What would it take for enterprises to become truly intelligent?

Intelligent enterprises are being shaped by the rapidly expanding footprint of Artificial Intelligence (AI). In the years to come, organizations will be forced to dovetail technology with sophisticated human sensory perception, thought processes, judgment, choices and responses, to differentiate and gain an advantage over their rivals. But, how do you start? What is the best way to implement AI in your enterprise? Which are the essential building blocks? How do you strategize the transition to AI-powered infrastructure? How can you make AI real, productive and transformational?

We intend to answer some of these questions – to proactively define a value-creating AI strategy for enterprises.

To start with, harness the potential of intelligent data

Don't fall into the trap of believing that robots and machines are ready to run businesses. The investments needed to scale up AI systems to deliver results are still limited to board-room discussions for many organizations. Speed to solution leads to great proof of concepts, but pop culture has conditioned us to Tony Stark's Jarvis-like AI, which is far from reality. In real world enterprise scenarios, data still matters: to teach and test systems which include human training and interactions, as well as for validation of models, and transparency of recommendations.

Enterprises today serve millions of users, generating billions of transactions, which involves processing trillions of data records. Add to that connected devices, security and surveillance, worldwide research activities, scientific experiments, government outreach and initiatives, and other untraceable activities which are information driven. Imagine the amount of data being generated every single moment; and organizations will have to integrate, manage and secure all this information. For such data-intensive scenarios, the Cloud is emerging as a quintessential resource. The kind of storage capability an organization needs depends on multiple factors viz. the industry use case being addressed and the need to make real-time decisions. For example, a credit card company that uses AI systems to detect fraud needs extremely low latency storage architectures and high-value neural network ecosystems. Enterprises can deploy and manage massively scalable and reliable services using Cloud to address unprecedented growth in the volume of data.

AI in its true sense is only as good as the data behind it, and hence organizations also need to worry about the source of their data and how do they make it intelligent for use in AI applications. Ensuring data quality is a critical activity for AI. Inaccurate, incomplete or redundant data fed to an AI system, leads to incorrect, biased and irrelevant outputs. Automated data quality tools, that assess data for errors using rules or algorithms, are in demand among organizations, particularly those in data-driven industries. Data accessibility through a variety of touchpoints viz. mobile devices via wireless networks, raises several privacy and security concerns. Enterprises must look at authorization and data encryption tools as part of their data management and governance strategies.

Therafter, leverage intelligent network

Leveraging networks is key to AI's success. The human brain is a network of connections, and similarly, an intelligent enterprise needs to create knowledge from its data and meta-data. Businesses can easily rely on intelligent agents for specific individual activities, thereby reducing costs and avoiding human errors and biases. However, companies will need data scientists, data engineers, cybersecurity SMEs, network professionals and developers with a gamut of skills, coupled with business acumen, to handle their infrastructure to use AI technologies - such as computer vision, machine learning, natural language processing and deep learning. Thus creating an intelligent enterprise network. Hence, training and building a skilled workforce of versatilists (professionals capable of holding business, as well as technology-related roles) will also remain vital for enterprise success.

Large enterprises also need to enhance their infrastructure to support the AI overhaul. The success of AI, and the value it can generate, has a direct correlation with how amenable the enterprise technology ecosystem is to handle such powerful applications.

AI needs abundant computing power. Deep learning involves massive data sets, and deploying scalable, neural network algorithms for which traditional computing resources are insufficient. Organizations need to turn to Graphics Processing Units (GPUs), Tensor Processing Units (TPUs) and Deep-Neural-Networks Processing Units (DPUs) which can drive rich and sophisticated self-learning algorithms to process massive amounts of data, much faster and more accurately, on a massive scale. For smaller enterprises, much of AI is being done through APIs – with the infrastructure and hardware residing with the cloud service provider. However, irrespective of the size of business, the digital transformation of enterprise systems is a non-negotiable imperative for the success of AI.

Essential requisites for building more intelligent enterprises

1. Intelligent data

In real-world enterprise scenarios, AI is only as intelligent as the data behind it.

2. Intelligent network

Strengthen the capability for automated knowledge construction and learn to build intelligent agents.

3. Intelligent decisions

Target specific use-cases where AI can deliver measurable business benefits.

Lastly, take intelligent business decisions

Enterprises need to pick their battles intelligently by identifying the specific problems they want AI to solve, thereby making existing processes, products and services smarter. Essentially, target use-cases, where Natural Language Processing (NLP), Image Recognition, Machine Learning (ML) and other such technologies within the arsenal of AI could deliver measurable business benefits. For example, if an enterprise is into BPO, an NLP based chabot adds a lot of value by solving basic problems without human intervention; classifying customer issues in predefined buckets for faster identification and resolution - thereby improving BPO productivity. To prioritize on these use-cases, businesses should drive ownership of initiatives by establishing KPIs for the entire line of business - for the success of AI, and along with it focus on the value potential of the use-case and its implementation viability. Exponential business value is the most important measurement litmus test for a successful AI initiative.

This may not be an exhaustive list of activities which can guarantee the success of an AI initiative for businesses, because a lot remains to be explored on this front. As Larry Tesler puts it, “AI is whatever hasn’t been done yet.” However, we intend to break some (A)Ice and help enterprises look at AI, not as a threat but as an efficient and effective way of becoming more and more intelligent.

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