

DETECTING AND REDUCING FRAUD

BACKGROUND

Within the insurance industry, fraud can span from opportunistic individual claims to organized multi-million dollar rings that involve staged auto accidents and participating medical equipment providers and clinics.

The speed and sophistication at which new fraud techniques are emerging create major challenges for today's fraud detection systems to keep up; it involves building new models, creating new dictionaries, and performing new training. In addition, the growing number of parameters used by institutions to identify individual claims increases the difficulty to "match" new claims against existing ones in order to identify possible commonalities.

The current tools available to insurers cause them to miss a significant number of fraudulent claims. Moreover, today's special investigative teams within insurance companies are overwhelmed with new cases; as a result, these teams detect only 1% to 3% of the 10% of claims that are likely to be fraudulent.

CHALLENGE

A leading insurer contacted the the Intel® Saffron Cognitive Solutions Group with a challenge: reduce its multi-billion dollar expenditures on auto insurance claims, which is its largest annual expense. Currently, the company avoids paying out only about 0.33% of the predicted 10% of fraudulent claims.

The insurer uses both manual and automated systems to flag questionable claims. These claims are then passed on to the investigative case managers who read adjuster and other member notes, explore the fraud watch list, and search the web. Existing

methods prevent the investigative team from detecting fraud rings because they do not have a holistic view of the connections across insurance members, providers, claims, and other entities in the data. The inability to view existing claims, while systematically looking across claims from past years, further prevents these teams from discovering relevant knowledge of possible colluding entities. As a result, the insurer cannot easily discover fraud rings or, more importantly, collusion among other fraud rings.



**IN LESS THAN A MONTH,
SAFFRON COGNITIVE SOLUTIONS
EXAMINED 113,000 CLAIMS FROM
1 YEAR IN 1 STATE AND FOUND
3 POTENTIAL FRAUD RINGS.**

The insurer turned to the Saffron Solutions Group to find a more effective way to prioritize questionable claims (i.e., the individual claims with the most financial exposure) and provide a holistic view of all associations across all entities within these claims to detect possible fraud rings.

SOLUTION

The Intel Saffron Team worked with the insurer for 10 weeks to find hidden associations and detect fraud rings. Intel® Saffron Memory Base™ ingested auto injury claims data and MSR notes from three states within the last three years. Saffron Cognitive Solutions learned from both legacy claims and new claims; this allowed investigative teams to see patterns and similarities of providers across all claims and easily identify fraud rings. For example, the Saffron Cognitive Solution discovered that a radiology clinic from the investigative watch list was actually part

of a much larger fraud ring and a common link that connected three potential fraud rings together. The clinic was previously identified as fraudulent for MRI overcharging, but the investigative team could not view the clinic's possible connections with other providers. Using Saffron Cognitive Solutions' "reason by similarity" analysis, the Saffron Memory Base illuminated all otherwise hidden connections to that particular clinic as well as the other colluding rings.

RESULTS

The Saffron Cognitive Solutions Group examined 113,000 claims (structured data) from one year in one state and found three potential fraud rings, warranting

further investigation, in less than a month. Under further investigation, the Intel Saffron Team detected that these three rings were part of one larger ring that included 38 claims and 42 participants of various providers such as psychologists, acupuncturists, physical therapists, physicians, and durable medical equipment providers. From these 38 claims, the insurer unknowingly paid out approximately \$400k to questionable providers of the \$700k that was billed. According to the insurer, every 0.1% increase in avoidance payouts results in a \$10 million addition to the bottom line. As a result, the Saffron Cognitive Solution can help insurance companies avoid such costly and unnecessary payouts.

WHY SAFFRON COGNITIVE SOLUTIONS



Unprecedented Accuracy

Provides customers with the highest degree of data accuracy—the proof is in



Speed-to-insight

Provides customers faster speed-to-insight to quickly see the actionable knowledge in their data.



Full Transparency

Gives customers the explanation and reasoning behind the results of their data.



Model-free and rule-free

Dynamic and not constrained by rules and models—incrementally learns and adapts in real-time from incoming data and human



Learns on Sparse Data

Learns on sparse data so customers don't need volumes of data to get started.



High ROI

Proven track record of high ROI for leading enterprises across industries and use cases.



Time-to-value

Customers can rapidly unlock value in their data (i.e., weeks rather than months).

LEARN MORE

To find more information about Intel Saffron Cognitive Solutions, go to www.saffrontech.com.