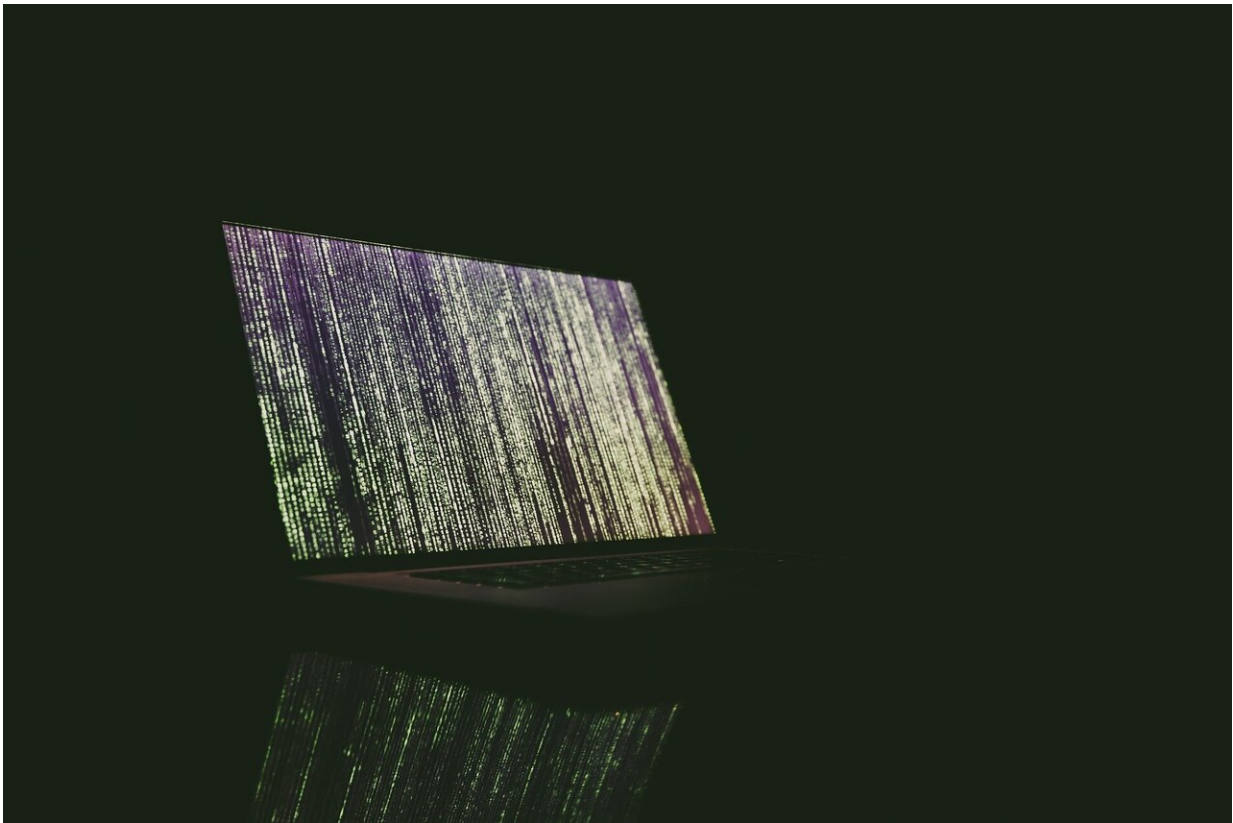


Scientists identify workflow algorithm to predict psychosis

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Scientists from the Max Planck Institute of Psychiatry, led by Nikolaos Koutsouleris, combined psychiatric assessments with machine-learning models that analyze clinical and biological data. Although psychiatrists

make very accurate predictions about positive disease outcomes, they might underestimate the frequency of adverse cases that lead to relapses. The algorithmic pattern recognition helps physicians to better predict the course of disease.

The results of the study show that it is the combination of artificial and human intelligence that optimizes the prediction of mental illness. "This algorithm enables us to improve the prevention of psychosis, especially in [young patients](#) at high risk or with emerging depression, and to intervene in a more targeted and well-timed manner," explains Koutsouleris.

The algorithm does not replace treatment by [medical professionals](#); rather, it assists decision making and provides recommendations as to whether to conduct further examinations on an individual basis. Using the [algorithm](#), practitioners can identify at an early stage the patients that need therapeutic intervention and those who do not. "The results of our study could help drive a reciprocal and interactive process of clinical validation and improve prognostic tools in real-world screening services," Koutsouleris summarizes.

The study is published in *JAMA Psychiatry*.

More information: Nikolaos Koutsouleris et al, Multimodal Machine Learning Workflows for Prediction of Psychosis in Patients With Clinical High-Risk Syndromes and Recent-Onset Depression, *JAMA Psychiatry* (2020). [DOI: 10.1001/jamapsychiatry.2020.3604](https://doi.org/10.1001/jamapsychiatry.2020.3604)

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