

Artificial Intelligence – Futuristic Pediatric Healthcare

Quality, affordability and accessibility in healthcare services are the three biggest challenges faced by Indian population. A recent report ranks India at 145th place out of 195 countries on the basis of healthcare access and quality index [1]. As majority of patients do not approach a physician in the initial stages, their disease is usually diagnosed when it has reached an advanced stage. This results in increased the cost of treatment, and also reduces the likelihood of recovery [2]. Early detection of disease followed by holistic management can help in prevention of such diseases. Artificial Intelligence (AI) can be useful in developing cost-effective and easily accessible digital tools for pediatricians in identifying diseases in their early stages.

AI comprises of highly capable softwares with ability to do jobs that need human intelligence like thinking, learning and decision-making. These features can be used to build prediction models to diagnose the diseases in the early stages. The performance of such prediction models is evaluated in terms of accuracy, precision and f-measure [3]. Once the performance of the model is acceptable, it is then hosted on the public domain, which can be easily accessed by the pediatrician through internet. Once the vital data attributes of the patient are fed in the prediction system, a risk score is generated. A patient with a high-risk score shall be instructed by the medical practitioner to consult the specialist so that the treatment can be started timely.

Thus, AI ensures a cost-effective way of diagnosing the diseases in an early stage, and can help greatly in reducing medical complications in diseases like diabetes [4]. Though India has adopted electronic health record (EHR) policy, there is no uniformity of interpretation of digitized records. Also, there are huge concerns on privacy and security of data. Stakeholders should resolve these issues as early as possible so that AI-enabled healthcare facilities are made available to all. Development of AI research skills shall be a great step to provide a healthy future to every child. Indian Academy of Pediatrics can play an important and big role in this regard.

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