FEATURE SPACE

OUTSMART RISK

Only the Adaptive Survive

ARIC™ Risk Hub

Predict and prevent fraud and financial crime

Predict and prevent fraud and financial crime with ARIC™

Featurespace has built ARIC Risk Hub, a holistic financial crime solution, by working as a technology partner to combat fraud and money laundering.

Financial crime costs the global economy $2.4 trillion annually (Refinitiv). The societal impact includes terrorist financing, drug and people trafficking, government corruption and arms' funding. Criminals are technically sophisticated - obtaining illegitimate funds from fraud and laundering them through the financial system.

Financial institutions are in a front-line battle to report suspicious activity to regulators and protect their customers. To survive - and thrive - means going beyond rules and static models to take advantage of technology which can manage converging data sets.

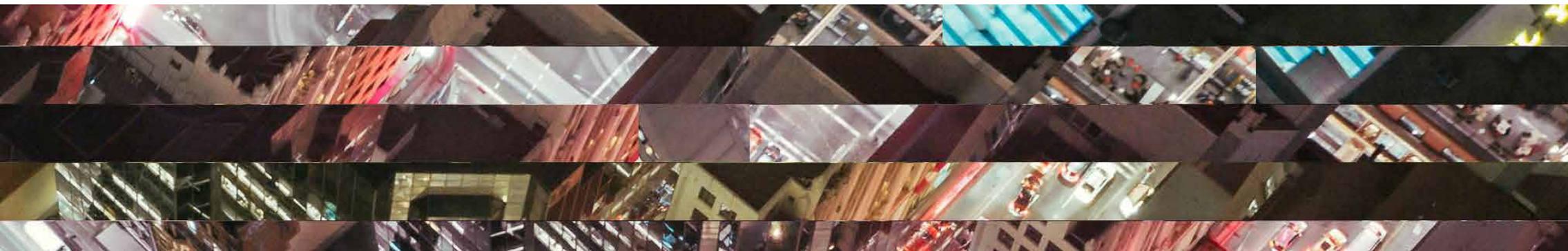
Predict and prevent fraud and financial crime. 7 Solutions from 1 Risk Hub.

ARIC Risk Hub builds individual profiles by monitoring good behavior and spotting suspicious activity - enabling fraud and Anti-Money Laundering analysts to prioritize alerts and detect suspicious activity in real-time, with explainable anomaly detection.

Using the power of Featurespace's invention - award-winning Adaptive Behavioral Analytics - risk teams have never been better placed to fight financial crime.

Welcome to ARIC Risk Hub

Leverage the power of machine learning and Adaptive Behavioral Analytics



ARIC Risk Hub solved the hardest problem faced by the financial services industry, by using real-time transaction monitoring to catch 75% of fraud across types including payments, card and application fraud.

By building individual statistical profiles and spotting anomalies, ARIC simultaneously identifies suspicious activity and reduces genuine activity blocked, typically by 75%.

The AML industry challenged Featurespace to apply this approach to the tricky problem of transaction monitoring for AML.

ARIC Risk Hub proved successful - spotting 133% of existing suspicious activity while reducing overall alerts.

ARIC is fuelled by industry-leading technology. It understands normal, 'good' behavior to discover anomalies that may indicate fraud and money laundering.

Harnessing machine learning and Adaptive Behavioral Analytics, ARIC Risk Hub assesses complex data sets to control and understand risk exposure. At the same time, ARIC minimizes false positives and prioritizes all alerts, enabling investigators to focus on the alerts that need the most urgent attention.

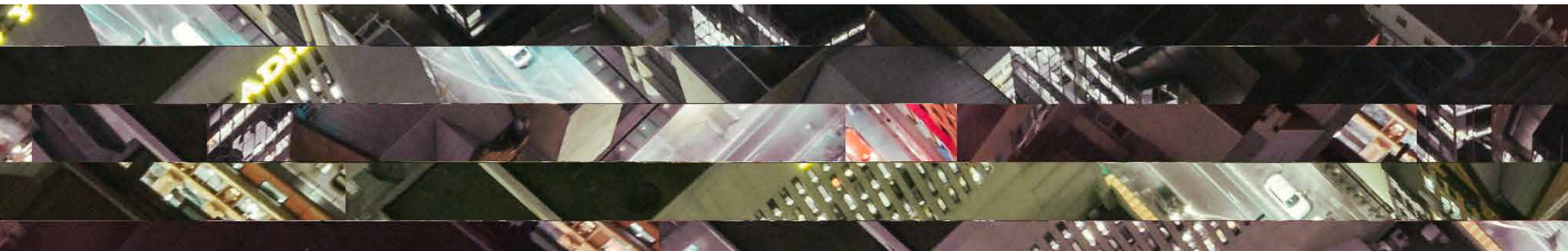
With ARIC Risk Hub

- Predict and prevent more financial crime
- Reduce cost of investigations
- Increase efficiency
- Report with explainable analytics
- Get self-learning models which retune automatically

