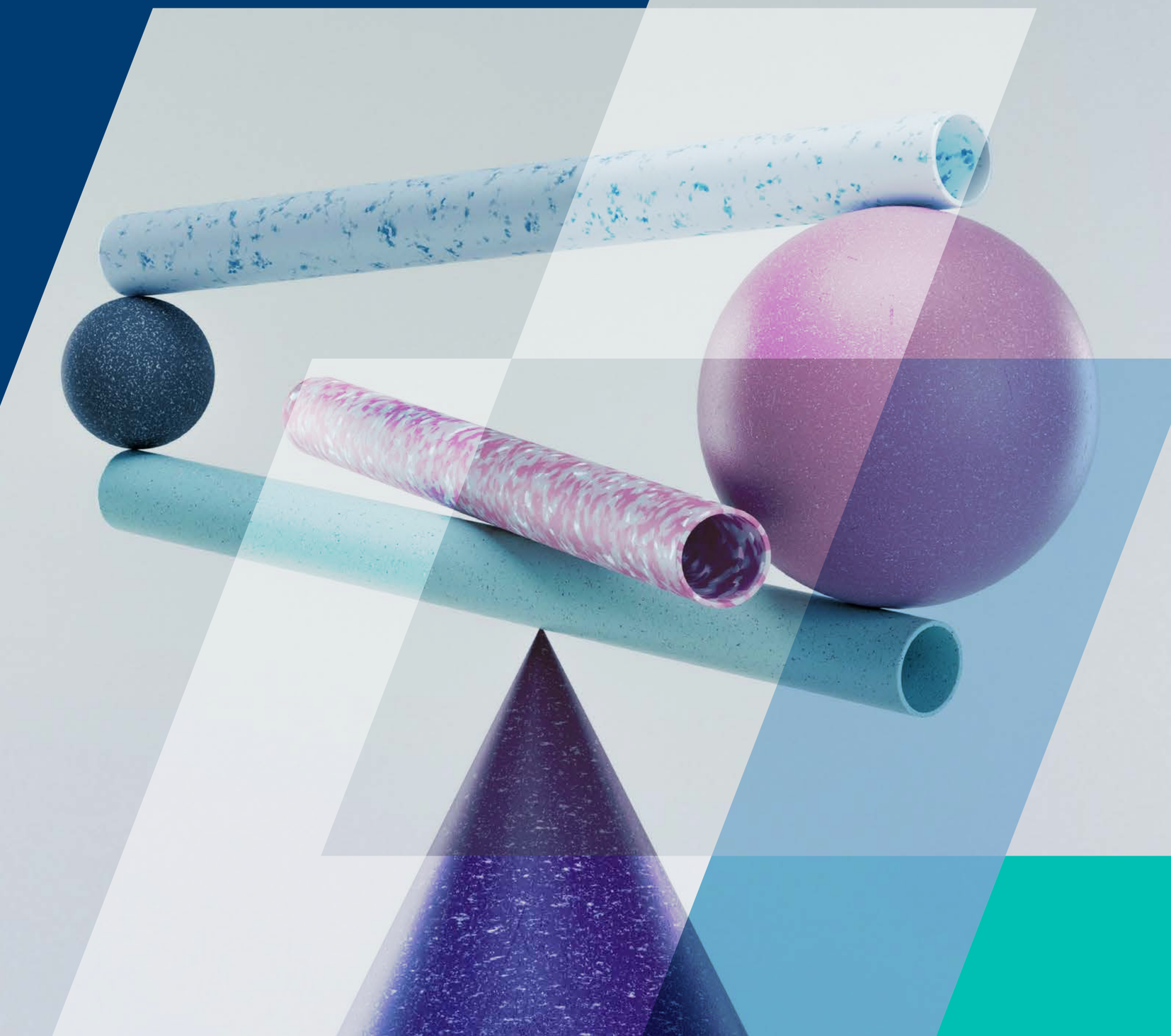
FCA Innovation
Digital Sandbox

FCA FINANCIAL CONDUCT AUTHORITY

# 2024 FCA Digital Sandbox Spring Expo

Projects Overview



# Welcome to the 2024 FCA Digital Sandbox Spring Expo

Digital Sandbox

Since its inception in August 2023, the Permanent Digital Sandbox service is designed to foster experimentation and drive advancements in financial technology.

Having Digital Sandbox as one of the service offerings alongside Regulatory Sandbox, Innovation Pathways and TechSprints, the FCA Innovation Hub supports FCA's competition and the new UK growth and competitiveness objectives.

We are delighted to showcase 13 finished projects categorised into the following themes:

- Financial Inclusion
- RegTech
- Data and Enablement
- Fraud Detection

The Expo will be at the FCA office on 25 April 2024.

This booklet provides in-depth details about each project and its dedicated team. **We invite you to register for the Expo** and look forward to seeing you there!







# Financial Inclusion

Finexos
My Life Kit

finexos.io

More details of this project available here

# Finexos

## Credit risk analytics powered by state of the art machine learning and real-time data

### Project Summary

Finexos aims to address financial inclusion and credit poverty issues by providing credit providers with enhanced risk detection tools. Through advanced AI, behavioural analytics, and real-time data, Finexos reduces risk, costs, and default rates, benefiting lenders, borrowers, and society. In the Digital Sandbox, Finexos has developed the next generation of credit risk analysis using open banking to assess retrospective, current, and future views of a borrower's financial capability. The analytics focus on affordability, probability, and suitability, striving to create a fairer financial landscape.

### The Innovation

Finexos enables lenders to utilize real-time data from multiple sources to calculate the overall suitability of a credit product for a borrower, considering their financial capability, affordability, and product suitability. Additionally, Finexos reduces bias by excluding Personally Identifiable Information (PII) from all aspects of its process. The AI employed by Finexos composites over 300 data points along with behavioural analytics and affordability metrics to ensure that the borrower will repay, significantly reducing the chances of default.

### The Benefits

The key benefit of Finexos' technology lies in providing lenders and other credit providers with a clear understanding of the financial capability of their customers in a more holistic sense than credit ratings. This proves advantageous not only for lenders in minimizing default rates but also for borrowers who are often wrongly excluded from credit products. By contributing to the creation of a fairer credit ecosystem, Finexos ensures more money is reinvested into the UK market as a whole.

