizations can have higher fidelity lab processes and improved measuring capabilities for experiment quality over time. Manufacturing can eliminate business-impacting failures with predictive maintenance and monitoring. Retail will provide better customer service with targeted recommendations based on a formula of factors like demographics and purchase history. The list of possible benefits goes on.

We've only just begun. The future of AI and machine learning is bright. Soon we should expect end-to-end AI instead of piecemeal models that work together to perform a function. Self-configuration is something that will quickly take hold to relieve human handlers from architecting or validating. And pre-trained, open-source models will likely soon be readily available as reusable components serving a variety of uses cases.

Are you ready to dive into the future with AI and machine learning?

To learn more about AI and machine learning trends and how to maximize the benefits download the ESG report:

Leveraging AI and ML for Greater Impact

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