Spot suspicious activity as it happens

Prioritized alerts for maximum efficiency

Explainable anomaly detection models



Fraud Case Study: Top 25 US Bank

In search of the best fraud solution, this top 25 US Bank chose Featurespace after extensive market research and a successful proof of concept. ARIC was proved as a flexible, reliable solution to solve their business needs.

Challenge

As the largest digital-only bank in the US, and one of the 25 largest banks in the country, this bank was open to new fraud types, such as synthetic ID application fraud.

The bank had a set of rules that screened applications for fraud, but as the business grew the bank recognized that its existing process was stretching operational resources and was not flexible enough to provide effective protection.

The bank's main challenge was handling 87 data feeds that were going into its engine, and the various screens that investigators had to work to review a case.

Results

ARIC was tested on this data set and provided a complete profile of each customer in real-time, using over 80 available data feeds.

Fraud detection improved up to 85% with machine learning algorithms ingesting both batch data and real-time data.

85%
fraud detection rate improvement

1:1.4
false positives ratio

Outcome

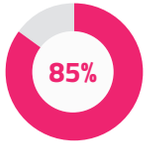
With ARIC Risk Hub, the bank can now view a complete profile of each customer in real-time, using over 80 available data feeds, including:

- Featurespace's proprietary data collectors capturing in-session client behavior on device using Adaptive Behavioral Biometrics
- All customer activities (e.g. account updates, transactions and returns) Third-party providers (e.g. data enrichment and credit scores)
- Risk-score alerts such as log-ins to online banking or new payee set-up in real time
- Improve fraud detection to up to 85% with machine learning algorithms ingesting both batch data and real-time data

Featurespace Solutions

Application Fraud

- Detects fraud even with limited information on the customer
- Very low false positives across all channels and customers



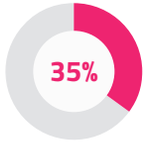
Improvement in fraud detection rate over six months (Top 20 US Bank)

Fraud blocked in real-time (Credit Reference Agency)

Payment Fraud

- Monitors non-plastic payments such as web, mobile and other digital payment methods
- Cross-channel monitoring spots fraud (including pivoting and non-monetary fraud) on many channels

Fraud value detected before a payment



Increase in fraud value detected

Card Fraud

- Monitors plastic transactions, including card-not present, e-commerce and at POS terminals
- Blocks and detects fraud even when third party fraud checks pass
- Benefit being protected from both first party and synthetic ID fraud across all channels and customers

Reduction in genuine tranactions declined

Reduction in genuine tranactions declined (CNP)

Reduction in fraud losses

Anti-Money Laundering (AML)

- Transaction monitoring for anti-money laundering reduces total alerts without missing suspicious activity
- Prioritization allows analysts to save time and focus on the most risky alerts
- Fight financial crime more effectively with reduced cost of investigations and more efficient monitoring

Total reduction in overall alerts

More suspicious activity identified

Prioritize the top 5% of alerts to investigate

Merchant Monitoring

Featurespace's Merchant Monitoring is used worldwide by processors and acquirers to mitigate and manage losses from merchant fraud.

- Merchants are monitored in real time, enabling acquirers to discover new fraud attacks automatically
- Allows the monitoring of various merchant hierarchies or operating lines from a single solution
- ARIC Risk Hub can process any entity connected with a transaction, including device ID and terminal identifier number

Gaming fraud

Featurespace uses Adaptive Behavioral Analytics to identify suspicious behavior in real time to detect and block gaming fraud.

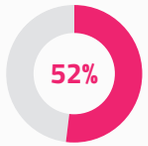
- Players are monitored in real time, flagging and blocking gaming fraud before it happens
- Anomalies are investigated within individual campaigns using risk-centric campaign analytics to confirm, manage and quantify suspicious activity
- ARIC Risk Hub minimizes friction for genuine players by accurately identifying and targeting high risk behavior

ARIC White Label

Provide real-time fraud protection with machine learning to your clients, while opening new revenue streams for your business.

