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Artificial intelligence (AI) holds great promise to improve healthcare. But AI must be mindful to fulfill its potential. This was a key takeaway from a panel about AI and healthcare conducted at the MIT Technology Review Arabia virtual conference on November 30.

The panel, “How Mindful AI Can Contribute to Advancing Public Health,” featured Ahmer Inam, Chief AI Officer at Centific; and Tarek Khorshed, Lead Technology architect at the World Health Organization. The discussion was moderated by Shaikha AlOthman, founder and CEO of Haus of Care. Key themes included:

AI Is Making Strides in Healthcare – but It Has a Long Way to Go

As Tarek Khorshed noted, AI is pervading all aspects of our lives, and healthcare is no exception. For instance, AI continues to make breakthroughs in important areas such as diagnosing cancer. AI can help treat cancer by detecting it earlier and making it possible for physicians to monitor its

progression more accurately.

Ahmer Inam added, “Healthcare is human, and AI is human at the core. AI is good at using complex sets of data and synthesizing it in a purposeful way to solve complex problems. The amount of data needed to solve complex problems makes AI the right fit for healthcare.”

But AI has many limitations and challenges. For instance, to identify and learn from cancer signatures, providers must have adequate patient data and tissue samples -- and to do that, developers need to be more inclusive and less biased when they collect and prepare data to train AI.

“You have to have the right amount of data to treat a disease,” Tarek Khorshed said. “And limited data sets available is hampering AI in healthcare. In addition, healthcare companies need to figure out how to collect that data in a way that does not violate consumer privacy. If we are able to address challenges with data sharing and privacy, we can make AI more useful to healthcare.”

Shaikha AlOthman pointed out that AI suffers from a Black Box problem, too. People still know very little about how AI-based applications make decisions that affect how we live. Consequently, there remains a pervasive fear that AI will become so smart it will make decisions without our understanding how those decisions are made.

Tarek Khorshed said that those fears are understandable. But at the same time, are we making unreasonable expectations for how much knowledge we need to possess about AI in order to trust it? He noted that people don’t need to become expert automobile technicians and engineers before we hop in our cars and drive them, and yet cars are complex machines.

Ahmer noted that desire to know what is in the Black Box problem is essentially a change management problem. “Everyone who is affected by AI needs the right level of information that is necessary for them to gain trust and understanding depending on their vantage point,” he said. “We have to ensure that physicians and care givers are trained well on what AI can and cannot do. Patients may not need to know everything physicians need to augment their decision, but on the other hand, patients may need insight that are more pertinent to them to trust the decisions.”

AI Must Be Mindful

“A paradox exists between the promise of AI and the adoption of AI,” Ahmer said. “90 percent of AI projects fail the adoption test. Why? Because humans do not trust it.”

Ahmer said that one reason for the distrust is cultural, both the culture of the enterprises where we work and the cultures that we live in. People in different cultures around the world are being expected to adapt to monolithic AI technologies without any regard for how people prefer to use AI-infused digital solutions.

“We have to lead with empathy for the people who use AI and those that it will impact,” he said. “When we lead with empathy, we can design a solution that treats the problem we are trying to solve for. We need to change the orientation from ‘What can we automate?’ to understanding the ‘Why we do it what we do.’ It evolves the task-orientation of AI systems design to a purpose-oriented approach.

He said that empathy led, human-centric design will lead to a lovable experience that ensures that healthcare providers design a product that actually gets used by physicians and patients. This is

known as mindful AI. Mindful AI addresses healthcare's core pain points by treating the emotional wants and needs of people that it is intended to serve.

Learn more about mindful AI here.

Optimize to Improve Healthcare

Ahmer noted that improving healthcare with AI is not just about achieving moonshots. But it is also about optimizing current processes.

"If 80 percent of healthcare's operational costs come from 20 percent of your processes, you should focus on optimizing those processes with AI," he said. "Imagine the operations cost savings you can achieve by doing that. For instance, optimizing the planning of resources required for treating patients – such as different beds, machines, and medicines -- is important. It's not sexy. But you need to optimize processes to save capital, which could be reinvested into catalyzing AI-fueled moonshot innovations. Healthcare does not need to reinvent itself to succeed."

The Metaverse and AI in Healthcare

"The metaverse is a fascinating technology," Ahmer said. "As a technologist, I am excited. As a member of society, I am a little bit scared." He noted that on the downside, the metaverse, because of its immersive nature, could amplify divisions that exist in society. In addition, the metaverse can create mental health issues by encouraging people to live in isolation

But the metaverse, if designed in a mindful way, can be the next space program of our generation. It can transform healthcare. For instance, Johns Hopkins neurosurgeons are using metaverse-based technologies to perform surgeries. And immersive worlds inside the metaverse can make life more meaningful and enjoyable for people living in isolation, notably individuals who need assisted care facilities.

"What if you can take a walk in a garden with someone you can no longer see personally?" Ahmer asked.

"AI Helps Us Better Understand the Known and Take Flights into the Unknown"

Essayist Daniel Tammet once wrote, "like works of literature, mathematical ideas help expand our circle of empathy, liberating us from the tyranny of a single, parochial point of view. Numbers, properly considered, make us better people." Ahmer Inam left us with a thoughtful perspective:

"What is Mindful AI if not an empathy-led abstract expression of mathematics that brings clarity to help synthesize different points of views? AI helps us better understand the known and take flights into the unknown. A journey that mesmerizes us all with new knowledge as we explore from known-known universe to the uncharted territories of the unknown-unknowns. It adds dimensions into the exploration of pure possibilities and can materialize our pure imaginations."

How We Practice Mindful AI

Mindful AI is more than a concept – it's also a reality. At Centific, we operationalize mindful AI through:

- Tools such as the Mindful AI Canvas to help product design teams conceive of products from the start with people the center.
- People in the loop to train AI-powered applications with data that is unbiased and inclusive. We provide rely on globally crowdsourced resources who possess in-market subject matter expertise, mastery of 200+ languages, and insight into local forms of expressions such as emoji on different social apps.
- Technology to scale our solutions. For instance, our crowdsourced team uses our OneForma platform to teach AI models to make accurate decisions. LoopTalk**,** our voice AI data generation capability, makes it possible for our team to train voice recognition models in order to better understand regional accents/non-typical pronunciations of certain words in a target market. Doing so helps our clients make AI more inclusive.
- A repeatable methodology, FUEL, to develop Mindful AI products. FUEL relies on principles of design thinking and lean innovation to road test and develop AI responsibly.

Contact us to learn how to improve healthcare with mindful AI.

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