Perspective

Artificial Intelligence in Healthcare Sector

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ABOUT THE STUDY

The main aim of Artificial Intelligence (AI) is to replicate human cognitive functions. It's causing a paradigm change in healthcare, thanks to the growing availability of healthcare data and the rapid advancement of analytics tools. We take a look at the present state of AI applications in healthcare and speculate on their future. AI may be applied to a wide range of healthcare data sets (structured and unstructured). Machine learning methods for structured data, such as the traditional support vector machine and neural network, as well as current deep learning, and natural language processing for unstructured data, are all popular AI approaches. Cancer, neurology, and cardiology are three major illness areas that employ AI techniques.

Recently, AI approaches have made huge waves in the healthcare industry, sparking a heated debate on whether AI doctors would someday replace human doctors. Human physicians, we believe, will not be replaced by computers in the near future, but AI may certainly help physicians make better clinical judgments or even replace human judgement in certain areas of healthcare (eg, radiology). The recent effective uses of AI in healthcare have been made feasible by the rising availability of healthcare data and the quick development of big data analysis methodologies. Powerful AI algorithms may reveal clinically important information hidden in vast amounts of data, which can aid clinical decision making when guided by relevant clinical queries.

Disease detection and treatment have been at the center of Artificial Intelligence (AI) in healthcare for the past 50 years. Early rule-based systems had the ability to diagnose and treat disease properly, but they were not widely adopted in clinical practise. They were no better at diagnosing than humans, and their integration with clinical workflows and health record systems was less than optimal. Using Artificial Intelligence in healthcare for diagnostic and treatment plans, whether rules-based or algorithmic, can be challenging to integrate with clinical processes and EHR systems. When compared to the accuracy of proposals, integration concerns have been a higher impediment to mainstream use of AI in healthcare.

Medical software manufacturers' AI and healthcare capabilities for diagnosis and treatment are often stand-alone and focus on a single area of care. Some EHR software providers are starting to include limited AI-based healthcare analytics functionalities into their product offerings, although they are still in the early stages. To fully benefit from the use of artificial intelligence in healthcare with a stand-alone EHR system, providers must either undertake significant integration projects themselves or rely on third-party suppliers with AI capabilities who can interface with their EHR.

CONCLUSION

The most difficult hurdle for AI in healthcare is assuring its acceptance in daily clinical practise, not whether the technologies will be powerful enough to be useful. Clinicians may eventually gravitate toward activities that demand specialized human abilities, such as those that require the highest degree of cognitive function. Features in artificial intelligence models often have value to human observers, deciphering the model's output without adequate interpretation can be challenging.

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