FRAUD IN FINANCIAL SERVICES

Gain a truly adaptive, flexible approach to managing fraud and customer experience in real-time. Catch new fraud attacks at the moment they occur and accept more good business from genuine customers.

Discover how to save costs and maximise revenue with the ARIC™ system.

FEATURESPACE

Executive Summary

Financial Services institutions face challenges from rapidly evolving fraud attacks. As the development of payment devices, mobile platforms and customer demand for 24/7 global access increases, fraudsters inevitably expose the vulnerabilities inherent in rules-based systems. Additionally, Card Not Present fraud is becoming an increasing threat, with online fraud increasing at 20% per year (*Source: UK Cards Association*).

In this dynamic fraud landscape, financial institutions need a modern fraud management solution to catch new fraud types as attacks occur, reduce customer friction and improve business efficiency.

Adaptive Behavioural Analytics

Featurespace's unique machine learning solution monitors the real-time behaviour of each individual customer and merchant, detecting anomalies to spot new fraud attacks at the moment they occur.

Founded on applications of Bayesian maths, Adaptive Behavioural Analytics uses cutting-edge research in noise reduction and signal processing to understand the significance of individual behavioural changes.

ARIC™ engine

Delivered via the ARIC™ engine (Adaptive, Real-time, Individual, Change identification), Featurespace's approach spots new fraud attacks in real-time, while accepting more genuine transactions to dramatically reduce false positives. The system is self-learning, adapting to new fraud types automatically so that the models do not degrade.

Catch new fraud attacks, reduce false positives

Organisations in Financial Services, Gaming and Insurance have seen dramatic improvements, including:

- 70% reduction in genuine transactions declined
- 40% more fraud prevented
- 80% reduction in Card Not Present fraud

Featurespace's system is tried, tested and delivered, enabling organisations to make informed business risk decisions. Gain a truly adaptive, flexible approach to managing fraud and customer experience in real-time. Implementing the ARIC™ system to save costs and maximise revenue growth by reducing false positives and improving operational efficiencies.

Key challenges facing the Financial Services Sector

The Financial Services sector is constantly under threat from new, unknown types of fraud attacks. Security breaches are increasing in size, velocity and sophistication. It is becoming increasingly difficult to predict new attacks and fraudsters have learnt to exploit the vulnerabilities inherent in rules-based fraud detection systems. Financial Services institutions can no longer rely on annual data refreshment or manual review to anticipate rapidly-changing fraud attacks.

Online fraud is growing 20% year-on-year (*UK Cards Association, 2014*) and institutions continue to feel the cost of blocking legitimate customer transactions – to both revenue and customer experience. Companies in the Financial Services sector are turning to automated, machine learning solutions to combat problems with outdated, inflexible, rules-based fraud systems.

Faced with these challenges, Financial Services institutions need a cutting-edge fraud system, which can cope with a complex, real-time, multi-layered approach to fraud prevention and customer management. At the 'moment of truth' of a suspected fraud event, it is vital that Financial Service providers not only prevent fraud, but provide a frictionless, secure and personalised customer experience.

A modern solution: Adaptive Behavioural Analytics

Adaptive Behavioural Analytics meets these challenges head on – monitoring individual customers and merchants in real-time, from any device, to detect anomalies in behaviour. This approach builds a statistical profile for each individual to spot new fraud attacks at the moment they occur, while accepting more good business from genuine customers. Fraud is caught quickly, while clients also typically see over 70% reduction in false positives.

Featurespace's unique machine learning approach automatically detects new types of fraud attack, enabling financial institutions to make informed business risk decisions. The approach is delivered via the ARIC™ engine which is self-learning - continually adapting to new fraud types so that the models do not degrade. ARIC™ is the only fraud management solution which enables organisations to maximise revenue growth, limit headcount and provide a frictionless, personalised experience to customers.

What is different about Featurespace?