### Data Used

Synthetic loans, synthetic banking transactions, synthetic clients and social media data.

**Mark Fisher**

Founder & Head of Product

Mark is a seasoned fin-tech innovator and leader with over a decade of dedicated research into the high-cost credit market and its profound impact on millions of individuals. His mission is clear: to provide customer -centric, technology-driven solutions that empower people to break free from high-interest debt using ultra-ethical products and services.

**Alex Minshall**

Chief Technology Officer

Alex has delivered award-winning transformation projects for major banks, including leading the teams for HSBC's landmark Trade Transformation and their Balance Sheet Realignment Programme, as well as orchestrating their Brexit response. Additionally, Alex is a founder, having built a SAAS-based tech start-up in the 2000s.

mylifekit.io

More details of this project available here

# My Life Kit

## Index and data insights platform for better customers' financial wellbeing

### Project Summary

Many financial institutions face challenges in understanding their customers' circumstances, hindering product innovation and impacting customer experience. Recognizing this, MLK empowers banks, insurers, hospitals & governments with a new index and a data insights platform. This enables them to enhance community well-being, support customers in leading healthier lives, and overcome market challenges. The innovative approach incorporates health, wealth, environmental, and global data, leveraging advanced AI analytics to create a holistic VioScore™. This revolutionary index, coupled with MLK's insights platform, facilitates informed decision-making and opens avenues for product innovation, risk management, and broader financial inclusion.

### The Innovation

Current solutions rely on the limited context of historical financial data and do not take other external factors into consideration. As a result, they may not capture someone's true ability to repay debt, thereby limiting access to credit. Together with the integration of Enso's core platform we also insure the highest data integrity and compliance.

### The Benefits

VioScore™ provides the foundation for a fairer assessment of someone's creditworthiness. It gives an alternative view, particularly of benefit to those with thin credit histories. Armed with VioScore™, financial institutions will be able to offer more innovative products to a broader spectrum of currently underserved customers and nurture and reward well-performing customers.

### Data Used

Synthetic SME credit card history, UK cancer survival rates, household expenditure, synthetic UK business current accounts, synthetic UK business credit ratings, credit card, synthetic UK SME loans, augmented UK PII Aaccounts for SME loans and Authorised Push Payment (APP) Fraud synthetic data.

MLK™

**Romano Toscano**
Founder & CEO

For decades, Romano has played a leading role in various tech and entertainment ventures, showcasing a comprehensive understanding of technology and artificial intelligence. His mission centers on empowering individuals with limited to no credit scores, aiming to contribute to a brighter future for them.

**Dipnarayan Guha**
Co-Founder

Dipnarayan is an electronics and computer engineer, brings over 20 years of R&D and technology commercialization experience. He has worked across sectors, including Fortune 500 companies, research labs, universities, SMEs, and ventures in government, defense, education, and professional services. IEEE Senior Member, inventor of 2 US patents and co-inventor of 1 US patent, and co-author of 6 peer-reviewed papers.

**Masood Shaikh Mohammed**
Founder

Masood is a seasoned tech entrepreneur with a diverse background in the industry. His experiences in the UAE, Saudi Arabia, and China have shaped his global perspective and deep technological insights. As the founder of Enso Lab, a research-driven tech company, he continues to push the boundaries of innovation and drive success in the technology sector.

# RegTech

OneID
Proofmarked
SurferMonkey

oneid.uk

More details of this project available here

# OneID

## Certified digital ID solution to reduce Authorised Push Payment Fraud

### Project Summary

Authorised Push Payment (APP) fraud is enabled by a lack of identity verification, which enables fraudsters to impersonate others to defraud victims online. Using digital identity enables social media and platform providers to verify that accounts have a traceable human ID with the right FCA permissions, to give better security and make the account owner accountable for their actions. OneID has explored linking to the FCA register to prove a corporate or investment advisor has FCA permissions, to reduce APP scams such as investment fraud.

### The Innovation

OneID is the first UK bank-verified digital ID, built specifically for the UK market to combine Open Banking with the Department of Science, Innovation and Technology's certified ID framework. Other ID verification solutions rely on apps, document scanning and selfie-checking, which is high friction. OneID uses a digital source of identity data from an individual's bank, to make the user experience much better and more inclusive for those who don't have ID documents. The solution does not store the ID data and it remains with the bank.

### The Benefits

APP fraud losses were £485m in 2022. Reducing APP fraud not only lessens the non-financial repercussions of scams on individuals and businesses but also alleviates financial costs to banks, which will increase with the new PSR regulations mandating reimbursement of lost funds to customers.

By embedding a simple bank login process, which is low friction and can be easily built into digital flows without disrupting the customer experience, banks can obtain validated data on both parties in a transaction, with consent.

### Data Used

FCA Register API.

**Adrian Field**
Director of Market Development

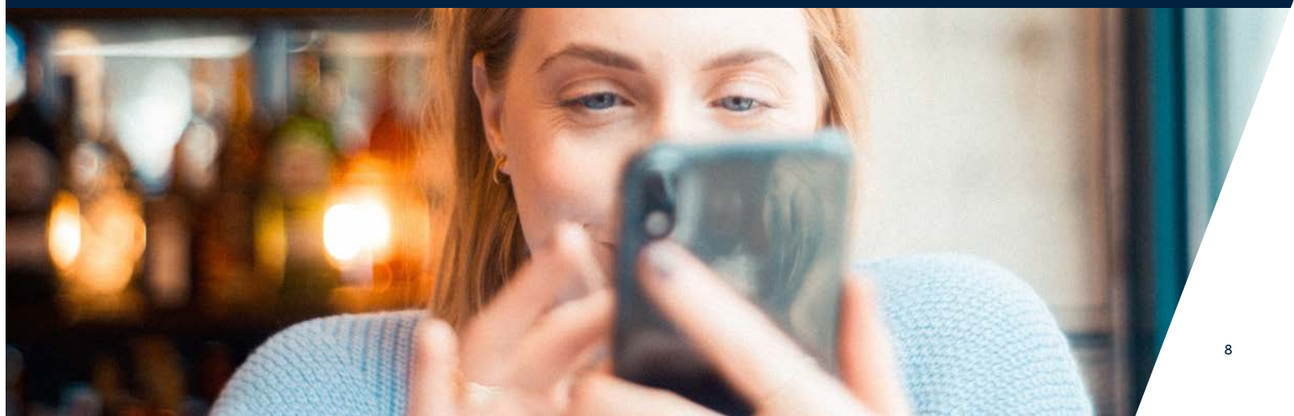
Adrian works as an advisor with customers, banks, industry groups, government and regulators to enable the UK market for ID services to scale. He has worked on developing global open standards for identity, and global projects to connect identity schemes internationally.

