Artificial Intelligence Starts with Data

To realize the power of artificial intelligence, start with data.

Many are talking about artificial intelligence (AI. AI holds promise for organizations in every industry and every size. Some of the challenge today is how to prepare for AI in the organization and how to plan AI applications when there is a dearth of relevant case studies.

The foundation for AI is data. You must have enough data to analyze to build models. Your data determines the depth of AI you can achieve -- for example, statistical modeling, machine learning, or deep learning -- and its accuracy. The increased availability of data is the single biggest contributor to the massive uptake in AI where it is thriving.

Improving Analysis with AI

If you are optimizing a restaurant supply chain, you want to know how much of each food item to stock and how many prep items to prepare in each restaurant daily. You decide this based on anticipated sales in the restaurant. Fore-

casting can be done with standard time-series analysis on historical sale snapshots, but if you want more accuracy, you could use machine learning or even deep learning methods, both of which need more data.

Let's add in weather data because order habits are highly weather dependent. What drinks sell more in the highest heat of summer? You can learn by adding historical weather data to the model and using a random forest regression or another machine learning model, comparing the "costs"/error when looking at historical actuals.

One of the great things about AI is if you add the data, it can find correlations, if any, and improve the model. Is there a data set for food trends, which is also likely correlated to purchase patterns? You can add Web search data and syndicated supplier demand data. The more the merrier, as more data brings you closer to letting the data tell the full story of the business and guide you to the best next move.

Check Your Data Management

An enterprise would not necessarily be step-ping up to all this data without AI, but it should be managing the key pieces today, such as sales data in the example. This core data must be under solid management before you try to introduce AI.

To fully realize the value of AI, you also need the data scientists, the tools, and the compute power (possibly GPUs) to deal with massive amounts of data in seconds. However, before you consider any of that, it starts with having the data.

Data needs to be flowing to the subscribing data stores and available in real time. You need 360-degree data about your organization, including big data, covering all channels, touchpoints, and customer analytics. The AI-adopting organization must be efficient with clear master data and data ownership, available detailed data, and available refined data. If this is not the case, priorities and focus will remain on these basics while AI is starved.

AI is providing a powerful foundation for impending competitive advantage and business disruption. To realize this power, start with data.