- ARIC White Label uses real-time Adaptive Behavioral Analytics to protect your clients from fraudulent transactions across all payment types and channels
- Multi-tenant configuration of ARIC to serve multiple independent customers
- Set rules across all customers, at a customizable segment level or at an individual merchant level

Our customers see:



Improvement in opperational efficiency

Reduction in genuine transactions declined

New fraudulent transactions blocked

AML Case Study: Tier 1 Global Bank

In search of the best AML solution, this Tier 1 global bank selected Featurespace following a head-to-head challenge to demonstrate the benefits of machine learning coupled with automation.

Challenge

The bank used a rule-based AML transaction monitoring solution. They had a complex data set where it was difficult to spot suspicious activity with rules alone.

The bank's existing solution generated a monthly batch of alerts with a high volume of false positives. Which required manual consolidation and time-consuming investigation, resulting in operational fatigue.

Results

We tested ARIC on this complex data set, comparing the results against the existing solution.

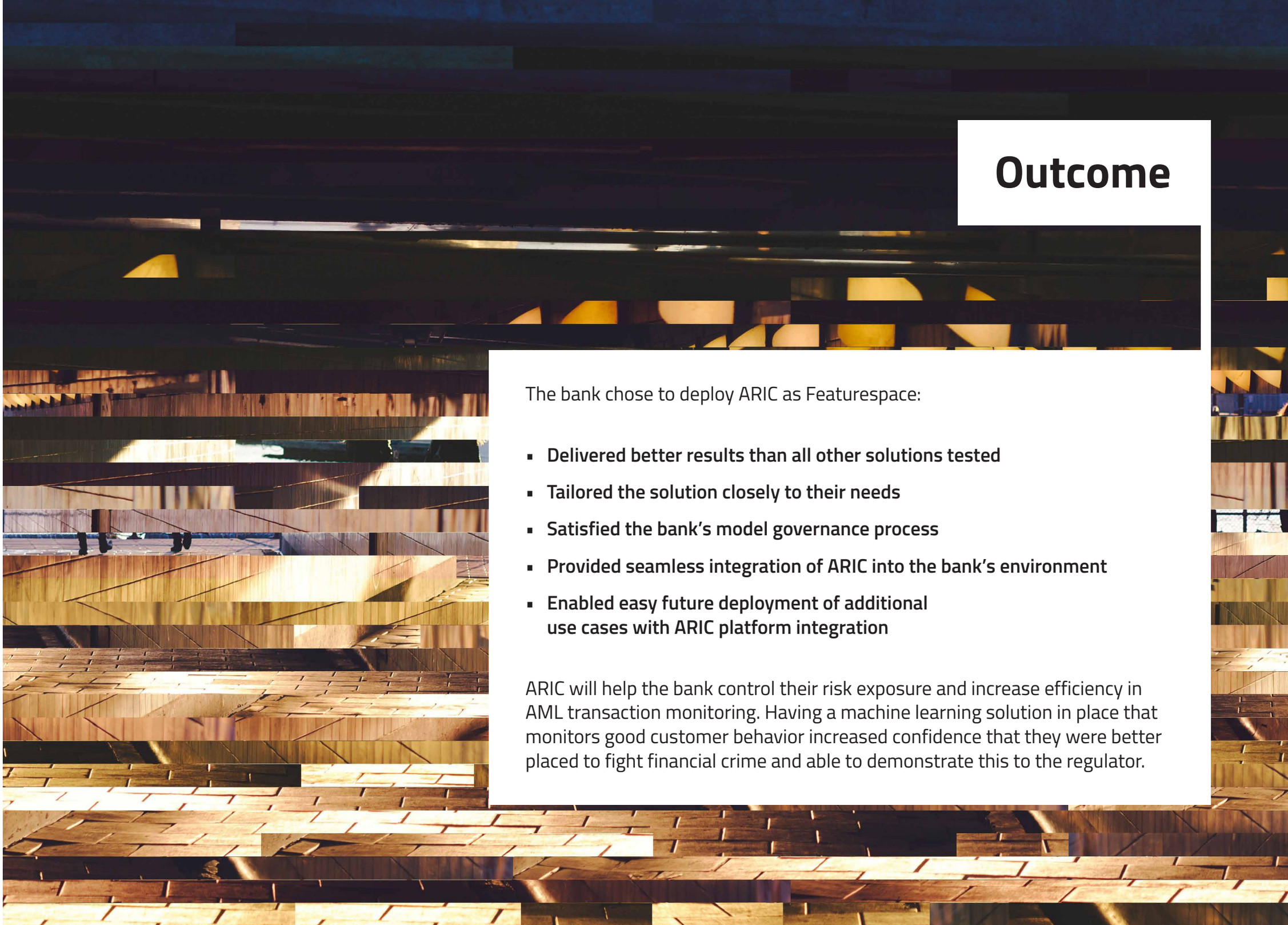
We found that ARIC generated fewer alerts and uncovered a lot more SARs.

