

5 WAYS ARTIFICIAL INTELLIGENCE WILL IMPACT HEALTHCARE



Artificial intelligence is poised to become a game-changer in healthcare. This blog will tell you how the impact of AI-driven tools will help clinicians and patients?



The healthcare business is primed for major transformation. From chronic diseases and cancer to radiology and mitigation strategies, there is practically limitless potential to use technology to deliver more precise, efficient, and effective therapies at precisely the appropriate time in a patient's care.

As payment mechanisms change, patients expect more from their providers, and the volume of available data starts to grow at an alarming rate, artificial intelligence is positioned to be the engine driving advances across the care continuum.

AI has several advantages over conventional analytics and clinical decision-making methods. They have the ability to interact with training data, learning algorithms can become more exact and accurate, allowing people to acquire unparalleled insights into diagnosis, care processes, treatment variability, and patient outcomes.

“The greatest opportunity offered by AI is not reducing errors or workloads, or even curing cancer: it is the opportunity to restore the precious and time-honored connection and trust”

— Eric Topol

Here are 5 ways in which Artificial Intelligence (AI) can impact and revolutionize the healthcare sector all around the world.

1. Mind and Machine advancing through Brain-Computer interfaces

Using computers to communicate is not a novel concept, but developing direct connections between technology and the human mind without the use of keyboards, mice, and monitors is a cutting-edge area of research with substantial implications for some patients.



Neurological illnesses and nervous system injuries can impair certain patients' ability to communicate, move, and interact meaningfully with others and their surroundings. Brain-computer interfaces powered by artificial intelligence may be able to bring back those essential experiences for those who worry they will be lost forever.

“AI will not replace doctors but augment them, enabling physicians to practice with better medicine with greater accuracy and efficiency.”

-Benjamin Bell

Through this, we can now be able to decode the neural activates associated with the intended movement of one's hand using a BCI and artificial intelligence, and we should be able to allow that person to communicate in the same way that many people communicate using a ubiquitous communication technology like a tablet computer or phone.

Brain-computer interfaces have now the potential to significantly improve the quality of life for patients suffering from ALS, strokes, or locked-in syndrome, as well as the 500,000 people worldwide who suffer from spinal cord injuries each year.

2. Expanding healthcare access in Unserved and Developing regions

In underdeveloped countries around the world, a lack of qualified healthcare workers is the main reason for more health-related problems. If services like ultrasound technologists and radiologists are available in such areas it can severely limit access to life-saving care.

According to the session, more radiologists work in the half-dozen hospitals that line Boston's renowned Longwood Avenue than in all of West Africa.

By taking over some of the diagnostic activities normally assigned to humans, artificial intelligence could help reduce the effects of this significant shortage of skilled clinical staff.



AI imaging techniques, for example, can scan chest x-rays for symptoms of tuberculosis, frequently with accuracy comparable to people. This capability might be made available to physicians in low-resource locations via an app, decreasing the need for a skilled diagnostic radiologist on-site.

However, algorithm developers should also be mindful of the fact that different ethnic groups or residents of different locations may have distinct physiologies and environmental factors that influence disease manifestation.

For instance, The course of a disease and the population impacted by the condition may look very different in India than it does in the United States.

As we create these algorithms, it's very critical to ensure that the data covers a diverse range of illness presentations and demographics – we can't develop an algorithm based on a particular group and also expect it to operate equally well on others.

4. Use of Wearables and Personal Devices for Health Monitoring

Almost all consumers now have access to gadgets equipped with sensors that can collect valuable health data. A growing share of health-related data is generated on the go, from cell phones with step trackers to wearables that can detect a heartbeat around the clock.

Collecting and analyzing this data – and complementing it with the information provided by patients via apps and other home monitoring devices – can provide a unique perspective on individual and public health.

Artificial intelligence will be crucial in deriving useful insights from this vast and diverse treasure trove of data.



However, according to Omar Arnaout, enabling patients to become comfortable with sharing data from this intimate, continuous monitoring may necessitate a little extra effort.

People have been fairly liberal with our digital data as a culture. However, when things like Cambridge Analytica and Facebook enter the public consciousness, people will become more cautious about with whom they share the data.

Patients, on the other hand, also tend to trust their doctors more than they may trust a giant corporation like Facebook, which may assist to alleviate any apprehension about donating data to large-scale research endeavors.

This is why there is a very good probability wearable data will have a significant impact because by continuously gathering granular data, we increase the possibility that the data will help us take better care of patients.

5. Making Smartphones powerful diagnostic tools

In keeping with the theme of leveraging the power of portable devices, experts now believe that images taken from smartphones and other consumer-grade sources will be an important supplement to clinical quality imaging – particularly in underserved populations or developing nations or during the times of pandemic like today.

The quality of cell phone cameras is improving year after year, and they may now provide photos suitable for examination by artificial intelligence algorithms. Dermatology and ophthalmology are among the first to benefit from this trend.



Researchers in the United Kingdom have now even created a technology that analyses photos of a child's face to identify developmental problems. The system is capable of detecting discrete elements such as a child's jawline, eye and nose positioning, and other characteristics that may suggest a craniofacial anomaly. At the moment, the program can match regular photos to more than 90 illnesses in order to provide the best clinical decision support.

Nowadays the bulk of the population is equipped with pocket-sized, powerful gadgets with a variety of sensors built-in and that is an excellent chance for us healthcare to step in. Almost every major company in the business has begun to incorporate AI software and hardware into their products. This isn't a coincidence. Every day, we generate more than 2.5 million gigabytes of data in our digital world. Manufacturers of cell phones believe they can utilize that data in conjunction with AI to create much more tailored, faster, and smarter services.



Using cellphones to take photographs of eyes, skin lesions, wounds, infections, drugs, or other issues may be able to assist underserved areas in dealing with a dearth of specialists while also shortening the time-to-diagnosis for some diseases.

AI will now usher in a new era of clinical excellence and exciting advancements in patient care by powering a new generation of tools and systems that make doctors more aware of nuances, more efficient when giving care, and more likely to get ahead of developing problems. You and your company also have an awesome chance to enter this field by doing a quick course on **Artificial Intelligence** from **Big Data Trunk** which can help you understand all about the opportunities in AI and how to excel in it in no time!

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