

Fraud detection system

ML FDS system contains a machine learning module that provides the second line of defense, identifying new fraud types directly from available data. Thanks to this data-first approach, a system learns continously and adapts itself to evolving fraud sofistication.

Addressable business needs

Fraud and misconduct is a daily challenge that every business is facing nowadays be it financial transactions, insurance or others. Detection of fraudulent behaviour is mainly based on predefined criteria. This approach however suffers from high false positive rates and more importantly is not resistant to complex fraud patterns.

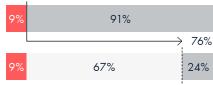
ML FDS system identifies new fraud types from data directly, which allows it to spot complicated fraud patterns and prevent them in the future. Due to the data-driven approach, the system learns continuously and adapts itself to evolving fraud sophistication.

DISTRIBUTION OF PREVENTED
FRAUD LOSS BY SOURCE
OF DETECTION

Based on previous deployments, we can see fraud detection accuracy increased **up to 76%** and the amount of reported false positives decreased **up to 60%**.

- Rule/Black list
- Others
- Machine Learning

Current



With ML FDS

Selected use cases



Insurance

- Error and mismatched records in historical transactions identification
 - Hidden risks management
- Concentrate on relevant cases only.
 - Reduce false positives.



Accounting

- Accounting reports processing
 - Attendance reports
 and performance processing
- Find useful insights for auditors.
- Uncover unwanted behavior.



Telco/Banking

- Fraud and misconduct behavior detection
 - Hidden risks management
 - Reduce subscription frauds.
- Prevent fraudulous behaviour.

Key benefits



Detection time reduced from days to minutes or seconds.



Up to 60% decrease in false positives



Ability to learn and adapt without the need of manual management



Up to 76% accuracy in fraud detection

How it works



2.

3.

4.

Enterprise and external data

Various streams of data from different systems are used as an input source for AI algorithms to detect fraudulent events. The system adapts based on the data to uncover new types of fraud.

Rule-based system

Predefined rules and blacklists that are usually in place. Sufficient for known patterns only, manages all issues in the same way.

Machine learning

The framework works in synergy with a rule-based system as an additional layer of security. Machine learning looks at data from multiple angles, spots complicated fraud patterns and prevents them in the future.

Visualization and integration

The system is integrated into an existing environment.
All detected fraudulent events are reported to the users for further analysis and feedback.

Case study: Insurance claim fraud







GOAL

Even though insurers have fraud detection processes, tools and dedicated employees they felt a need to innovate and increase fraud detection efficiency, decrease false positives and protect themselves from evolving fraud activity.



ACTION

We leveraged historical claim data applying our machine learning fraud detection framework. As the result, AI models picked up complex patterns from claims, policies and other data enabling reliable fraud detection and white listing at the same time.



RESULTS

The Blindspot anti-fraud solution applied to historical claim data automated a fraud detection process, allowing analysts to concentrate on relevant cases, reducing false positives by -60%.

60% DECREASE IN "FALSE ALARMS": INCREASE IN OPERATION EFFICIENCY AND IMPROVED CUSTOMER EXPERIENCE

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