

How Covéa plan to save £1 million detecting fraudulent insurance policies



Covéa Insurance Plc is the UK underwriting business of leading French mutual insurance group Covéa, and offers commercial, motor, high net worth, property and protection insurance through its Standard & Poor's A+ stable rating.

Covéa Insurance serves two million policyholders and generated over £725.7 million in premiums in 2020. Their goal is to become the most advanced AI factory in the industry and to deliver value to customers and partners through efficiency and personalisation.

What was the challenge?

Every five minutes, fraud is committed within the insurance market, this is costing the industry over £1bn a year. One example is Ghost broking. Ghost broking is one of the most complex and hard-to-detect types of fraud faced by insurance organisations. This is when a policy is purchased by a middle person for a customer using false or stolen information to reduce the premiums. In the event of a claim, these policies would be legal and Covéa would have to pay out. However, Tom and his team had a plan.

As Covéa is mainly an underwriter, they often do not deal with the policy holder directly, so they had less data to work with to detect fraud. The call handling team were doing manual searches and checks on over two million new quotes per day. The scale was far too much to deal with in an efficient timeframe.

This is where Tom and his data science team came in. They developed a solution that targets ghost brokered policies, using the capabilities of Artificial Intelligence (AI) with a "human on the loop" system to spot fraudulent activity patterns.



Name: Tom Clay

Role: Chief Data Scientist

Company: Covéa

Mission

Develop a solution that targets ghost brokered policies, using the capabilities of AI with a "human on the loop" system.

£350k Saved in the first four months

How did they do it?

Tom and his team needed to put an ML pipeline into place quickly. They had the Python and Kubeflow skills in-house. They needed to be able to deploy models quickly and, most importantly, they had to be able to explain the decisions their models were making for the high standards of regulatory compliance within Financial Services. It was clear there was a gap between what they needed to achieve and their current tech stack. Tom evaluated a number of tools to use on top of their open source stack including SageMaker and DataRobot. After a number of trials and proof of concepts, Tom chose Seldon Deploy as his team's model serving and explainability tool.

"Seldon Deploy gave us the flexibility we needed to be able to manage the disparate policy data we had. Once models are deployed we are now able to integrate our many data sets with explainability"

The models were put into production by a team of just four people using Seldon Deploy. The models were able to recommend over 1,000 existing policies to be reviewed by the Policy Validation Team saving £350,000 in the first four months of 2022.

What's next for Tom and Covéa

Building on the success of their fraud detection models, Tom is now looking to apply them to real time quote setting to make sure fraudulent policies aren't approved at the point of purchase.

Outside of fraud detection, Tom is looking at wider risk reduction through AI in the future. For example, in automotive insurance, models that can monitor driving style could demonstrate risky behaviour, such as high heat and open windows at night that can indicate a tired driver. This AI could then notify the driver and inform them about the risks associated with these behaviours.

For their innovative work in AI, Covéa has won The Insurance Times Claims Excellence awards 2022 – Fraud Solution of the Year and have been nominated for The British Claims Awards 2022 – Counter Fraud Initiative.

"Seldon Deploy enables us to productionise models at speed while also adding explainers into every one we deploy. It's pivotal to our mission of becoming the most advanced AI Factory in the industry."



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