One third of SARs were spotted one month earlier than with existing rule-based solution.

12%
Reduction in overall alerts

133%
Existing SARs caught

1/3
of SARs spotted
1 month
earlier than existing system



Outcome

The bank chose to deploy ARIC as Featurespace:

- **Delivered better results than all other solutions tested**
- **Tailored the solution closely to their needs**
- **Satisfied the bank's model governance process**
- **Provided seamless integration of ARIC into the bank's environment**
- **Enabled easy future deployment of additional use cases with ARIC platform integration**

ARIC will help the bank control their risk exposure and increase efficiency in AML transaction monitoring. Having a machine learning solution in place that monitors good customer behavior increased confidence that they were better placed to fight financial crime and able to demonstrate this to the regulator.

Key benefits of ARIC Risk Hub

Adaptive Behavioral Analytics

Identify and stop suspicious activity
Real-time transaction monitoring catches suspicious activity by focusing on 'good' behavior, without generating huge amounts of false alerts to review - reducing genuine activity blocked.

Sophisticated rules engine
Import existing rules and scenarios along with our advanced rules recommendations, based on our extensive experience of preventing fraud and money laundering. In our Sandbox environment, you can test and continue to improve these rules further to get even more accurate results.

Adaptive machine learning models
Market-leading machine learning models use Featurespace's invention, Adaptive Behavioral Analytics, to analyze each individual customer's behavior within the solution. ARIC uses machine learning to continually assess investigators' actions and update individual and peer profiles in real time. These self-learning models become increasingly accurate over time and enable the prediction of entirely new fraud and AML risks.

Network Analysis
With Network Analysis, ARIC captures subtle differences in customer behavior which might suggest an individual account is part of a wider fraud or money laundering ring, enabling it to detect links between suspicious accounts.

Easy-to-explain methodology
Featurespace analytics have a proven track record of passing model governance, making it simple to demonstrate model explainability to regulators.

Deploy models developed in-house
Continue to improve monitoring by writing and importing machine learning models and features within the platform.