**Gary Humphrey**
Head of Product

Gary leads OneID's product development and has previously led product development for leading credit reference agencies.

**George Antoniadis**
Head of Engineering

George leads OneID's technical development team. He has experience in developing a range of high-performance cloud architecture applications.



Proofmarked.com

More details of this project available here

# Proofmarked

## Building a web of trust, through a market-driven allowlist of authorised firms' domains and websites

### Project Summary

Proofmarked has created self-sovereign identities for organisations. The product allows organisations to sign their website properties with their trademarked logos, which creates a market-driven allowlist of domains. Proofmarked is the other side of KYC. A way for financial organisations to show to their customers they are who they say they are. With Financial Institutions adopting Proofmarked, their customers can easily distinguish between a legitimate and an illegitimate website (e.g. clone firms). Thus, preventing financial losses, before people give away their credentials to cybercriminals or fall prey to investment scams (e.g. unauthorised firms).

### The Innovation

Proofmarked elevates trust and legitimacy on the web through its B2B2C SaaS cybersecurity platform. Unlike conventional educational approaches, Proofmarked has designed out the flaws of the existing web framework to make cybersecurity human-centric. Accessible to the masses for free, PROOFMARKED surpasses traditional domain and padlock measures by clearly demonstrating the authorization of a URL with the logo of the responsible company. This secure ecosystem of trusted organisations displaces cybercriminals' ability of website impersonation safeguarding users and ensuring a safer online experience. Notably, Proofmarked is already operational on key websites such as Royal Mail, HMRC, GOV.UK, NHS, various banks, and numerous others.

### The Benefits

Proofmarked is creating a white space market solution that provides "fair advantages" for legitimate organizations, while it makes cybersecurity human-centric. The solution expands on services in brand protection and makes cybersecurity a consumer product for Financial Institutions' clients. This approach moves beyond tackling malicious websites to establish positive trust, in a way that is easy to understand even for the most digitally vulnerable, resulting in a performance improvement of 10x.

### Data Used

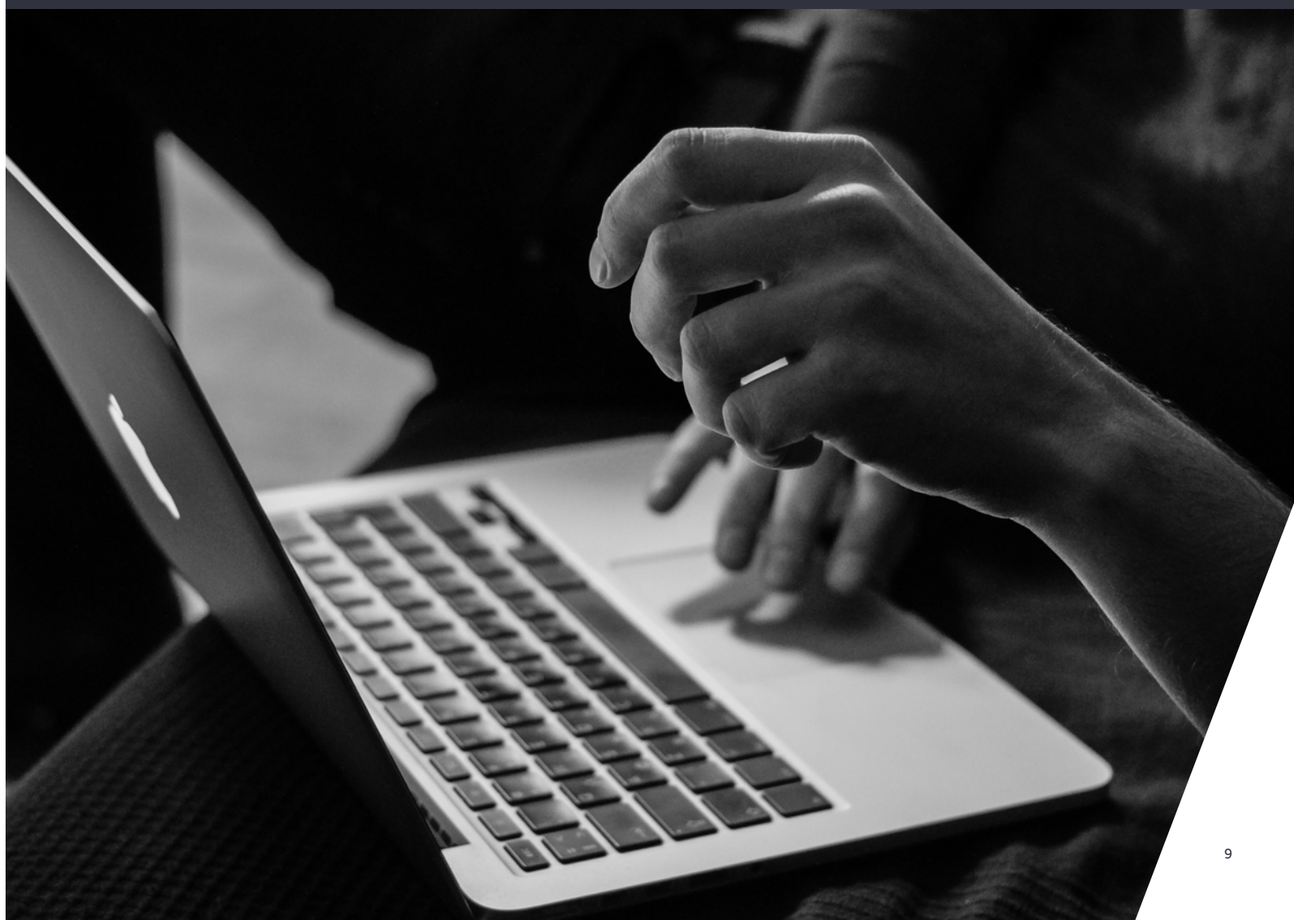
FS Register API.

