
Self-Calibrating Models: Recent Advances in Understanding Normal Behaviour to Identify Anomalies and Improve Customer Outcomes

Supervised models work well most of the time, when the behaviour being targeted in the future is similar to that seen in the past. But what happens when it's not? What about when you are battling wits with multiple fraudsters, all spending their time inventing new ways to steal money from you and your customers? One key part of your toolkit should be self-calibrating models.

Self-calibrating models are able to learn patterns and variances online as the data is streamed. Furthermore, they can be used for outlier detection, which is often a strong proxy for financial crime events. Multi-layered self-calibrating (MLSC) model technology, developed and patented by FICO, combines the benefits of self-calibration with behavioural analytics methods to produce an anomaly score indicating, for example, the risk of fraud.

In fact, understanding what constitutes normal behaviour for a customer, account, ATM, or indeed any entity, allows anomalous behaviour to be identified and categorised. Using machine learning to accelerate this process allows this to happen in real-time, enabling mitigating action to be taken against fraudulent activity in an appropriate time frame, improving customer treatments while reducing adverse outcomes, including fraud losses and false positives.

Financial crime is an area where there are multiple obvious use cases for this technology. Indeed, any data-rich, streaming analytics scenario where there is an ever-changing threat, and where we are searching for better customer outcomes, could benefit from this approach. There are also potential applications in other areas such as manufacturing or telecommunications.

This session will cover the concepts of FICO's patented profiling and Multi-layered Self-Calibrating (MLSC) technology, and an example of its application.