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## INDUSTRY INSIGHTS

# AI's Impact on AML Today and Into the Future

By Richard Lee and John Arvanitis

Navigating the intricate challenges of financial crimes like money laundering requires innovative solutions that leverage the latest technology. Google Cloud's Anti Money Laundering AI (AML AI) marks a pivotal advancement in this cutting-edge response. However, the story goes beyond technology alone; it encompasses ethical considerations, the role of AI in due diligence, and best practices for implementing AI and machine learning (ML) in money laundering detection. Recognizing this holistic approach is crucial as it underscores the intertwined nature of technology and the broader dimensions of responsibility, operational efficiency, and ethical conduct in AML practices. These elements create a multifaceted picture of an industry in constant evolution, ready to confront emerging threats and seize new opportunities. By integrating both technological prowess and ethical considerations, the industry not only elevates its detection capabilities but also fosters a more responsible and transparent environment, setting a higher standard for combating financial crimes in the future.

## AML AI in Motion

Google Cloud has developed AML AI, an AI-based solution aimed at aiding global financial institutions in the detection of money laundering activities. The tool provides features that include:

- **Improved Risk Recognition:** Rapidly analyzes vast data sets to identify transactional patterns and behaviors indicative of money laundering, yielding up to four times more true positive alerts.
- **Reduced Operational Costs:** Reduces alert volumes and minimizes investigator time spent on false positives.
- **Improved Governance and Defensibility:** Delivers auditable outputs for internal risk management, ensuring institutions can confidently validate and defend their AML practices to stakeholders and regulators.
- **Enhanced Customer Experience:** Streamlines compliance processes for customers by reducing unnecessary verification checks.

Google Cloud's AML AI uses specialized ML technologies, such as Vertex AI and BigQuery, to handle the complexities of running AML at scale. It provides a consolidated ML-generated customer risk score, derived from transactional patterns, financial network behavior, and Know Your Customer (KYC) data. The system also adapts in real time to any changes in underlying data to deliver more accurate results. The tool has had much success, as financial institutions like HSBC, Bradesco, and Lunar have found significant value in this AI-based approach to AML. The product has helped improve detection capabilities, deliver more accurate results, and significantly reduce processing times for analyzing billions of transactions.

### Challenges and Ethical Considerations of Generative AI in Financial Crime Detection

[Spotting money laundering with AI technology](#) greatly enhances efficiency and recognition speed, yet it also raises specific ethical concerns and other challenges. Since the detection process frequently deals with confidential personal and financial data, it's essential to comply with governing bodies and regulations, such as the U.S. Federal Trade Commission (FTC) and the EU's General Data Protection Regulation (GDPR). Moreover, AI solutions should be developed to manage data securely, incorporating suitable access controls and encryption methods.

AI models are only as good as the humans who train them. This is because these models rely on large datasets curated and labeled by humans to learn and make predictions or decisions. If the individuals responsible for training the AI hold biases—consciously or subconsciously—there's a significant possibility that these biases will be reflected in the training data. Over time, the AI system can inherit these biases and magnify them, making its conclusions and actions a reflection of the biases. This can be particularly problematic when we consider AI models used in sensitive domains like credit scoring, lending, or fraud detection. Inadvertent perpetuation of human biases may occur in the data on which AI models are trained, leading to potentially unfair profiling or discrimination. Mitigating bias during data collection and model training is essential, and regular monitoring and auditing of the AI system must be done to detect unintended biases.

Lastly, just because AI represents cutting-edge technology, doesn't mean it's immune to relevant rules and regulations that have long been in place. AI systems must comply with existing laws and ensure alignment with legal requirements. In addition, the EU AI Act, [approved by the European Parliament](#) in June (though not yet signed into law), marked a significant step toward the first formal regulation of AI in the West. This [landmark set of rules](#), including greater restrictions on generative AI tools and bans on certain technologies, aims to build safeguards on AI development and use while addressing concerns like job displacement, misinformation, and bias. In the U.S., there is no equivalent at this time, which can be attributed to factors such as Washington's slower regulatory pace and the push by major tech corporations for "[sensible regulation](#)." Considering this and future proposed legislation, [collaboration between regulators and compliance experts](#) is essential, including a multidisciplinary approach involving AI experts, legal and compliance professionals, and domain experts in finance and criminal justice. Continuous monitoring, transparency, and ethical review boards (committees tasked with evaluating the ethical considerations and potential impacts of decisions or practices) can ensure responsible and effective deployment of AI in money laundering detection.