Holistic Transaction Monitoring

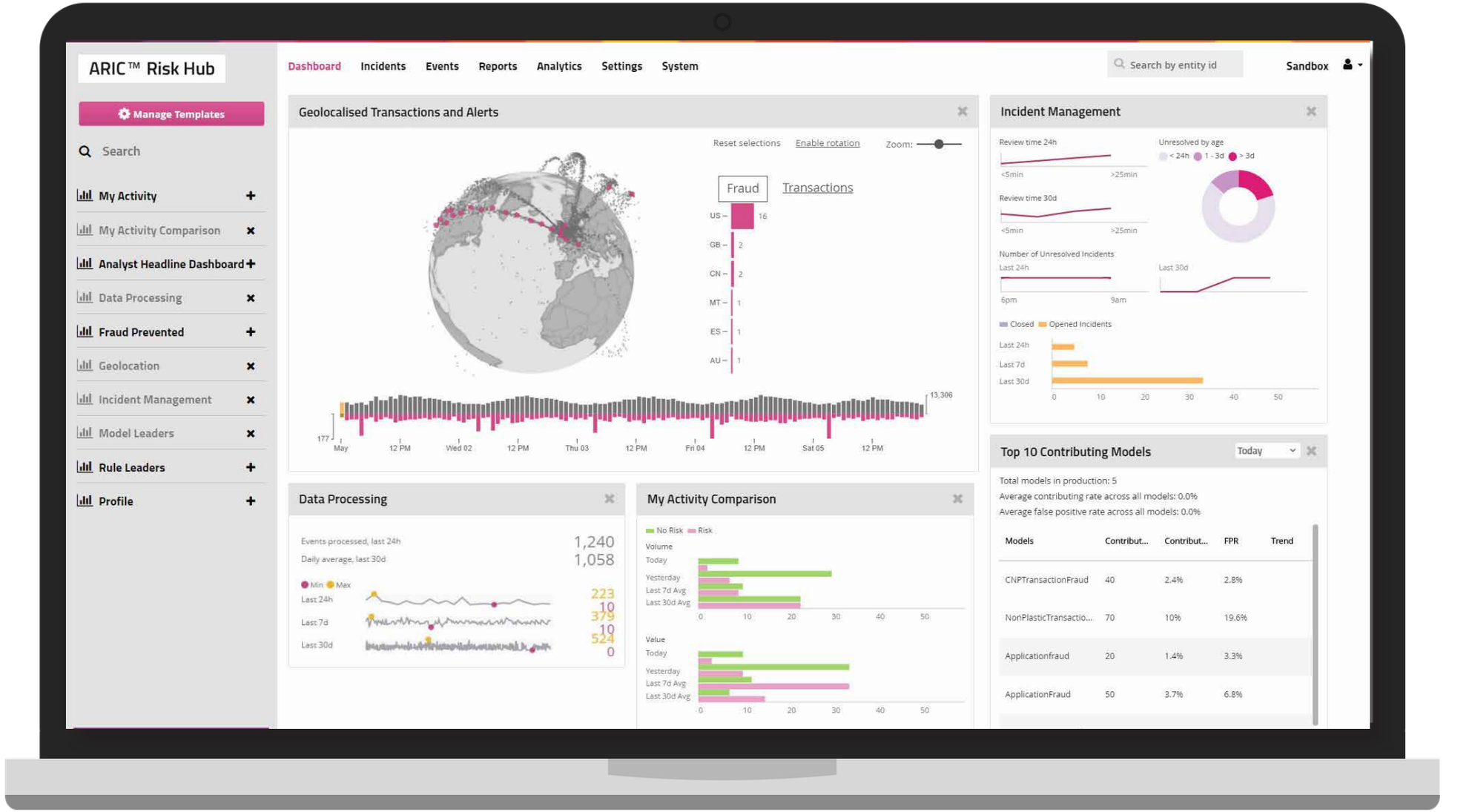
Work on prioritized alerts
Alerts are prioritized based on risk scores and previous action taken by investigators, providing an output of alerts tailored to risk appetite and driving efficiency.

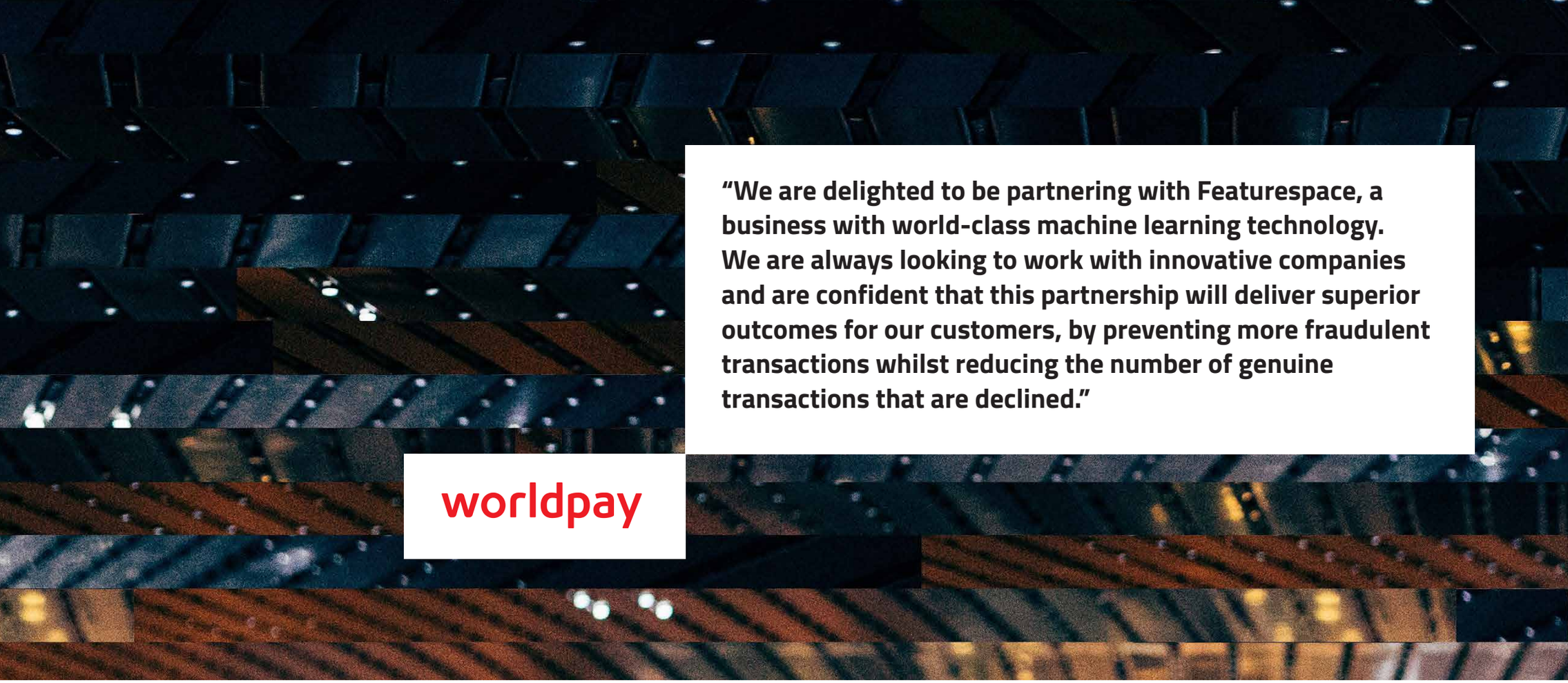
Holistic customer view
ARIC provides a single holistic customer view with Network Analysis, where all transactional and investigative data can be reviewed in one user interface, dramatically improving investigator focus and operational efficiency.

