COVID-19 accelerating use of algorithms rather than human reviewers

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From automated health assessments to diagnosis, healthcare tech start-ups are leveraging the power of algorithms and cloud to develop new technologies to combat COVID-19

As countries across the globe initiated their response to the pandemic, they leaned on their strong technology sector and specifically Artificial Intelligence (AI) and Data Science to track and fight the spread of the virus while tech leaders have been accelerating their company's healthcare initiatives. As a result, governments and private companies are integrally involved with academics, clinicians, medical experts and government entities around the world to activate technology as the world continues to grapple with the virus.

Artificial Intelligence has played a significant but fragmented role in the global fight against the Coronavirus. Since the virus outbreak, AI has been used for prediction, screening, alerts, faster diagnosis, automated healthcare services and deliveries, and laboratory drug discovery. As the pandemic s continuing its spread across the world, various innovative applications of AI have been developed to assist in controlling the spread. For example, Arogya Setu application continues to be a crucial tool in the battle to reduce the transmission of the disease. The way AI remains in action against Covid-19 provides a glimpse of the possibilities it holds in the various aspects of healthcare in the future.

Medical Professionals Turning to AI

From predicting outbreaks to developing treatments, medical specialists are turning to AI to fight the COVID-19 pandemic and the possible threats of a pandemic in the future. While AI run algorithms were already becoming a significant part of healthcare, the pandemic has accelerated the adoption by manifold.

AI has exhibited a record of success in diagnosing COVID-19 by interpreting medical scans. There is no denying the fact that the healthcare industry has been undergoing a period of digital transformation in recent years which got a rapid acceleration with the coronavirus outbreak. From wearables monitoring patients' vital signs to AI being used in drug discovery, technology is doing wonders in the healthcare system. A Nature Medicine study found that an AI system was more accurate than a radiologist in diagnosing coronavirus patients using CT scans — X-ray images of lungs clubbed with clinical symptoms.

Technology Helping to Fight the Pandemic

While it has already been identified that best healthcare delivery requires the support of new technologies, during this pandemic, technology has played an exceptional role to detect any possible cluster of cases, predict where this virus could affect the most in times to come, by collecting and analyzing all previously stored data. AI is helping to tackle infectious disease risks by analysing social media platforms, news reports, and government documents, AI can learn to detect an outbreak. Additionally, AI solutions are helping front-line healthcare workers detect and monitor the disease efficiently. It is not only the clinical operations of hospitals that are being affected but also the administrative functions as they deal with the surge of patients. World over, there have been many developments in the last few months - use of AI algorithms and its computing power to understand and examine the proteins that might make up the virus, deploying AI systems to build drugs that have the capability to fight the world's toughest diseases, a surveillance system that uses facial recognition technology and temperature detection to identify people who are more likely to have the virus and big data to assesses the risk of individuals with travel history.

AI works in an efficient way to imitate like human like intelligence. For instance, chatbots have been of huge assistance for free online health consultation services in real time. The cloud computing resources are being used by researchers to fast-track the development of a vaccine or cure for the virus. During the pandemic infused crisis, technology has become critical to helping various stakeholders effectively deal with the outbreak.

It Holds a Huge Potential

According to Markets and Markets report - Artificial Intelligence in Healthcare Market, the global AI in healthcare market size is expected to grow at a CAGR of 44.9%, from USD 4.9 billion in 2020 to USD 45.2 billion by 2026.

The application of AI tools and algorithms is far beyond one virus. As we fight coronavirus using advanced technology, we must recognise the great potential it has for the future of healthcare. From machine learning being used to develop algorithms that mimic the human brain to creating a mobile medical assistant which helps doctors spot serious kidney conditions earlier, the potential of AI goes beyond our imagination.

As technology improves and associated results prove to be effective, it becomes clear that AI has the potential to dramatically transform healthcare across all levels. In order to tackle the biggest challenges facing public health, we must equip data scientists, researchers, and clinicians with powerful AI tools and implement human-machine collaborations in the real-world. These powerful AI tools are not replacing human decision-making, but rather giving healthcare specialists effective ways to tackle coronavirus. We must recognise the great potential that technology holds to improve our response not only to this pandemic, but also the future of healthcare in general.

Summing It All Up

Before the world was even aware of the threat posed by CoviD-19, AI systems had detected the outbreak of an unknown type of pneumonia in China. AI tools and technologies are now being employed to support efforts of policy makers and the medical community to understand the virus and accelerate research on vaccine or cure by rapidly analysing large volume of research data.

From automated health assessments to diagnosis, healthcare tech start-ups are leveraging the power of algorithms and cloud to develop new technologies to combat COVID-19 and manage all the stages of the crisis and its aftermath: diagnosis, response and prevention. AI data mining tools can be employed to uncover the virus' history, transmission, and diagnostics and to prevent the spread of the virus. Algorithms that identify patterns and anomalies, and image recognition systems are speeding up medical diagnosis.

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