Featurespace delivers a unique, real-time, machine learning approach to modern fraud detection, identifying behavioural anomalies to spot new fraud attacks at the moment they occur. There is no need to imagine where the next fraud attack will come from – customers can be protected and new threats can be caught before accounts are compromised.

Fraud prediction without assumptions: the new normal

Featurespace is part of the maths revolution occurring at leading research universities – including Stamford, MIT, and Cambridge. Founded on applications of Bayesian inference, the ARIC™ engine uses the latest research in noise reduction and signal processing, designed specifically to replicate the way that humans observe suspicious behaviour in a truly observational manner.

The ARIC™ engine is an adaptive machine learning system, which combines modern processing power with a behavioural analytics engine to spot behavioural anomalies in real-time. Instead of starting from point-in-time data assuming what fraud looks like, the ARIC™ engine uses times-series data to learn what normal behaviour is for each individual entity (for example, customers or merchants). At the same time, ARIC™ understands the context of every wider cohort group. The proprietary models within the ARIC™ engine analyse complex, variable input streams of both transactional and non-monetary data (for example, online account management activity). ARIC™ is self-learning, automatically adapting its fraud definitions with each new event or transaction, so that the models do not degrade.

The ARIC™ engine uses this analysis to build statistical profiles for every customer. The probability of an anomaly being indicative of fraud is output as a risk score, which is used to set alert thresholds.

This solution also provides a unique technical approach to false positives. When anomalous changes occur, instead of assuming the customer is ‘guilty until proven innocent’, the ARIC™ system understands the wider context of positive and negative behaviours. It is therefore able to accept more genuine transactions, minimising inconvenience to legitimate customers. This revolutionises how fraud affects the P&L line – false positives no longer have to be the most significant cost of fraud.

The Featurespace approach to fraud management combines statistical, mathematical expertise with an adaptive mind-set, reducing negative impact at the ‘moment of truth’ of a fraud event while keeping pace with evolving types of fraud.

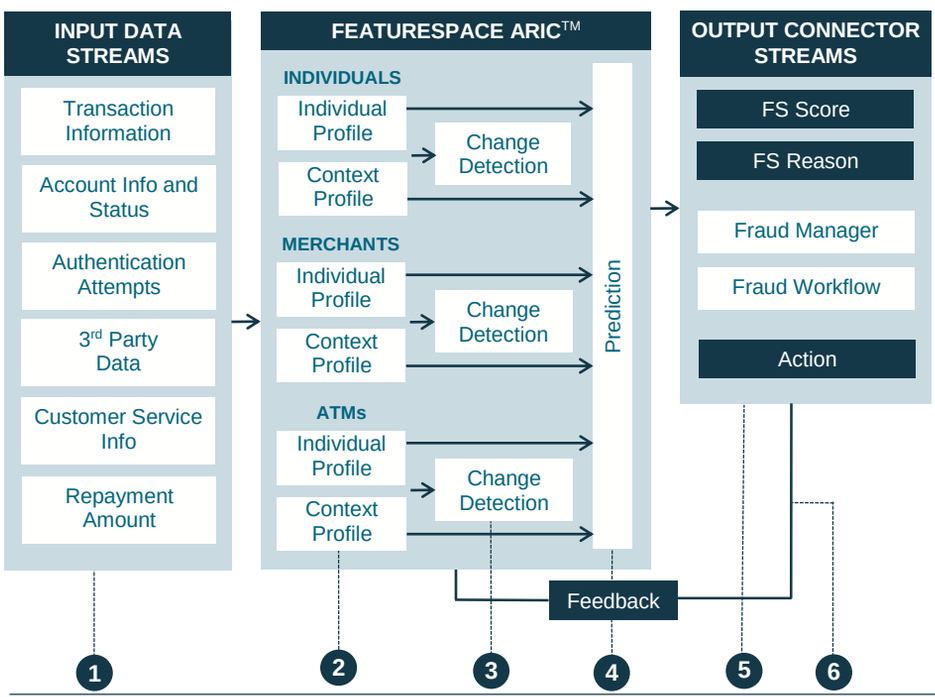
Featurespace ARIC™ Engine

ADAPTIVE
ARIC™ employs self-learning models, tracking shifts in both individual and group behaviour to ensure the most up-to-date analysis.

