

“Investing in AI is a definitive step to scale operational efficiencies”

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Generative Artificial Intelligence (AI) is revolutionising the way industries are functioning, and healthcare is no exception. A significant impact of Generative AI on the healthcare industry in India is turning out to be around its ability to diagnose and treat diseases more accurately. Generative AI algorithms can analyse medical data much more efficiently, enabling doctors to identify diseases early and recommend appropriate treatments. Gurugram-based CORE Diagnostics is one such player leveraging this opportunity. Dr Shivani Sharma, Vice President of Pathology Services & Lab Director, CORE Diagnostics spoke with BioSpectrum about new innovations and applications of Generative AI.

How can the diagnostics industry harness the potential of Generative AI?

Adopting AI shall help in all pre-analytic, analytic, and post-analytical phases of the sample journey in a diagnostic lab. This means, AI will help pick up the sample quickly through the shortest route, getting analysis done by the most advanced technology with minimal errors and then providing reports with better insights into the disease process.

AI helps to build accuracy, precision, and better turnaround time, which directly impacts the patient's life. With accuracy comes the confidence that the results being delivered are error-free. AI is not affected by the factors that would otherwise affect the human mind, like tiredness and stress, so one can rely on the results at any time of the day and any day of the year, which means the result will not change if the test is analysed again. The game changer for diagnostics is a better turnaround time as this helps the physician to start the treatment of the patient earlier and helps the patient to get quicker relief from the symptoms and the disease.

How is CORE Diagnostics leveraging Generative AI?

CORE Diagnostics is already working on different projects that involve Generative AI. Our latest test launched for early cancer detection in women is based on AI-driven analysis of the metabolites in the body. AI helps to get the highest sensitivity and specificity in this scenario. Similarly, we are working with different US-based companies to help our pathologists analyse the digital pathology slides through AI. This shall significantly reduce the turnaround time for the analysis of these slides.

AI-powered Bot WhatsApp application is currently used to connect patients with our genetic counselling (GC) team. With this application-based model, patients can get genetic consultations based on their needs, time, and convenient mode of communication. Integrated with the Zoom application, connecting with the GC team for video consultation has become accessible at one click.

This AI and NLP-based chatbot serves multiple purposes, including customer support and report downloads. Users can avail instant support from our team right at their fingertips. Walking ahead of time along with sharing our knowledge base with multiple academic institutes in the USA, we have published multiple papers in reputed international journals with high impact factors.

What are the future plans to further incorporate Gen AI applications?

We are already on the path of incorporating AI in all our systems, right from sample collection to morpho-molecular subtyping with digital pathology slide images. In the coming days, it shall be impacting all our operational functions, including customer interaction, and early sample pick up.

AI-based results interpretation shall be a part of all departments, including:

- Flow cytometry: where data plot interpretation can be made easier through machine learning, histopathology;
- Immunohistochemistry: where all the digital pathology slide analysis shall be done through AI;
- Cytogenetics: where faster chromosomal analysis can be done error-free;
- Bioinformatics: where AI model shall help in the analysis of the huge next generation sequencing data and literature survey;
- Biochemistry: where analysing metabolites in our body by AI-driven algorithms will be done in seconds; and,
- Lab management: triaging the sample flow and monitoring the errors in the lab.

All of these are in progress, and in time, we shall witness this as an essential part of our daily lab routines.

What are your thoughts on investing in AI?

Investing in AI is a definitive step we intend to take towards the efficiency of all our systems that will eventually help us process a greater number of samples in a minimal time frame with better accuracy and quality. CORE, as an organisation, stands for innovation, quality, and precision, and an investment in AI helps us to be our best in all these spheres but above all, we want to create a positive impact on patient's lives which is our primary goal. AI helps us to build confidence in ourselves, our work, and our customers, so why not?

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