

IBM Research to use ML for detecting Alzheimer's

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A research team led by Dr Ben Goudey at IBM Research – Australia is using machine learning (ML) to identify a set of proteins in blood that can predict the concentration of amyloid-beta in spinal fluid.

Recent research has shown that a biological marker associated with the disease, a peptide called amyloid-beta, changes long before any memory-related issues are apparent. Examining the concentration of the peptide in an individual's spinal fluid provides an indication of risk decades before any memory related issues occur .

Unfortunately, accessing spinal fluid is highly invasive, requires an anaesthetist and is expensive to conduct on large segments of the population. Hence, there is a strong effort in the research community to develop a less invasive test, such as a blood test, that can yield information about Alzheimer's disease risk.

The models built could one day help clinicians to predict this risk with an accuracy of up to 77 percent. While the test is still in the early phases of research, it could potentially help improve the selection of individuals for drug trials: individuals with mild cognitive impairment who were predicted to have an abnormal concentration of amyloid in their spinal fluid were found to be 2.5 times more likely to develop Alzheimer's disease.