Proofmarked.

**Marco Soares**

Founder

Marco won the Eureka award at the FCA Register Data TechSprint. Since then he has brought Proofmarked after several iterations to its current stage. He has won a Digital Security Innovation Award from the Police Digital Security Centre and a Builder Award from Mozilla (i.e. Firefox). He holds an MSc in Game Theory and Behavioural Economics from the University of Amsterdam.



surfermonkey.io

More details of this project available here

# SurferMonkey

## Revolutionizing blockchain privacy and compliance with zero knowledge proofs

### Project Summary

SurferMonkey enhances AML/CFT for regulators and supports institutional entry into blockchain with confidence in privacy and compliance. SurferMonkey's Universal Plugin and Regulatory Dashboard enable secure, private blockchain transactions and offer regulators tools for monitoring and de-anonymizing transactions. The solution utilizes Zero-Knowledge Proofs and smart contracts to enhance privacy, block sanctioned addresses, and ensure compliance and security within the blockchain ecosystem.

### The Innovation

SurferMonkey sets itself apart by removing the compliance load from both users and developers, streamlining their focus on core activities. The platform strengthens accountability and financial forensics, ensuring a secure blockchain ecosystem. It provides compliant, private environments for institutions, encouraging their participation. The platform's ease of use and integration allows institutions to leverage the middleware protocol without modifying their existing codebase or deploying new smart contracts, ensuring a seamless and secure adoption of blockchain.

### The Benefits

SurferMonkey bridges the gap between government and big institutions aiming to venture into blockchain, providing a secure, compliant, and private platform. By addressing privacy concerns and ensuring compliance, their technology encourages these entities to participate in the blockchain ecosystem confidently. This engagement fosters innovation, enhances transparency, and facilitates seamless transactions, positioning the UK as a frontrunner in adopting blockchain for public and large-scale institutional use. This approach aims to enhance trust in digital transactions and promote a more inclusive and advanced financial landscape.

### Data Used

OFAC Sanctions API.

