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## **Predictive monitoring using machine learning algorithms and a real-life example on schizophrenia**

*Wednesday, June 29, 2022 11:00 AM (20 minutes)*

Predictive process monitoring aims to produce early warnings of unwanted events. We consider the use of the machine learning method extreme gradient boosting as the forecasting model in predictive monitoring. A tuning algorithm is proposed as the signaling method to produce a required false alarm rate. We demonstrate the procedure using a unique data set on mental health in the Netherlands. The goal of this application is to support healthcare workers in identifying the risk of a mental health crisis in people diagnosed with schizophrenia. The procedure we outline offers promising results and a novel approach to predictive monitoring.

### **Keywords**

Predictive Process Monitoring; Tuning Algorithm; Mental Health

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