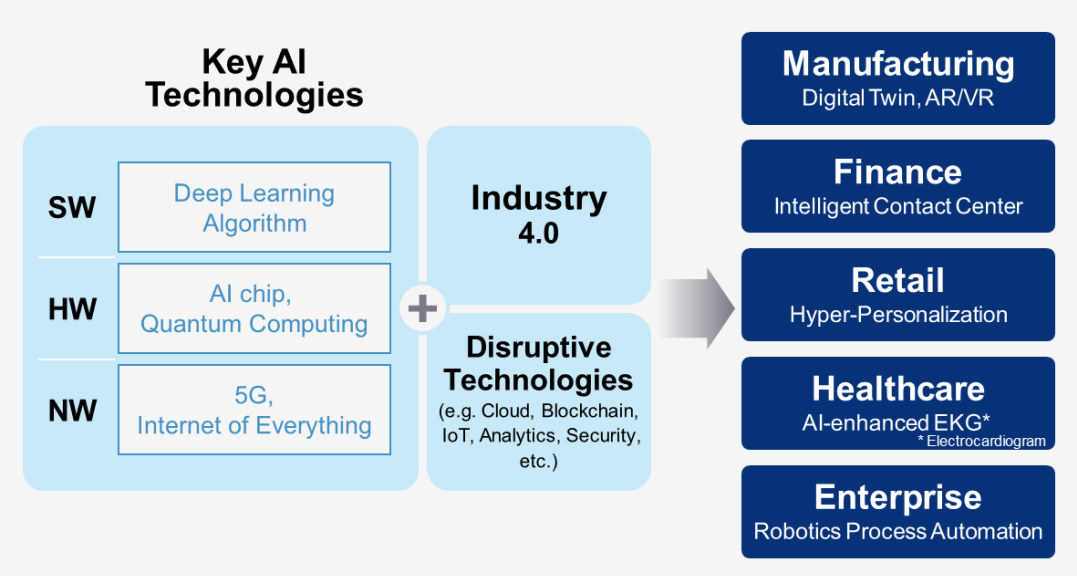
Bringing AI to the Masses : The Key To Enable an Intelligent Enterprise

AI is the key to enabling an intelligent enterprise, but companies must overcome two major hurdles to make AI a reality within their organization.

Source: Getty

Companies around the world are transforming into “intelligent enterprises” – organizations that leverage disruptive technologies to boost productivity, revitalize the customer experience, and digitally transform their businesses. These forward-thinking companies combine numerous disruptive technologies including AI, 5G, and IoT to bring automation, insights, and innovative process improvements to their organization in new and exciting ways.



Source: Samsung SDS

Chief among these disruptive technologies is AI, which has driven much of the innovation that enables intelligent enterprises. As processing power, network connectivity, and deep learning algorithms improve, companies have sought to leverage AI to tap into their ever-growing collection of data and develop truly innovative solutions.

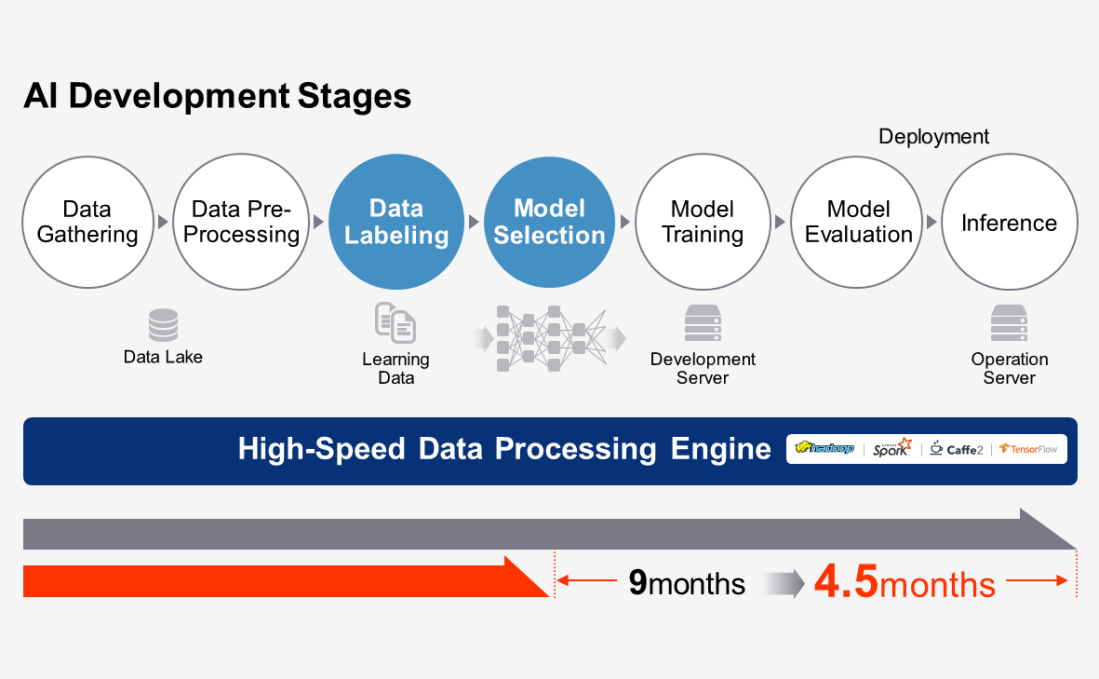
At Samsung, AI is used to more accurately predict sales demand and optimize inventory needs. Instead of relying on some combination of sales data and intuition, AI allows them to combine a wide variety of inputs including historical promotion data, holiday schedules, weather, and population density to forecast sales with an accuracy of up to 80% (compared with a previous 55%).

