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AI and Clinical Research – Is it an easy ride ahead?

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Artificial Intelligence, commonly known as AI, is a trending topic across all domains and everyone wants to exploit the potential of its practical applications.



The key advantage of AI is that it allows everyone to communicate with computers the same ways they communicate with other humans through speech and text. To sum up, AI is simply a machine that can mimic a human's learning, perception, reasoning, problem-solving and language usage.

According to various business reports, the global AI market size is projected to reach \$1394.30 billion in 2029, at a CAGR of 20.1% during the forecast period, 2022-2029. AI can be game changer for pharmaceutical companies involved in the drug development process. AI can lead to a change from large teams working across dozens of data systems to a single AI-enabled, standards and metadata driven backbone that requires minimal user input. By reducing the time and effort required for clinical trials, AI-enabled data collection and management can accelerate the drug development process and help companies get new and innovative treatments to market more quickly.

AI can be beneficial at all stages in the drug discovery process right from determining relationships between the structural properties of chemical compounds and biologic activity to alert medical staff and patients about trial opportunities to intelligently reuse existing data based on standards and metadata, reducing the need to start from scratch across trials.

India Perspective

COVID-19 pandemic was no doubt traumatic experience, but at the same time it was blessing in disguise for us to unleash and exploit the use of various technologies available around us which were conveniently side-lined by many in India for various reasons. India's AI market is expected to witness a growth of 20% over the next five years.

While the growth potential is enormous for pharmaceutical companies based in India given the talent pool with expertise in life sciences, pharmaceutical and technology domains; however, the hesitancy shown by the companies in adopting advanced technology and automation can also put the growth story at risk.

A well-defined roadmap needs to be defined by the companies involved in drug discovery to conduct of clinical trials which involves a strong collaboration between companies, universities and government to nurture and exploit AI for better execution of clinical research, improve data traceability and integrity. AI can be used to create structured, standardized, and digital data elements from a range of inputs and sources. It can also help in reducing the cost and time required to process clinical-trial data through smart automation, enhanced efficiency, and less need for rework.

The Road Ahead

No doubt, India has the potential to be the powerhouse in the clinical research domain with all the ingredients to be the next bright spot in the global economy as well as position themselves into leading position and excel in terms of delivering quality and innovative blockbuster drugs to the country and across the globe.

To conclude it will not be an easy ride for Indian pharmaceutical companies; however they need to be in top gear and make themselves Atma Nirbhar with the packages and policies rolled out by the government and to leverage the talent pool available in our country to produce quality and innovative products to cater need and demand of the current and future scenario.

Ravi Shet

Author is a Clinical Data Management Professional with around 14 years of experience. He is passionate for innovation and wants to leverage it to ensure good health for human race through his work in clinical research domain.