

Is Pakistan ready to implement Artificial Intelligence?

Hamna Tariq, Areeba Sajid

Madam, The phrase "artificial intelligence" (AI) refers to the capacity of computers to accomplish activities that humans can typically perform by utilising an Artificial Neural Network (ANN).¹ The Artificial intelligence has become an exceptionally desirable analytical tool in medicine due to its ability to generalise, handle imprecise information, analyse non-linear data, and learn from historical precedents.² According to Tata Consultancy Services Global Trends Study focussing on artificial intelligence and its impact on the healthcare industry, 86% of healthcare companies use AI, indicating its significance in improving healthcare.³ AI is employed everywhere, ensuring accuracy and speed in every aspect of a patient's diagnosis to their prognosis and treatment, revolutionising medicine.⁴

Despite all the benefits of AI, multiple factors need to be kept in mind before it can be successfully applied. AI works on software that is designed in accordance with data sets. If the data used in programming is not diverse, it will inevitably result in prejudice worsening the discriminatory outcomes in healthcare. There are numerous examples of AI being biased. For example, gender discrimination was a problem with facial recognition algorithms developed by Microsoft, IBM, and Face++; these AI systems were better at identifying the gender of white males than those with a darker complexion.⁵ When an advanced company like Amazon faces such issues, do we think a developing country like Pakistan will be equipped to successfully implement AI in a vast field like medicine? In Pakistan, women are typically responsible for the care of the home and are restricted in their capacity to travel alone and prioritise the health of their male family members.⁶ So will women be able to contribute their confidential information for AI data sets while they are confined to their houses? This could result in data that is weighted towards men.⁶

Conducting surveys is a crucial part of data collection.⁷ We must be cognizant that not all of Pakistan is accessible and that people there have a variety of objections and obstinate attitudes.⁷ The most recent COVID-19 outbreak

Second Year MBBS Student, Dow Medical College, Dow University of Health Sciences, Karachi, Pakistan.

Correspondence: : Areeba Sajid. e-mail: areebasajid28@gmail.com
ORCID ID. : 0009-0000-1210-9650

was the ideal illustration of their ignorant behaviour.⁷ This demonstrates how unlikely it is to obtain data from the Pakistani population, which means only limited data can be collected. Since AI data sets heavily rely on Volume, variety and velocity so it is natural for AI not to prevail in Pakistan.⁷ Not only that, but the expense of AI will always be a barrier to its adoption in Pakistani medicine.

Healthcare is a complex field which requires AI with a high level of intelligence and precision alongside data scientists and engineers who are competent in their jobs. Pakistan, at present, is not equipped with trained professionals well versed with technology.

Poor healthcare delivery infrastructure, a high disease burden, and a dearth of medical professionals with the necessary training are problems in developing countries like Pakistan which, at present, is not equipped with trained professionals who know how to develop and train AI to carry out precisely defined tasks. The issue of whether Pakistan has the resources to implement AI at a national level is raised.

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