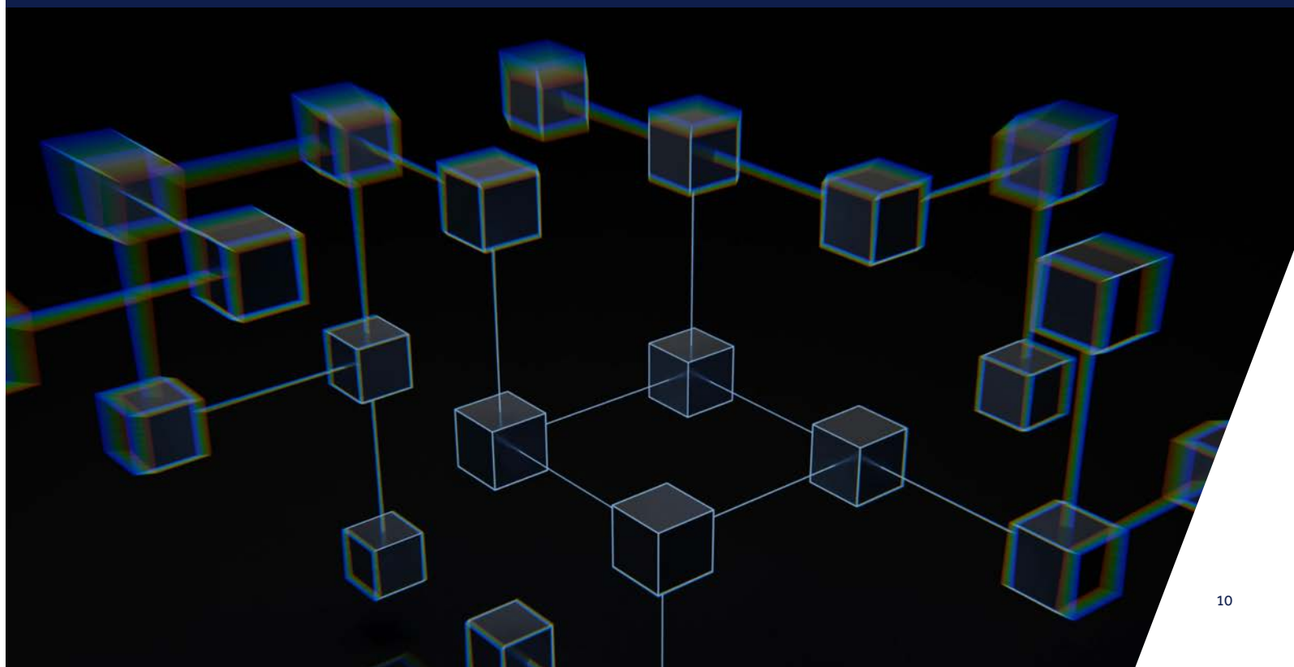
SurferMonkey
BE ANONYMOUS

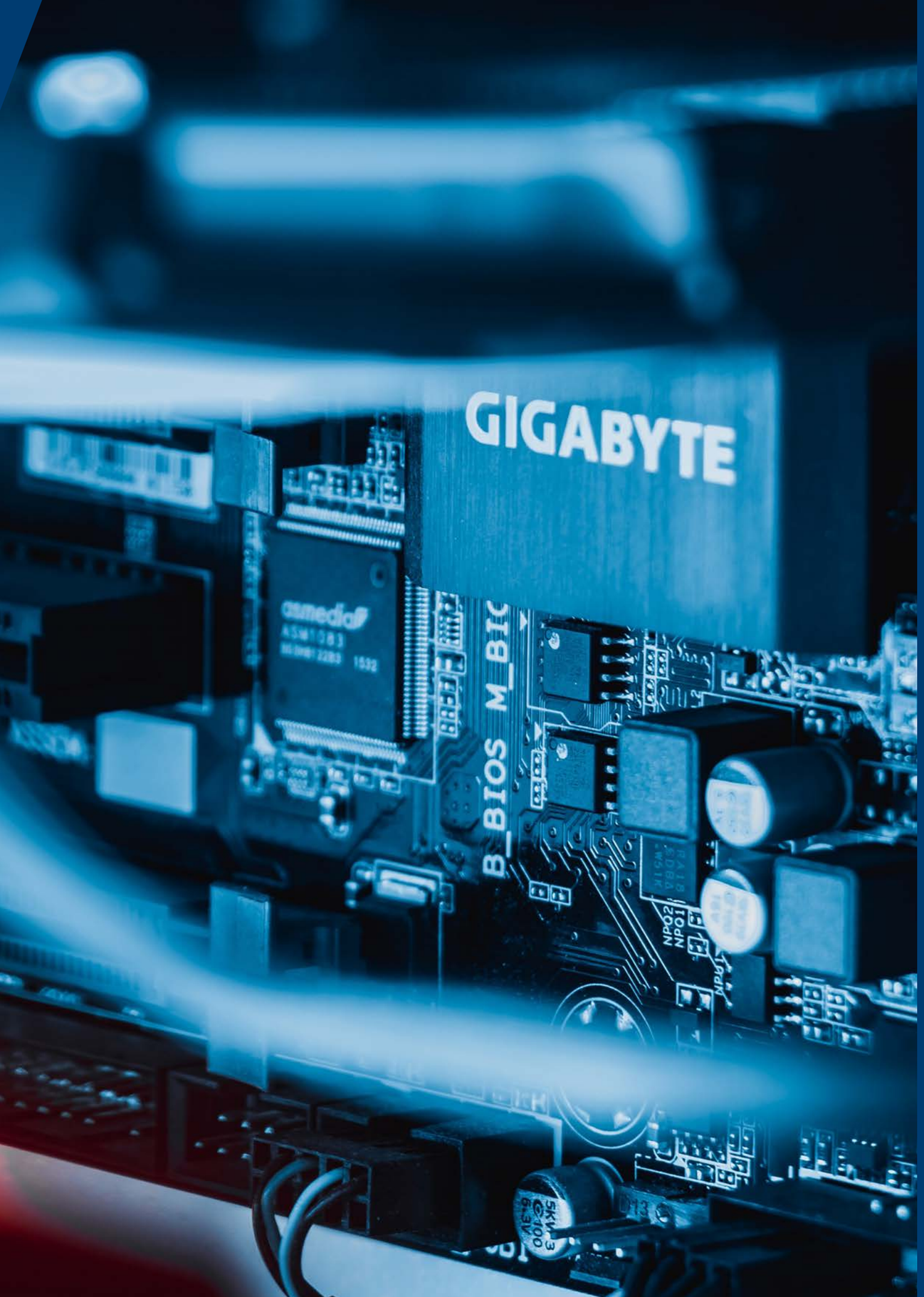
**Miguel Díaz Montiel**
Co-Founder, CEO & CTO

Miguel specializes in applying Zero Knowledge Proofs to blockchain for enhanced privacy and compliance.

**Al-Amin Ibrahim Noor Al Bakri**
Co-Founder, Chief Business and Strategist Officer

His work ensures that SurferMonkey blockchain solutions, led by their Universal Plugin technology, meet regulatory standards while fostering broad sector adoption.






# Data and Enablement

Abducere Holdings
EKAI
xcharta

abducere.com

More details of this project available here

# Abducere Holdings

## Privacy-by-design software enables direct, peer-to-peer customer matching and secure information exchange between banks and other businesses

### Project Summary

The Abducere solution employs a set of cryptographic hashes tailored to each customer's personal data, generating a unique 'key.' Importantly, the process of customer matching occurs without the transmission of sensitive personal data outside a firm's secure domains. This approach significantly enhances data security compared to conventional methods while maintaining the crucial fuzzy logic capability integral to the matching process. The solution is meticulously developed using privacy-by-design software, and its core algorithmic process has received a patent from the European Patent Office (EPO).

### The Innovation

Current data sharing agreements among businesses typically depend on an intermediary. Credit reference agencies (CRAs) are prime examples, commonly utilized for customer matching and credit data. However, these traditional methods are siloed, costly, and necessitate the storage of sensitive customer data for a second time, posing risks under GDPR regulations, dependence on third parties, and an increased susceptibility to cyber-attacks. The solution introduces a new alternative for the industry: matching customers and exchanging data directly between businesses, ensuring safety, security, and complete anonymity.

### The Benefits

The solution is to create a new trusted network across the UK financial system. This network will allow banks to safely and securely exchange information to help fight fraud - and, in particular, APP scams targeting the most vulnerable in our society.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data.