### The Role of AI in Due Diligence

With today's unrelenting drive for business efficiency, firms are considering the potential of AI and ML-driven models for complex analysis and risk modeling. AI [operates](#) by employing mathematical and logical principles to mimic human reasoning, learn from new information, and make decisions. As AI matures, it can process information with great speed and precision, making it suitable for intricate applications like self-driving vehicles and virtual assistants. Though the terms are used [interchangeably](#), AI is the broader field encompassing myriad technologies to mimic human-like cognitive functions, while ML is the subset of AI responsible for learning from data, improving over time, and using algorithms to analyze patterns and make informed decisions. Hence, the "[AI arms race](#)" among large financial organizations to build out proprietary systems, potentially resulting in an ultra-competitive landscape where firms that fail to adopt and integrate advanced AI technologies may be left behind, facing decreased efficiency, less accurate risk assessments, and diminished market share.

The appeal of AI in an AML context lies in its ability to sift through vast datasets, making complex due diligence decisions more manageable and faster. However, in cases where deep human intuition is required, AI continues to fall short. Human analysts may spot details that elude even advanced algorithms. A detailed look into affiliations and litigation, along with an intuitive “gut” sense of wrongdoing can lead to discoveries that might be missed by automated systems.

In a particular investigation conducted by [Integrity Risk International](#), human analysts, upon reviewing a UK-based individual's profile, discerned an unusually high number of company affiliations, a detail that might not have raised flags for an automated system. This observation led them to a detailed inquiry into each affiliate and its involvement in litigation. During this in-depth examination, the analysts uncovered a court judgment where the subject was implicated. Interestingly, there was a slight name discrepancy in the court record, which would likely evade an automated search. Without the analysts' intuition to delve deeper into what seemed like a mundane detail, this significant judgment might have gone unnoticed.

While AI plays a valued supporting role in due diligence, it is far from replicating fundamental human traits in the AML space completely. The future of AI in due diligence seems to be one of collaboration with human expertise, providing efficiencies and capabilities without replacing the unique value that human intuition and judgment bring to the process.

### **Leading Practices for Implementing AI/ML in Financial Crime Detection**

Implementing AI/ML technologies in AML necessitates strategic planning that aligns with organizational goals. Success hinges on having well-defined objectives, complemented by a comprehensive evaluation of products, critical scrutiny of vendors, and insightful comprehension of your firm's budget. These factors, together with considerations after product selection, form the foundation of [best practices](#).

Leading practices for implementing AI/ML technologies in financial crime discovery encompass several key elements. Defining your objectives is essential and involves having a quantitative understanding of current operational costs, timelines, and other critical details. A precise definition of what AI/ML means to the organization must be articulated, considering aspects like improved decision-making, data integration, and surveillance modification. Thoroughly assessing the product requires careful analysis of features and functionality, including understanding the differences between vendors and determining whether the product is ready-made or requires extensive customization, with due diligence and customer testimonials being vital in this phase.

Another key element is assessing vendor capability, going beyond just the product. Understanding the vendor's vision, roadmap, and ability to deliver is critical in narrowing down the choice, with a specific focus on their regulatory credentials and support availability. Also, determining the economic model involves understanding the give-and-take between risk and efficiency. This includes careful consideration of costs, including licenses, infrastructure, and data science teams, as well as an assessment of value-based pricing models against traditional ones to see if the investment is justified by the expected returns. Successful implementation is then finalized by proper planning for rollout and maintenance. Granular data collection, model retraining, and collaboration with the supplier's ecosystem is vital for long-term sustainability.

## In Conclusion ...

AI and ML are fundamentally reshaping the financial crime landscape, offering transformative solutions that prioritize both efficiency and nuanced risk evaluation. Google Cloud's AML AI stands at the forefront of this evolution (and may soon compete with the aforementioned proprietary systems), exemplifying the potential these technologies hold for the financial sector. Yet, as we embrace this future, we must remain vigilant of the inherent challenges and ethical implications that accompany such innovations. Striking a balance between automated efficiency and human discernment, ensuring regulatory compliance, and eliminating system biases are paramount to the responsible adoption of AI. By steadfastly upholding these standards and fostering collaboration among technology experts, legal minds, policymakers, and financial professionals, we set the course for a future where technology and humanity unite to create a more robust and ethical defense against financial crimes.



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