Manage alert workflow
From alert to reporting you can create a case for an investigation and escalate it through its case workflow, attaching any supporting evidence.

Self-learning models retune automatically - or according to your business needs
Action taken by investigators is automatically fed back into ARIC to continually update models and behavior changes and improve future transaction monitoring.

Reporting and dashboards
ARIC comes with a suite of standard reports and flexible dashboards, providing you with all the analytics, investigator and system level management information you need.


ARIC™ Risk Hub
Manage Templates
Search
My Activity
My Activity Comparison
Analyst Headline Dashboard
Data Processing
Fraud Prevented
Geolocation
Incident Management
Model Leaders
Rule Leaders
Profile
Dashboard
Incidents
Events
Reports
Analytics
Settings
System
Search by entity id
Sandbox
Geolocalised Transactions and Alerts
Reset selections
Enable rotation
Zoom:
Fraud
Transactions
US 16
GB 2
CN 2
MT 1
ES 1
AU 1
177
13,306
May
12 PM
Wed 02
12 PM
Thu 03
12 PM
Fri 04
12 PM
Sat 05
12 PM
Incident Management
Review time 24h
<5min
>25min
Review time 30d
<5min
>25min
Unresolved by age
< 24h
1 - 3d
> 3d
Number of Unresolved Incidents
Last 24h
6pm
Last 30d
9am
Closed
Opened Incidents
Last 24h
Last 7d
Last 30d
0
10
20
30
40
50
Data Processing
Events processed, last 24h
1,240
Daily average, last 30d
1,058
Min
Max
Last 24h
223
10
Last 7d
379
10
Last 30d
524
0
My Activity Comparison
No Risk
Risk
Volume
Today
Yesterday
Last 7d Avg
Last 30d Avg
0
10
20
30
40
50
Value
Today
Yesterday
Last 7d Avg
Last 30d Avg
0
10
20
30
40
50
Top 10 Contributing Models
Today
Total models in production: 5
Average contributing rate across all models: 0.0%
Average false positive rate across all models: 0.0%
Models
Contribut...
Contribut...
FPR
Trend
CNPTransactionFraud
40
2.4%
2.8%
NonPlasticTransactio...
70
10%
19.6%
Applicationfraud
20
1.4%
3.3%
ApplicationFraud
50
3.7%
6.8%