ABDUCERE
PRIVACY ENHANCING SOLUTIONS

**Frank Armour**

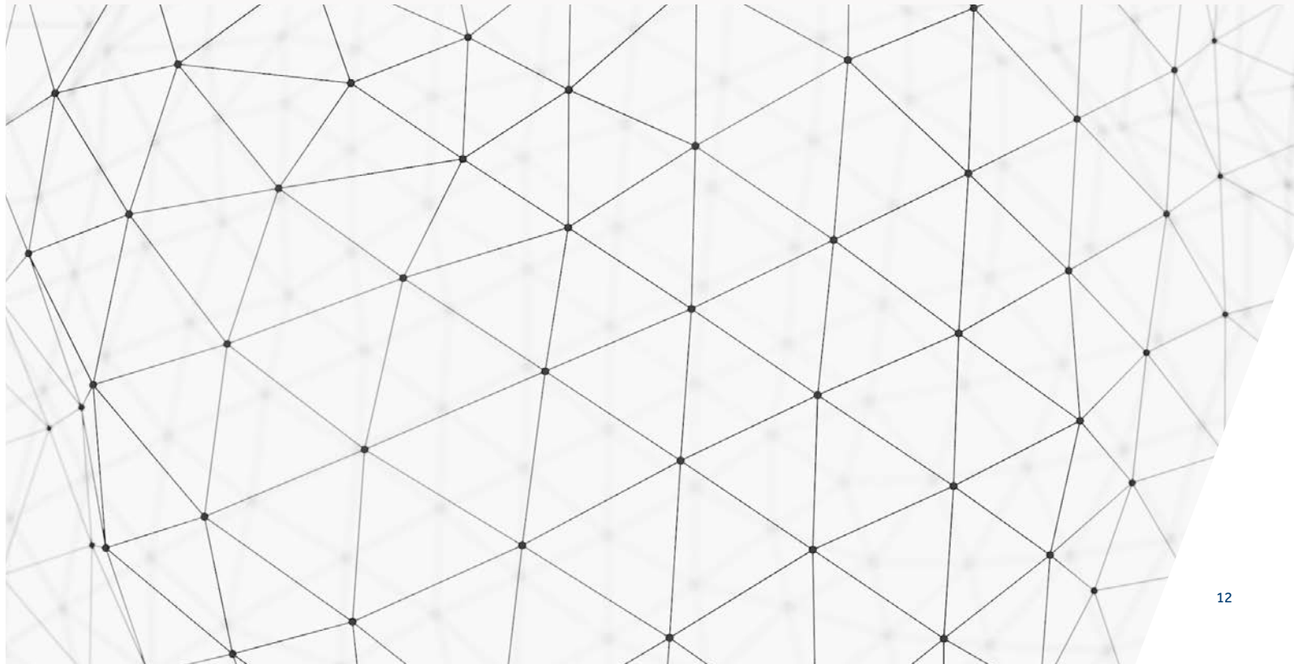
Managing Director & Co-founder

Frank studied Physics at Oxford University before moving into a career in Financial Services. Frank has over 30 years of experience within this industry with knowledge acquired from senior positions at a variety of companies including Barclays and Santander.

**Naim Chowdhury**

Lead software engineer

Naim holds a BSc in Computer Science and an MSc in Artificial Intelligence from Imperial College, London. He has extensive consulting and software engineering experience, focusing on security.



ekai.today

More details of this project available here

# EKAI

## AI co-worker for your regulatory team

### Project Summary

EKAI provides a platform to unpack/summarise & understand newer regulations, so organisations can reduce costs and facilitate Digital Regulatory Reporting (DRR) for Retail Banks and Insurance companies. Many of the newer regulations like the Operational Resilience, and Consumer Duty are much more complex than previous ones. The product provides a modularised implementation of regulations delivering required reporting via GenerativeAI. It also provides a ChatGPT-type interface to be used internally by organisations to interrogate the data required for the reports.

### The Innovation

The current regulatory software products require a lot of manual mappings and stitching together to achieve the output required for regulatory reporting and this is a major factor in the high cost of compliance. Any changes in the regulations or new regulations require significant work from the consumers. Our platform works with consumer data and understands the relationship within data, thereby creating a reusable knowledge graph that adapts quickly to regulation changes and newer regulations.

### The Benefits

EKAI give a tool to organisations of all sizes to swiftly comply with the newer regulations so they can focus on their core business. EKAI uses self-learning large language model that gets better with usage and time, hence helping companies with other transformation projects.

### Data Used

13 ESG related data, 50+ synthetic fraud transactions and other bank transactions data.

**Priya V Misra**
Founder/CEO

He has 15 years consulting service experience within banking and financial industries such as Lloyds Bank, Nationwide for digitalisation and architecture solutions.

**Hephzibah Olomu**
CSO/CMO

Hephzibah has a decade of experience in sales & marketing as well as strong regulatory and payments background.

**Herve Sodatonou**
CSO/CMO

Herve brings two decades of sales and marketing experience, complemented by a background in consultancy and financial services.

xcharta.com

More details of this project available here

# xcharta

## Automated data extraction from charts at scale

### Project Summary

xcharta automates the extraction of data from charts at scale. It's used by financial analysts, researchers and data teams to unlock data in graphs where source data isn't readily available. xcharta's technology combines AI and computer vision techniques to ingest full documents (e.g. a company sustainability report), detects charts and tables and then extract numbers along with relevant contextual metadata (e.g. titles, series names, units). It's available either as a SaaS platform for individual researchers and analysts to extract from specific documents, or as an API to embed in workflows for systematic extraction.

### The Innovation

Existing chart extraction technologies on the market are highly manual and do not represent a significant time saving when compared to manual extraction. Large Language Models attempt chart extraction; however, their technology performs poorly where numerical values aren't clearly labelled and they often approximate to a very high degree. This means that many firms building automated data pipelines or deploying LLMs on specific datasets cannot incorporate visual chart data in their workflows with sufficient accuracy.

### The Benefits

xcharta drives two core benefits: 1) Improving research and analysis efficiency, by ensuring that financial data locked in reports is accessible for those who need it. With 95%-time savings vs. manual extraction, it is estimated that xcharta's technology can save a cumulative 250M hours of analyst and researcher time in the UK over the next 5 years. 2) Unlocking new sources of data in  systematic document analyses, for example to augment textual analysis with interpretations of visual data when reporting on companies' ESG metrics.

### Data Used

1300+ company reports (e.g. annual reports and ESG information).

xcharta

**Venetia Jennings**

Co-founder, CEO/CTO

Venetia holds an MSc in Computer Science from Imperial College, where she won the Winton Capital Prize for applied computing, and an MA from Oxford University. She was previously a Senior Manager at Bain & Company where she advised on technology strategy, with a particular focus on automation.

**Louis Mather**

Co-founder, CRO/COO

Louis was previously an Associate Partner in Bain & Company's Enterprise Technology practice, with 10 years' experience leading technical transformations (with a particular focus on technology strategy, digital operating model and commercial negotiations). Louis holds a Masters in Chemistry from Oxford University and an MBA from INSEAD.

# Fraud Detection

Feedzai
Fintelligenx
Natwest
Resistant AI
Trident AI

feedzai.com

More details of this project available here

# Feedzai

## Real-time alerts underpinning by multidimensional detection of scams

### Project Summary

Feedzai Scam Prevention enables banks to protect themselves and their customers from Authorised Push Payment (APP) fraud by moving from detection to prevention. It collects and analyses customer online activity, transactions, behaviour, device and network to identify and prevent authorized fraud attacks. It empowers banks and payment providers to create multidimensional, customer-centric views across both digital and other channels such as telephony and branch and flags when a customer's behaviour is out of the ordinary. It uses multidimensional detection layers, optionally combined with existing fraud risk controls to protect customers and improve awareness and trust.

### The Innovation

Existing fraud solutions rely on data signals from disparate sources such as device, behaviour or payment requests create an incomplete view of risk and are not capable of detecting scams accurately enough without challenging customers too frequently. Feedzai Scam Prevention is the first single platform that collects and analyses customer online activity, transactions, behaviour, device and network to identify and prevent authorized fraud attacks.