Across industries, AI has the power to revolutionize how companies do business. However, many companies are still struggling to adopt AI within their organization for two primary reasons. The first is that companies are spending too much of their resources on the AI-development process, putting a significant strain on their ability to collect, analyze, and utilize advanced analytical models. The second reason, quite simply, is that AI and data scientists are in short supply.

According to Samsung SDS, the digital arm of Samsung Group, companies can solve these problems by automating the most time consuming stages of the AI development process, and by empowering citizen data scientists within their organizations.

Automating the AI development process

AI development is a time-consuming process that requires companies to gather large quantities of data, process that data, then select, train, and evaluate an AI model for deployment. This process can take six to nine months, with much of that time spent processing the data needed to feed and train the model. Companies can shorten this timeline as they rely on AI-based analytics platforms to complete the most time consuming stages of the development process: data pre-processing, model selection, and model training.



AI-based analytics platforms can significantly reduce the time required to develop and deploy an AI model

During data pre-processing, gathered data (such as images) are manually labeled and organized so that they can be used to train the AI model. With the right AI-based analytics platform however, a company can automate much of its data labeling and reduce the time needed to complete this stage by 80%. Using that same platform, the initial model selection process can also be accelerated. Rather than relying on AI experts to select a deep learning model through trial and error, the platform can automatically build one based on pre-built "seed" models, cutting the time needed for this stage in half.

Across each of these stages, but especially during the model training stage where heavy data processing is required, companies are restricted by their ability to process data quickly. An effective AI platform can reduce the time needed to process information at each stage using distributed computing technology, where processing units are used more efficiently. Rather than utilizing a single GPU for example, these platforms can simultaneously process data across multiple GPUs, thereby reducing the overall time required to complete each stage.

With its own AI-based analytics platform, referred to as Brightics AI, Samsung SDS has been able to dramatically reduce the time it takes to build AI models. At a major manufacturing plant for example, Samsung SDS was called upon to help develop a model that could assess and predict equipment failure. In another example, it built a model that could more accurately detect and diagnose heart conditions. In both cases, the model development time was cut in half by automating the data labeling process, recommending a model based on pre-built algorithms, and using Samsung SDS's advanced data processing engine.

Empowering Citizen Data Scientists

The lack of AI-focused talent is a major bottleneck for organizations looking to become intelligent enterprises. Even with the right data and the domain expertise to give context to that data, companies struggle to build well-functioning data analytics models without AI experts who understand the model's output. These data scientists often have a firm grasp on the analytical aspects, but lack the domain expertise needed to fully extract insights and are already stretched thin across the organization.

Rather than searching for more AI experts, companies can address this talent gap by developing Citizen Data Scientists within their organizations. As defined by Gartner, a Citizen Data Scientist is an individual who generates models that leverage advanced diagnostic analytics or predictive and prescriptive capabilities, but whose primary job function is outside the field of analytics. With the right platform, Citizen Data Scientists can properly leverage AI-based analytical tools without requiring the help of expensive and time-constrained AI experts.

Citizen Data Scientists are non-technical users that utilize AI-based analytical tools to easily understand complex datasets

Source: Getty

Today, many companies are looking for ways to enable more domain experts to become citizen data scientists who can analyze data by themselves and drive decision-making in a more accurate and meaningful way. With Brightics AI, Samsung SDS helps enable its customers to quickly analyze and visualize large volumes of data through an intuitive interface and automated report generation. Rather than relying on data scientists to generate inventory projections or interpret heart arrhythmia readouts, non-technical users at these companies can easily view, understand, and manipulate the data themselves. Every employee – from field experts to C-level decision-makers – is brought to a single platform

where they can make immediate use of data and collaborate with one another freely and transparently. These organizations, now armed with Citizen Data Scientists, can begin transforming into intelligent enterprises that fully leverage AI to understand, analyze, and improve every aspect of their business.

As companies leverage AI-based analytics platforms, they will be able to address the primary barriers to enabling AI within their organization: time and expertise. This will enable their transformation into intelligent enterprises, and will help them leverage AI to make smarter decisions, better serve their customers, and run a more efficient organization.

With Brightics AI, Samsung SDS has helped companies across a variety of industries and markets successfully adopt AI into their organizations. As the primary software and solutions provider to Samsung Group for over 30 years, Samsung SDS has developed a deep understanding of the primary IT challenges facing major organizations today. In addition to providing AI-focused solutions, Samsung SDS also provides leading IoT, Blockchain, Cloud, and Cybersecurity solutions to enterprise customers around the world.

Learn more about Brightics AI and Samsung SDS <here>.

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