

Challenges with KYC/AML? GenAI with RAG Delivers Results



Know your customer (KYC)/anti-money laundering (AML) is a big and persistent challenge for financial institutions, and non-compliance can have huge impacts on a business. In October 2024, for example, one of North America's largest banks was [fined over \\$3 billion](#) and saddled with ongoing business restrictions, including an asset cap, for failing to maintain a compliant AML program.

Fortunately, the emergence of generative AI (GenAI) coupled with [retrieval-augmented generation \(RAG\)](#) offers a powerful tool to improve and streamline these critical functions. Combining the capabilities of large language models (LLMs) with RAG, financial services companies can significantly enhance their KYC/AML workflows, leading to increased efficiency, accuracy, and scalability while reducing the firm's risk. Here's how.

Four Top Benefits of GenAI with RAG for KYC/AML

GenAI is transforming how we work, and RAG is enhancing it even further. RAG augments standard LLMs with up-to-date proprietary and specialized data that has been cleaned and organized into vector databases to increase analytic accuracy while decreasing known issues with public LLMs like “hallucination.” As a result, key improvements include:

Efficiency: Streamlining Low-level Tasks

One of the most compelling benefits of GenAI is the ability to automate low-level, repetitive tasks in KYC/AML processes while simultaneously utilizing and shielding sensitive information by deploying RAG. Functions such as data collection, sanctions screening, and risk assessment are prime candidates for AI-driven automation. By leveraging LLMs, financial institutions can consume and analyze vast amounts of data at unprecedented speed and scale, far surpassing human capabilities. At the same time, utilizing RAG to incorporate curated data sets helps improve accuracy and depth of insights.

Pattern Recognition: Identifying Suspicious Behavior

GenAI excels at identifying patterns and anomalies in large and diverse data sets, making it an invaluable tool for KYC/AML. By training LLMs on historical data and incorporating RAG for contextual information, financial institutions can more effectively flag suspicious transactions, unusual behaviors, and high-risk customers. Moreover, GenAI can combine financial and non-financial events, such as location and time data, to provide a comprehensive view of potential risks.

Improved Accuracy: The Power of Quality Results

In addition to increased efficiency, a GenAI RAG solution can significantly improve the accuracy and quality of KYC/AML results. Traditional rules-based systems and human judgment alone often fall short in detecting complex patterns and hidden risks. By leveraging the power of RAG-enabled LLMs, financial institutions can

achieve superior accuracy in risk assessment and decision-making. The human-in-the-loop interface, where AI-generated insights are reviewed and validated by compliance experts, ensures a superior blend of machine intelligence and human expertise. Over time, the AI models learn and adapt, continuously refining their performance and delivering more precise results.

Scalability: Handling Growing Volumes of Data

The exponential growth of data in the financial industry poses a significant challenge for KYC/AML programs. Traditional systems struggle to keep pace with the increasing volumes and varieties of information. Built on modern infrastructure, GenAI offers unparalleled scalability to handle these growing data demands. By automating data processing and analysis, financial firms can effectively manage larger data sets, including [structured and unstructured data](#) from multiple sources. This scalability enables comprehensive risk assessment and ensures that no critical information is overlooked.

Pure Storage: Enhancing KYC/AML with GenAI and RAG

To harness the full potential of GenAI for KYC/AML activities, financial institutions need a reliable and high-performance data infrastructure. Pure Storage provides a validated, production-ready [GenAI RAG solution for financial services](#) that delivers performance and cost savings along with the necessary scalability, flexibility, and low-latency data retrieval to support the demands of KYC/AML programs. By leveraging Pure Storage, financial firms can ensure fast and efficient development of GenAI capabilities enhanced by RAG.

To address the critical objectives of KYC/AML regulations, which are to prevent money laundering and the financing of terrorism, financial institutions need to deploy the latest AI technologies. The benefits of using GenAI in KYC/AML processes are clear: Financial institutions can revolutionize their compliance efforts, reduce risks, and ultimately, better serve their customers. By leveraging the Pure Storage platform, enterprises can confidently embrace this innovative



approach to KYC/AML, staying ahead of the curve in an increasingly complex regulatory landscape.

To learn more about GenAI with RAG for KYC/AML, download the latest white paper from Pure Storage: "[Utilizing GenAI to Enhance KYC/AML and Fight Financial Fraud.](#)"