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Brazilian scientists devise AI based approach for pathogen detection

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A team of scientists from the University of Campinas (UNICAMP) in Brazil has developed a new platform based on artificial intelligence (AI) for the diagnosis of various pathogenic diseases. The approach uses a combination of AI algorithm and mass spectrometry to accurately identify metabolic markers in patient blood samples.

Mass spectrometry can detect numerous molecules present in blood serum, while the algorithm can pin-point patterns related to viral, fungal, bacterial and genetic diseases. The team built the platform using Zika virus infection as a model and observed more than 95 per cent accuracy for diagnosis of this condition.

It is expected that the algorithm can examine large data volumes for specific patterns that can help in classification, prediction, decision making and modelling. Currently, the team is assessing the platform for the diagnosis of fungal systemic diseases, with plans to extend the evaluation to bacterial and genetic conditions.