



## SWIFT Hackathon 2021

# Be part of a big idea and deliver on the promise of AI

The SWIFT Hackathon 2021 challenges the financial community to develop artificial intelligence and machine learning solutions that can reduce friction across the entire industry. The winning solutions will help financial institutions efficiently manage risk and develop anonymised data-sets that test the next generation of AI-based services.

**Register now**

### Innovate with SWIFT. Why take part?

The winning teams will get the chance to present their innovative solution at the world's largest transaction banking event – Sibos. And, to make this year's competition even more appealing, we'll be inviting the winners to come and co-create their solution with us so that it can benefit the entire financial community.

#### Challenge 1

##### Enhancing the accuracy of anomaly detection in payments

Detecting fraudulent transactions and identifying money laundering activities are costly operations for financial institutions that pose a real reputational risk for banks that get it wrong.

For this challenge, teams must develop novel data representations (e.g. time-series, graph representations) that can better detect transaction anomalies. Participants can utilise a variety of ML algorithms or an ensemble method. SWIFT has prepared simulated datasets for this challenge and embedded anonymised fraudulent transactions and sanctioned entities within them.

Solutions should contribute to a reduction in the overall number of alerts and false positives without compromising accuracy or effectiveness.

#### Challenge 2

##### Building 'synthetic' data-sets required for AI-based product development, whilst protecting privacy

In the digital world, banks are striving to create new intelligent services that improve customer experiences of banking services – all underpinned by ML algorithms that recognise transaction types and learn from user behaviour.

However, building, maintaining and improving these services require the use of large datasets to train ML models. Financial institutions cannot use their own customer datasets to carry out this training as it would breach data protection laws. Creating large simulated datasets – derived from the original – that can be shared among SWIFT members, fintechs, third party software vendors and research institutions would enable the co-creation and validation of new business services while preserving customer privacy.

Teams must develop novel simulation techniques that maintain the utility of the original transaction data, whilst fully protecting the privacy of the institutions involved.

#### How will the solutions be assessed?

Both challenges will be evaluated by a panel of industry experts, based on the best understanding and explanation of the business challenge and the originality of the approach.

Challenge one will also be assessed against the F1-score obtained as the harmonic mean of precision and recall.

Challenge two will also be assessed against the measurement of the distance between the probability distributions in the simulated dataset and the original, real customer dataset (e.g., Kullback-Leibler divergence).

#### What tools will be provided to participants?

We'll supply participants with all the reference data sets and collaboration tools needed to develop solutions for both challenges. This year we're also offering participants access to a dedicated Hackathon sandbox environment for teams to design, develop and test their solutions before submitting them for assessment.

#### Who can enter the Hackathon?

All SWIFT members, fintechs and companies that provide services interacting with and complementing SWIFT's offering can enter the Hackathon.

#### What's the timeline?

Registrations will remain open until the Friday 30 July and as soon as registrations are received, we'll begin the onboarding process – the signing of T&Cs and performing the relevant checks.

The Hackathon will last three weeks between 6 and 24 September, with entrants developing their solutions on our dedicated hackathon sandbox. Judging will take place once the event is complete and the winners and runners-up of each challenge will be announced at Sibos.