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Artificial intelligence is already revolutionising the world. But there is a catch. For artificial intelligence to make the magic happen, it is going to need data. Massive amounts of data. Data is the engine that drives artificial intelligence capabilities and determines its extent and impact. Machine and deep learning capabilities largely depend on the data that is fed into the data-crunching artificial intelligence systems and it is the biggest need at the start. As the systems keep getting advanced, the data gets refined and the requirement comes down to relevant data.

Even data-hungry applications do not necessarily require huge amounts of data to leverage the latest technologies. That said, in order to use the state-of-the-art technology stack and concrete applications, there will be a need for internal data that can be leveraged to develop a new deep learning approach.

But the question arises, how much data is needed to make this happen?

Before thinking about how much data, let us explore what kind of data can help? When trying to make artificial intelligence effective, there are a few things that need to be kept in mind:

• Data has multiple dimensions: The richer the data, the better are the results. With all the raw data available to data scientists, they need to filter out the irrelevant information and extract the best quality data to make accurate decisions and take actions. They should take a comprehensive view of all the available data and then integrate the relevant data with the decision engines.

• Internal customer relationship management (CRM) data is the core: The minimum or core data required to make artificial intelligence-based automation a viable selling system includes customer data such as contact information and demographic or past purchase information, prospect data, and current and historical opportunities for the company. The internal CRM

information can be analysed to identify and understand customer behaviour and preferences. This also contains inputs by sales representatives regarding what works with customers and what does not.

• All data sources: The data sources vary owing to the different nature of businesses, customer demographics and industry dynamics. However, the following data should be a part of all artificial intelligence systems and mechanisms to extract the required results:

• Product/Service usage data, customer service data, marketing response, interaction with digital assets, purchase intent signals such as cart abandonment and tracking cookies.

• External content such as social media activity, engagement on different websites (own and competitors'), posts liked, shared or recommended, and interest in news articles can give away signals of prospective interests, preferences and demographics.

• Third-party content would include business-to-business (B2B) data such as firmographics and financials of firms, industry-specific data and prospect/lead contact details to find the right target audience and industry decision-makers and analyse their buying power. Third-party data for a B2B firm may include data such as demographics, lifestyle, the credit institutions involved and the financial details of customers.

Coming to how much data will make artificial intelligence effective, there was a time when more data meant better artificial intelligence results. But now, the game has shifted to reinforce the need for relevant and smart data sets. What is the point of feeding every bit of data available on CRM systems, which is huge in volume, and letting the artificial intelligence systems do the filtering (this is not to doubt the capability of artificial intelligence systems to crunch and process massive data sets). This puts too much pressure on the smart systems and can lead to a situation where they may not be able to give the desired results. There could be some mistakes, faults and errors that impact our decisions. And those erroneous decisions can cost us big time. This is the right time to take ownership and make things perfect by combining both human and machine capabilities. Only relevant and useful data required for each decision area should be fed into the systems, allowing the machines to analyse and squeeze out information, to see what magic unfolds – big wins, sales efficiency, high engagement, faster conversions, whatever you may want.

The artificial intelligence boom is as much about the availability of intelligent data sets as it is about intelligent software. The better the data sets, the smarter are the artificial intelligence systems. Thus, artificial intelligence could do wonders if the data quality is good.