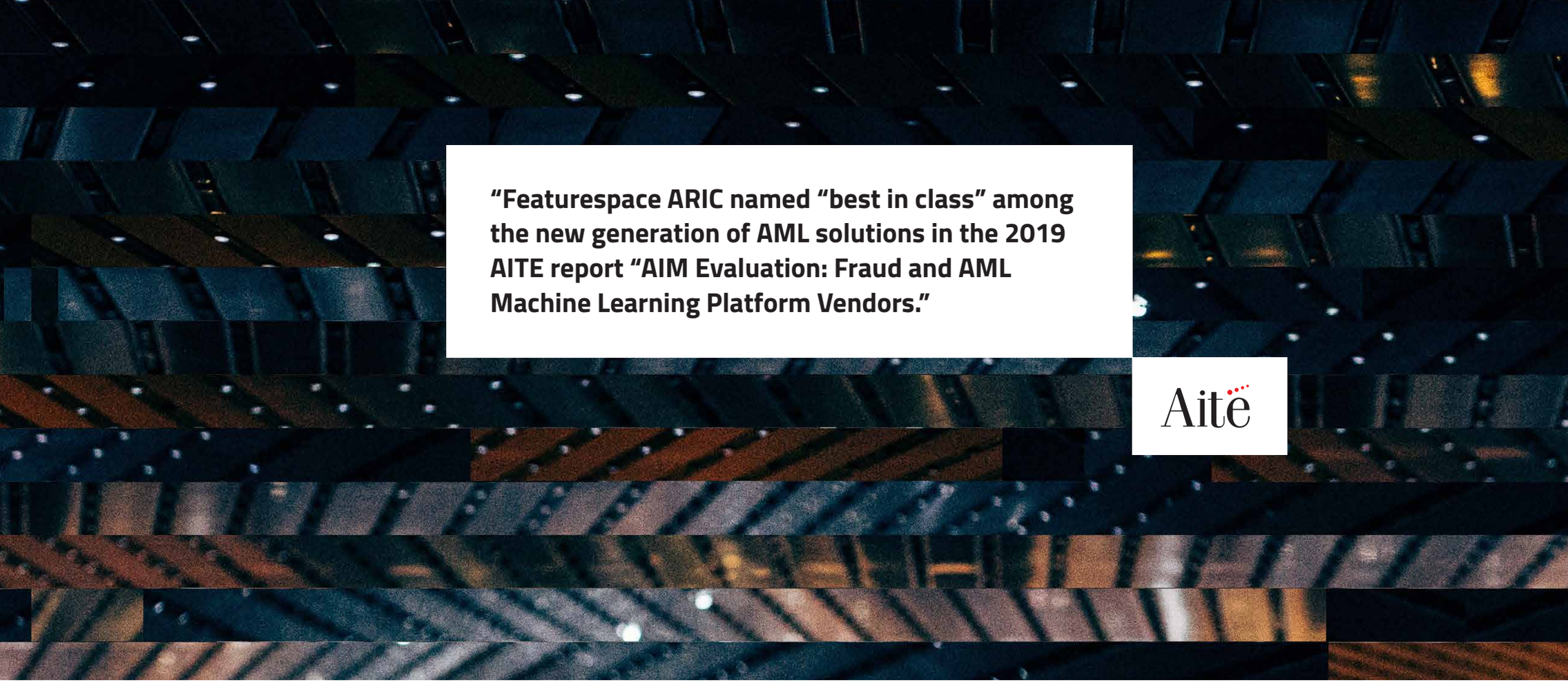
“We are delighted to be partnering with Featurespace, a business with world-class machine learning technology. We are always looking to work with innovative companies and are confident that this partnership will deliver superior outcomes for our customers, by preventing more fraudulent transactions whilst reducing the number of genuine transactions that are declined.”

worldpay

About Featurespace

Born out of 30 years of research at Cambridge University

Trusted by the most respected banks and payments companies in the world



“Featurespace ARIC named “best in class” among the new generation of AML solutions in the 2019 AITE report “AIM Evaluation: Fraud and AML Machine Learning Platform Vendors.”

Aite

World leaders in machine learning for solving risk challenges

Unique real-time machine learning methodology

Multi-award winning platform and best machine learning models

Inventors of Adaptive Behavioral Analytics

Cambridge

Featurespace,
Broers Building,
21 JJ Thomson Avenue,
Cambridge, CB3 0FA
United Kingdom

Atlanta, GA

Featurespace,
600 Peachtree Street NE,
Suite 420,
Atlanta, Georgia, 30308

London, UK

Featurespace,
110 Bishopsgate,
London, EC2N 4AY
United Kingdom