Insurance organizations are all exposed to fraud risks, whether dealing with false claims, false billings, unnecessary procedures, staged incidents, withholding of information, and much more. This industry must be on the cutting edge of technology to stay ahead of fraudsters and reduce losses. With limited resources on fraud investigation teams, every investigation into a case ultimately identified as low risk is wasted time.

Hiring more staff to conduct these manual audits is an expensive and inefficient option. Instead, the key is optimizing that team’s work by using big data to detect fraudulent activity with a higher degree of accuracy. This means using data from multiple sources (from patients and providers) and analyzing them together so that audit teams look only at the highest-risk cases to detect more fraud.
Leverage Data to Accurately Identify Fraudulent Claims

Challenge
Tackling Sophisticated Fraudsters

Take Santéclair, a health network part of Allianz. They found fraudulent reimbursements stemmed both from opticians as well as patients, but they didn’t have a system in place that allowed them to effectively analyze the right data and that would adapt with increasingly sophisticated fraudsters. Instead, they relied on “if-then-else” business rules to identify likely fraud cases, which resulted in the manual audit team spending their time on too many low-risk cases. With the increase of reimbursement volume (more than 1.5M a year), they needed to improve their efficiency and productivity. That’s how they met Dataiku, thanks to the IMT, a public institution dedicated to Higher Education and Research for Innovation, and Eulidia, a data consulting agency.

Solution
Leveraging Automation and Advanced Machine Learning

Santéclair found Dataiku Data Science Studio (DSS) via a POC led by the IMT TeraLab platform. Eulidia produced an algorithm using Dataiku to help the manual audit team identify more fraud by feeding them cases with a high likelihood of actually being fraudulent. They identified these high-risk cases using Dataiku by:

- Outsmarting fraudsters with advanced machine learning algorithms that continually update and automatically learn or retrain using the latest data so that any new fraud patterns are immediately identified and audited. Dataiku handles the entire workflow, from raw data to exposing the predictive model to the operational applications.
- Automatically combining hundreds of variables from different datasets, including patient/prescriber history, interaction graphs, prescription characteristics, and other contextual data.
- Allowing teams to develop their data science skills through Dataiku’s collaborative, easy-to-use interface.

Without Dataiku, the marketing team would have to rely on the technical team to continually provide or update data, which would be inefficient and ineffective for both teams.

Impact
Saving Customers Money with 3x More Effective Fraud Detection

Due to the comprehensive solution developed with Dataiku, Santéclair and Eulidia have:

- Enabled fraud detection teams to target actual fraud cases three times more effectively.
- Reduced time-to-market for similar projects by making a POC in a few weeks and then industrializing the project within a few months with a low impact on the IT team, thanks to the production-ready components of Dataiku.
- Saved their customers a lot of money by decreasing fraudulent behaviors in the health network and excluding the fraudsters from the network.
- Saved time with a model automatically updated and monitored along the way to prevent drifting of performance with little human supervision.
Santéclair & Dataiku Overview

<table>
<thead>
<tr>
<th>Technology</th>
<th>Time</th>
<th>Team</th>
</tr>
</thead>
</table>
| Python, Scikit-Learn, R | 6 weeks    | 1 Data Scientist  
                                                      1 Data Analyst  
                                                      1 Data Engineer |

A single platform for data scientists, analysts, and business users

From design to production thanks to cutting-edge automation features

Advanced features for data preparation

Automated report & advanced scheduling for global monitoring

Santéclair & Dataiku: Detecting Fraudulent Claims

- Models update automatically to prevent performance drift
- Fraud detection teams are 3 times more effective

GET STARTED

www.dataiku.com