### The Benefits

Enables customers to feel more secure in their banking relationships to foster trust and greater confidence in identifying scam attacks. Maintains a 360 view of customer risk to continually verify if a user is acting as normal or showing signs indicative of coercion or manipulation. Real-time, dynamic analysis of customers' combined transactional activity, digital signals, and behaviour over time using scam-specific machine learning models.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data.

**Robert Harris**
Head of Product Marketing

Robert is a passionate proponent of fighting fraud and money laundering, particularly in financial services. As Head of Product Marketing at Feedzai, he works with customers and like-minded organizations to understand the latest threats and consolidate best practices in combating digital criminals globally.

**Hugo Ferreira**
Director of Research AI

Hugo Ferreira is a Senior Manager of AI Research at Feedzai. He loves to develop state-of-the-art AI to build innovative solutions for financial risk prevention.

**Dan Holmes**
Fraud SME

Daniel is responsible for working with banking customers globally, supporting them to understand the range of fraud prevention and detection capabilities offered by Feedzai, while in parallel ensuring that the company product strategy reflects future market direction.

fintelligenx.com

More details of this project available here

# Fintelligenx

## Authorised push payment fraud signal discovery and explainability

### Project Summary

Fintelligenx utilises advanced AI models to offer API-based signals for preventing Authorised Push Payment (APP) fraud throughout the payment lifecycle, including at initiation and near settlement. These APIs assess the risk of APP fraud and assist in identifying fraud typologies. Recognising the dynamic nature of APP fraud, Fintelligenx also focuses on explaining risk scores for emerging attack patterns, even with limited training data for explainability. This approach ensures timely interventions and counter measures, enhancing the security and integrity of transactions by adapting to evolving fraud tactics.

### The Innovation

Fintelligenx' AI-driven product combats APP fraud by providing real-time API-based signals for early detection, enhancing security throughout the payment lifecycle, and offering insights into fraud risk. Designed to adapt to evolving tactics, it ensures explainable risk scores for informed decision-making, increasing transaction security and trust in digital payment systems. Its sophisticated application of advanced technologies enhances confidence in identifying novel attack patterns, while receiver-side signals enable timely interventions, offering a comprehensive defence against fraud.

### The Benefits

The product will look at both ends of a payment transaction, sending and receiving, and can provide risk-based assessments to either party, but also has the possibility of combining intelligence from both ends to maintain a much stronger posture against APP fraud. With a mechanism to discover new attack patterns, the APIs can provide supporting explanations about the risk score, without prior knowledge of the fraud typology.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data (including enhanced dataset), anonymised credit card transactions for fraud detection and synthetic Telco data.

Fintelligenx

**Abhay Chrungoo**

Chief Executive Officer, Chief Science Officer

Abhay is an accomplished leader in web-scale engineering, AI, and customer-centricity in fintech. Abhay has a proven track record of delivering complex, business-critical platforms across various industries.

**Kamal Shah**

Chief Technology Officer

Kamal is a seasoned technology leader with 30+ years' experience in fintech and identity sectors, led SCA-compliant Identity and Fraud platform development at Lloyds Banking Group, and served as Chief Architect for Rubikon, specializing in critical platforms for retail banking, digital identity, mobile payments, security, and fraud.

**David Majomi**

Product Manager

David is a professional in banking compliance and economic crime prevention, specializing in developing and implementing secure digital banking systems and card processing solutions to meet regulatory standards, with Master's and Bachelor's degrees in Computer Science.

**Joby Joseph**

Principal Engineer

Joby is an experienced Principal Engineer with 15+ years' experience in developing complex platforms across retail banking, trading, and risk management systems. Joby specializes in Java, Generative AI and Large Language Models (LLMs).

**Ankur Chrungoo**

Principal Engineer

Ankur, a Principal Engineer with 17 years of experience in software engineering and AI innovation, excels in secure architecture, scalable cloud-native solutions, and leading cross-functional teams to leverage AI for superior business outcomes. Proficient in Java, Python, Spring ecosystem, and Kafka, he holds a Master's degree in AI.

natwest.com

More details of this project available here

# Natwest

## Harnessing additional data throughout the journey of a scam to enhance our real time profiling capability

### Project Summary

Frauds and Scams equate to an extremely small proportion of payments on a normal day - “Needle in a haystack”. With the knowledge of NatWest’s customer, their device and additional intelligence on the beneficiary contained within the synthetic dataset, the project focused on helping banks to be better equipped to break the spell of scams. Within real-time payment profiling engines, the project explored additional attributes which could drastically increase NatWest’s proactive fraud and scam detection rates, while also decreasing the impact on genuine customers.

### The Innovation

The projects centered around conducting experiments with synthetic data to validate the use case for currently unavailable data attributes. The discussion often revolves around industry data sharing. This dataset aims to unveil attributes that could substantially enhance how Natwest protects customers and ignite innovation throughout the UK banking sector.

### The Benefits

NatWest possesses extensive knowledge about its customers. However, when it comes to harnessing information from telecom companies to mule accounts receiving payments, the bank finds itself relatively under-equipped. This limitation results in the oversight of moderate-risk scored scams and can also affect genuine customers when fraud alerts are raised.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data.

NatWest

**Paul Shanks**
Fraud Strategy Manager

Paul has 14 years of fraud prevention experience, including 1st Party investigations, performance reporting and real-time fraud strategy management. Most recently found producing insights to enhance the protection we offer customers, fuel strategic change and improve the performance of our models.

resistant.ai

More details of this project available here

# Resistant AI

## Machine learning model targeting authorised push payment fraud

### Project Summary

Resistant AI applies machine learning to help firms reduce instances of fraud, with a particular focus on Authorised Push Payment (APP) fraud. Resistant develops machine learning models based on ensembles of anomaly detectors and classifiers. Resistant has focused on leveraging the combination of both banking and telco data sources to create a machine learning model that will enable firms to reduce instances of fraud. The model design is such that it allows firms to benefit from the power of data sharing.

