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Point of View

Tapping into the **Power of Humanlytics**

Author
Soumendra Mohanty
(EVP & Chief Data Analytics Officer at LTIMindtree)

As organizations engage in the implementation of analytics and data science, a multitude of challenges lie ahead. As a busy analyst, a business owner, or a breakaway enterprise, insights are important to you, but you want actions from your data. And, as a human, you still want to be the ultimate decision maker. So, if you are looking for a more human-centric design in the space of data, analytics and AI application - Humanlytics is meant to help you.

In an interesting conversation with Soumendra Mohanty – An acclaimed thought leader and subject matter expert the field of AI, Analytics, Data Science and Automation, we learn how far can technologies like AI and Analytics go, and why "human-in-the-loop" is so important.

Soumendra has been deeply engaged with customers and partners implementing and using Big Data, AI, Cognitive and Analytics solutions. With his regular interaction with customers across the globe, he brings strong customer connects, as well as their journeys and experiences to the table.

Let's start with defining Humanlytics. What is Humanlytics and how can we leverage the power of it?

I will give you a slightly longest answer. Let's go back five years when Big Data was the talk of town and everyone was talking about the buzz created by it. But the essential question is how do you humanize big data? With this kind of magnitude and madness around data, we still need to figure out how to leverage it. We are back to a similar phase where AI, Analytics, Automation are not becoming humanized in a true context.

I read in a book - The Numerati (a 2008 non-fiction book written by Stephen L. Baker on the subjects of automatic identification and data capture and Big Data) that algorithms reduce you to a number and you' re just a score. Also, many of these algorithms are very hard to understand; there is no clarity on the parameters.

So, in our journey to be AI-driven, despite the positive outcomes it offers along the way, are we undermining the aspect of making AI explainable to everybody. For example: One-dimensional scenarios like Moody's ratings reducing entities to numbers; in that process, other aspects surrounding the entity are lost. It becomes one-dimensional. Thus, it's necessary to being in the human understanding and interpretation angle to it and humanizing all of it - that's how the concept of Humanlytics is evolving.

> "We always associate intelligence with an ability to reason and draw inferences. However, being more evolved, humans would supersede with their instincts."

Today, the humans – all of us - have developed our own unique ways of interpreting and thinking about the world. So, for machine intelligence (AI or Analytics) to have a significant impact on us, it needs to think like us. What are the possibilities?

It is debatable whether it needs to think like us. When you look at artificial intelligence, and the journey of AI and its stages of maturity, at the core of it - there is intelligence. And, we always associate intelligence with the ability to reason and to draw inferences, in a very automated fashion. When we see artificial intelligence being talked about everywhere, we are dealing with a very narrow sense of AI. There're are three stages or phases of AI. The first stage is called-

Artificial Narrow Intelligence. There is a good level of intelligence used with an ability to reason and make some decisions based on it, but it is applicable only to a specific domain or sub domain, and within certain pre-defined boundaries. For example, autonomous or driverless cars. They do a good job in a regulated environment, but you can't put the same car on a battlefield and expect a similar outcome. The car is conditioned to drive in a very controlled environment. But a human can drive this car in a battlefield. They have the judgement and know how to apply it. We - the humans - are far more evolved. We haven't really been on a battlefield, but give us a car and put us on a battlefield and we will be able to drive it despite lack of exposure to that kind of an environment.

The next stage is - Artificial General Intelligence. Artificial general intelligence is the intelligence that can understand or learn any intellectual task that a human can. Now let's talk about – Artificial Super Intelligence - here the bar has gone a bit high and the stakes are higher. There is more learning involved to an extent that using some self-learning, the intelligence can adapt and deal with unknown domain scenarios better than a human. The more context and additional scenarios you expose it to, it observes what the human does, and thus, there are higher chances of getting an enhanced performance. However, in a case where the car has to save a human accidently coming in its way, it won't be able to decide what to do, unlike a human who can use his/her instincts. So, it needs to think like us, but it's extremely difficult.

AI-driven analytics and automation are drawing the future close— giving us priceless insights to help us make the best possible decisions. However, it is said that AI is unlikely to penetrate the integral parts of the human mind – it's creative ability, drive, judgement power, individual expressions, and collective vision. What are your views?

There are attempts being made in that area. We always associate a human with creativity -be it creating an art, telling a story, making a movie- in that line of thinking- AI has actually done significant work. It has written a book on its own, given specific instructions. It can also observe numerous dance moves and based on your biometrics, give you a unique, customized dance move. In those aspects, it can be creative. If you apply reinforcement learning, they do learn by trial and error, improvise on their performance and crack it.

However, Art is very subjective, and the impact is measured differently here. But if you take a scenario of medical analysis, then it's a different story. The tolerance factor will drop when it comes to personal impact in this context. We are still tolerant to mistakes or errors done by humans in many contexts, but not when it comes to AI. Consider a scenario of a health diagnosis or stockmarket investments, a wrong analysis can cost you a lot since the parameters are entirely different here.

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Does the primary challenge of building AI solutions lie not in building an efficient system, but rather in a human-centred design? Will continuous and non-biased interaction between the machine and human make the world easy for both to survive in?

As a human, I still want to be in control. We want AI to do things on our behalf, but we want to retain the power of decision making with us.

This is a sensitive matter for us. Human in the loop is extremely important. We haven't figured out the policies through which we can govern the scenarios. AI is becoming more powerful but when it comes a failed output, who will be penalised? So a human-centric design needs to come in, and the governance framework and policies are the need of the hour. If something goes wrong, humans need to be smart enough to catch the race to prevent the consequences.

What next? What the big picture looks like?

AI is here to stay, but it needs to be more matured. In my view, three factors should be focused on – The human-machine collaboration; How would you penalise or reward a human-machine environment; and the case of Quantum Computing. While it can leapfrog to do much more, we should be ready to manage the repercussions. Consider 5G - Super connected, super-efficient, but will need better management. So, exciting times are ahead, but we must operate with a sensible mind. A human should have the ultimate control.

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Soumendra Mohanty (EVP & Chief Data Analytics Officer at LTIMindtree)

Soumendra has led key growth portfolios (IIoT, Data, Analytics, AI, Intelligent RPA, Digital Integration, Digital Experience, Platforms) at LTIMindtree, bringing in world class capabilities, innovative solutions and transformation-led outcomes-led value propositions to clients. Under his leadership, LTIMindtree has built deep digital and data analytics capabilities and an enviable culture of client-centric innovation solving problems.

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