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 continuously and adapts itself to evolving fraud sophistication.

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.

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

DISTRIBUTION OF PREVENTED FRAUD LOSS BY SOURCE OF DETECTION

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>With ML FDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9%</td>
<td>91%</td>
<td>76%</td>
</tr>
<tr>
<td>9%</td>
<td>67%</td>
<td>24%</td>
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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 fraudulent behaviour.
The Top-Quality AI Services Provided by Blindspot.AI

Blindspot.AI is a highly professional team of AI experts delivering end-to-end implementations of AI systems for multinational companies and startups. Blindspot is your partner in adopting and using AI in any area of business processes.

Key benefits

- Detection time reduced from days to minutes or seconds.
- Ability to learn and adapt without the need of manual management.
- Up to 60% decrease in false positives.
- Up to 76% accuracy in fraud detection.

How it works

1. **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.

2. **Rule-based system**
   - Predefined rules and blacklists that are usually in place. Sufficient for known patterns only, manages all issues in the same way.

3. **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.

4. **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