

Mining, Space Exploration and Financial Crime Detection:

How Artificial Intelligence Reduces Risk and Improves on Human Results

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Mining is rife with danger for human beings. Miles underground with limited air supply and only one way out, people risk their very lives to collect the data necessary to identify and exploit viable deposits of coal, metals and precious gems. Similarly, in the quest to explore outer space, people who could make the complex decisions and collect the critical data needed to understand the universe were sent beyond our planet. To reduce risks, our best and brightest minds turned their attention to finding a safer way to apply technology to perform tasks and make decisions that previously only people could make. And they succeeded.

Software can now emulate human behavior, learn over time and, at lightening speeds, detect patterns in vast amounts of complex data that explain the unexplainable. Why not apply these artificial intelligence methods to other risky, complex and expensive problems? What other seemingly impossible tasks can be completed that would be impracticable to be performed by people? Fortunately, for financial institutions, one such problem is financial crime — crimes recognizable by decoding complex patterns of human behavior that show us the way to the fraud, the laundered money or the white-collar criminal.

New and increasingly complex methods to launder money and commit financial fraud are constantly emerging, making the detection of suspicious activity notoriously difficult. To succeed in detecting financial crimes, sophisticated sensing, control and planning systems must be deployed that do not depend on hard-coded rules but, rather, can adapt intelligently to changes in the large volume of information involved.

Financial institutions deal with large volumes of information (about people, accounts and transactional behavior) from a variety of data sources (core banking systems, card-processing systems, wire and ACH systems). Choosing an appropriate automation technology to filter this information ensures that the limited resources of

the financial institution are used to investigate suspicious activity that is truly suspicious (true positives), while reducing the investigation of activity later determined to be legitimate (false positives). Focusing resources to investigate truly suspicious activity reduces the potential costs associated with non-compliance or fraud losses and helps ensure resources are used to greatest effect.

Such intelligent systems make computers think the way people think, instead of the other way around. These systems give computers the ability to make decisions more like humans, expanding traditional logic to deal with data that falls outside of the fixed thresholds that plague rule-based systems. This flexibility enables financial institutions to analyze vast amounts of data to detect patterns and catch suspicious activity that might otherwise be virtually impossible to spot. These systems recognize patterns, make associations, compare and contrast activity within the system to past events, and help formulate ideas based on these concepts.

In light of the recent global recession and the current financial crisis experienced by the financial services sector, financial institutions now, more than ever, must consider the effect of their choice of automation technology and their ability to manage risks and efficiently allocate their limited resources to suspicious activity detection, investigation and reporting.

Verafin, a recently endorsed CBA strategic partner, designed its AML and anti-fraud solution using state-of-the-art artificial intelligence technology, and methods honed in the mining and space industries. This intelligent approach provides financial institutions with an adaptable system that accounts for changing circumstances, such as new financial crime typologies, helping further reduce costs and mitigate risks. **CB**

To learn more about Verafin and how our approach to automation using intelligent systems can help your institution meet the challenges of suspicious activity detection and management, contact us at info@verafin.com.