

AI MAY PREDICT ALZHEIMER'S DISEASE 5 YEARS IN ADVANCE

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The methodology could help lead people in the right direction, say scientists.

Scientists — including one of Indian origin — have created an artificial intelligence (AI) algorithm that can accurately predict whether a person's cognitive decline will lead to Alzheimer's disease in the next five years.

Researchers from the University of Toronto in Canada designed an algorithm that learns signatures from magnetic resonance imaging (MRI), genetics, and clinical data. According to the study published in *PLOS Computational Biology*, the algorithm can help predict whether an individual's cognitive faculties are likely to deteriorate towards Alzheimer's in the next five years.

“At the moment, there are limited ways to treat Alzheimer's and the best evidence we have is for prevention. Our methodology could have implications as a ‘doctor's assistant’ that would help stream people onto the right pathway for treatment,” said Mallar Chakravarty, an assistant professor in McGill University.

For example, one could even initiate lifestyle changes that may delay the beginning stages of Alzheimer's or even prevent it altogether,” said Chakravarty.

The researchers trained their algorithms using data from more than 800 people ranging from normal healthy seniors to those experiencing mild cognitive impairment, and Alzheimer's disease patients.

“We are currently working on testing the accuracy of predictions using new data. It will help us to refine predictions and determine if we can predict even farther into the future,” said Chakravarty.

With more data, the scientists would be able to better identify those in the population at greatest risk for cognitive decline leading to Alzheimer's.

Worldwide, around 50million people have dementia and the total number is projected to reach 82 million in 2030 and 152 in 2050, according to the World Health Organization.

Alzheimer's disease, the most common form of dementia, may contribute to 60-70 per cent of cases. Presently, there is no truly effective treatment for this disease.

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