### The Innovation

Resistant 'detectors' model different sets of transaction properties utilising various machine learning techniques to promote the ensemble's diversity and result in a higher efficacy. The methods used by Resistant are selected from a rich portfolio of proprietary algorithms which include stochastic methods, regression, decision trees, clustering, Fourier transforms, deep-learning, natural language processing (NLP), transformers and graph algorithms - which are orchestrated to assess different parts of the transaction behaviour simultaneously. For this project, Resistant focused on using the APP Fraud dataset to further diversify and expand existing approaches by building a classifier model that can help firms further strengthen their defences against APP fraud.

### The Benefits

Resistant uses an ensemble approach that leverages a variety of machine learning models and approaches to enable firms to create layered defences against fraudulent actors. The ensemble approach leverages on several smaller, simpler models which require less data and are easier to update than large, complex models.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data.

resistant.ai

**Samuel Mešša**
Machine Learning Researcher

Samuel studied Statistics and Financial Mathematics at Charles University in Prague. Before working at Resistant AI, he worked as a data scientist for consultancies focusing on the fintech sector.

**Katherine Gormley**
Product Manager

Kathy has spent the last 10 years working with RegTech providers to develop and deploy innovative products to financial services firms in the UK.

**Martin Grill**
Co-Founder and Research Team Lead

Martin holds a PhD in Computer Science from Czech Technical University in Prague and has 16 years of experience applying machine learning techniques to detect anomalous behaviours in transactional data. He is an author of 26 publications and 14 patents.

tridentai.co

More details of this project available here

# Trident AI

## AI assistant for fraud investigations of unauthorised card transactions and APP scams

### Project Summary

The project leverages Authorised Push Payment (APP) Fraud synthetic data to train AI agents to investigate card fraud and APP scams. This involves tasks such as transaction analysis, report writing, and customer communication to efficiently gather necessary evidence for investigations with precision. The dataset was enriched with additional transaction details and customer communications. To effectively perform its role, an AI agent must possess a contextual understanding of previous transaction history, customer communications, and current scam tactics. Traditional transaction analysis and report writing processes typically take 30-40 minutes, but the product utilizes AI to accomplish these tasks in just a few seconds.

### The Innovation

The product is designed for investigations post-transaction flagging or customer reporting. AI is employed to streamline customer communication, eliminating the repetitive back-and-forth that often causes delays in fraud investigations. This solution combines the interpretability of robotic process automation workflows with the generalizability of Large Language Model agents. The AI is adaptable and can seamlessly integrate with the existing workflows of the company.

### The Benefits

Overall, the product facilitates banks and fintech companies to expedite fraud investigations, thereby increasing their capacity to detect more instances of fraud and safeguard customers. It contributes to reducing operational costs for growing fintech companies by optimizing the utilization of existing fraud teams or equipping customer support teams with fraud investigation expertise. The product enhances remediation paths for false positive transactions, enabling detection models to flag more transactions. The AI employed in the solution learns evolving tactics used by scammers during investigations, contributing to industry-wide fraud intelligence. The investigation process maintains consistency and auditability as identical rules are applied to every case.

### Data Used

Authorised Push Payment (APP) Fraud synthetic data.

TRIDENT AI

**Zain Hussain**

CEO

Zain has been the senior Fraud Expert at Monzo for 4+ years overseeing unauthorised fraud and APP scam investigations. He is also a barrister (non-practising), and has published academic research endorsed by the Law Commission of England and Wales (Digital Assets Fraud Consultation).

**David Mlčoch**

CTO

David holds a Master's degree in Informatics from the University of Edinburgh. He developed solutions for VC-backed start-ups, the European Union Space Agency and banks (ING, CSOB).

"Access to high quality synthetic data with 'real world' variations and population densities has been invaluable to us. In particular, it has allowed us to leverage third-party data expertise across the sandpit community to validate and refine our decisioning systems."

**Abducere**

"We were able to test our model at scale with the data provided in the Digital Sandbox and produced some impressive results that further validate our whitepaper and our proposition."

**Finexos**

"We've been paired with a great mentor who is guiding us in identifying the most suitable datasets. Additionally, we've gained access to helpful APIs for application integration, with new datasets continually being added."

**EKAI**

"The FCA Digital Sandbox allowed Feedzai to evaluate the quality of a synthetic APP dataset and the additional value it might provide when compared to real APP data we have visibility from across several customers at Feedzai."

**Feedzai**

"The community and the connections formed are great. We had the opportunity to meet two mentors, which was a valuable experience. Additionally, the round table discussion with the CEO proved to be highly beneficial."

**My Life Kit**

"A place to experiment with Telco data in the run-up to a scam taking place. Interaction with other banking and dataset users to fuel innovation. Regular catchups with FCA contacts to provide feedback on the dataset as well as share best practice."

**Natwest**

"We connected with the Financial Services Register Team to grasp regulatory limitations inherent to a regulatory body such as the FCA."

**Proofmarked**

"The Digital Sandbox enables us to experiment with broader datasets and APIs, broadening the scope of problems we can solve with digital ID to inform our product roadmap."

**OneID**

"Access to a wide range of data and data sources in which we traditionally do not have access to (e.g. telco data) is a big advantage. We had regular communication with our FCA Case Officer which was valuable for our development in the Sandbox."

**Resistant AI**

"Through the FCA Digital Sandbox, we gained valuable insights into applicable datasets and received pivotal feedback on our roadmap. Notably, the advice to engage with FCA's Innovation Pathway has opened avenues for deeper mentorship and clearer guidelines on regulatory possibilities."

**Surfer Monkey**

"The FCA Digital Sandbox has been incredibly supportive with providing access to datasets to help develop our MVP. There's also access to various channels to communicate directly with relevant providers, and gain an insight into other solutions currently being developed and tested."

**Trident AI**

"We accessed large, complex datasets and were introduced to other companies in the community who will benefit from our technology."

**xcharta**

"The FCA Digital Sandbox experience was highly beneficial, particularly the access to synthetic datasets, which was crucial in developing our explainability approaches, especially given the lack of prior data in this area. Mentorship and feedback from the community and experts helped refine our product, ensuring it aligns with market expectations. Additionally, the opportunity to engage with the fintech community has enriched our development journey."

**Fintelligenx**

# See you at the 2024 FCA Digital Sandbox Spring Expo!

**FCA Innovation**
**Digital Sandbox**

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