Collaboration Required to Achieve Unbiased AI in Healthcare

In a recently published perspective in npj Digital Medicine, a team of researchers from Duke-National University Singapore Medical School concluded that achieving fair AI in healthcare necessitates collaboration among experts from various disciplines. The persistent concern regarding bias looms large, highlighting the need for careful consideration despite the significant potential that AI holds for delivering healthcare insights.

A fair model is anticipated to demonstrate consistent effectiveness across subgroups including age, gender and race. Nevertheless, variations in performance stem from valid clinical reasons and may not necessarily indicate bias or unfairness.

Recognising factors such as race, gender, etc., and adjusting the AI algorithm or its application to ensure that more vulnerable groups receive the care they need is likely a more pragmatic approach for clinical AI.

The conflict lies in choosing the most suitable metrics to measure model fairness, and unfortunately trade-offs are inevitable. The researchers recommended evaluating which patient attributes are deemed "sensitive" for each AI application. Clinicians can play a crucial role in this process by providing additional context and assess which variables indicate systemic biases or reflect biological differences. Essentially, they guide models towards equitable decisions.

Despite considerable progress in fair AI methodologies, translating them into clinical practice remains challenging, primarily due to the intricate nature of healthcare involving biological, ethical, and social considerations.

Co-author Associate Professor Daniel Ting, said, "In order to advance AI practices to benefit patient care, clinicians, AI and industry experts need to work together and take active steps towards addressing fairness in AI".

The paper reflects the commitments to develop AI that empowers clinicians with reliable insights, enabling the delivery of high-quality and equitable care enhanced by technology.

Senior co-author Professor Marcus Ong , said, "Pursuing equitable and unbiased AI to improve healthcare will require open, cross-disciplinary dialogues".

Source: npj Digital Medicine

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