REAL-TIME
Data is processed, models are developed, updated and adapted, predictions are delivered and downstream alerts are forwarded (e.g. to CRM systems), all in real-time.

INDIVIDUAL
Captures behaviour of high-level groups, intermediate segments and individual customers.

CHANGE-IDENTIFICATION
Individuals, extreme activity, general trends and transient opportunities are automatically detected as they adapt and change.



1 DATA STREAMS
Multiple internal and external sources of data are processed.

2 FEATURE EXTRACTION
Behavioural features are extracted from signals and statistical profiles are continually updated to reflect the most recent observations at individual and group levels.

3 ANOMALY DETECTION
Any anomalistic change in behaviour is spotted in real-time.

4 PREDICTIONS
Predictions for individuals are made based on a propensity to act: for example, to churn, to commit fraud, or to purchase a product.

5 ACTION WORKFLOW
Downstream systems (e.g. CRM, or Featurespace ARIC Fraud Manager) are fed with real-time information for appropriate action to be taken.

6 FEEDBACK
Results are fed back into ARIC™, enabling self-learning and the continuous updating of individual and context profiles in real-time.

Let your fraud protection and customer experience reach its full potential

Featurespace's ARIC Fraud Manager is protecting financial institutions from fraud, whilst increasing their customer acceptance:

- **Spot new fraud attacks as they occur:** prevent more fraud, more quickly by detecting anomalies as they happen to spot and block new types of fraud.

- **Over 70% reduction in false positives:** clients typically see over 70% reduction in genuine transactions declined (false positive rate. False positives are one of the highest costs of fraud, causing increased customer management and loss of customer confidence and future revenues. ARIC Fraud Manager copes with the high volume of daily new fraud threats, whilst continuing to accept legitimate customers.

- **Improve operational efficiencies – no model degradation:** cut manual labour costs by reducing manual review tasks. ARIC™ is self-learning so the models do not degrade. Organisations have seen up to 50% reduction in analyst headcount.

In addition to these key benefits, ARIC Fraud Manager also enables organisations to:

- **Identify fraud across any channel or device:** individual behavioural profiles are built from data across multiple channels (for example, digital and branches) and devices (such as mobile, apps, desktop) to manage customer risk on a single platform.

- **Rapidly deploy a customised system:** ARIC Fraud Manager is fully flexible to each client's specific business needs, intelligently processing multiple, diverse, data streams across the entire payments process. There is no reliance on consortium data.

- **Protect upstream activity, as well as transactional data:** ARIC Fraud Manager builds profiles from both transactional and non-monetary data (e.g. online account activity) – increasingly important in the shift to online banking and mobile devices.

- **Protect from internal and external fraud:** many attacks start from insider knowledge and access. Featurespace's approach easily monitors employees as well as customers across all channels.

- **Optimise the end-to-end customer journey:** fraud prevention is just the first step – analysing both positive and negative behaviours enables organisations to create strategic, targeted communications with customers, maximising revenue growth.

Real-world customer results

Companies in financial services, gaming, insurance and retail are using the ARIC™ system to detect and manage fraud while providing a more targeted customer experience.

They have gained insights that resulted in dramatic improvements, including:

- **Day-one identification of new fraud attacks**, even during days with reduced headcount (e.g. bank holidays)
- **Over 70% reduction in false positives**
- **80% reduction in Card Not Present fraud**
- **50% reduction in fraud analyst headcount**

Why not embrace a solution which prevents fraud, protects brand reputation and provides customers with a frictionless, secure, personalised experience?

Featurespace has the only real-time, machine learning solution which can spot new fraud attacks as they occur, while also accepting more good business. Gain a truly adaptive, flexible approach to managing fraud and customer experience in real-time, with no model degradation.

Find out more

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