



Storage and AI: Financial Services Invests in Big Data and Automation

In 2017, *Forbes* asked the question: “Why are banks — who are typically the most capable and tech-intensive players in the business world — acting like Luddites with AI?”¹

“Rather than taking a siloed approach and having to reinvent the wheel with each new AI initiative, financial services executives should consider deploying AI tools systematically across their organizations, encompassing every business process and function.”³

Since that question, a lot has changed. Financial institutions have moved fast and furious towards AI, realizing that it is one of the main technologies in driving digital transformation and enabling enhanced customer experience. AI can create differentiated value, combat financial crime, increase efficiencies, and reduce costs, as well as provide new levels of security.

The Data Revolution in Financial Services

AI is grabbing headlines across the financial sector, with new use cases developing more frequently. Parviz Peiravi, CTO Financial Services Industry Solutions for Intel, points out that “business intelligence, advanced analytics, and artificial intelligence deliver significant capabilities but rely on large volumes of high-quality data to produce high quality results. In other words, enterprise-wide analytics and AI services require scalable, reliable and high-performance data pipeline, and democratization of data”.

At a transactional level, one of the common use cases is smart bots that provide customers with self-help solutions, easing the call center workload. *Towards Data Science* identifies a dramatic improvement in the loan processing, seeing “a faster, more accurate assessment of a potential borrower, at less cost, and accounts for a wider variety of factors, which leads to a better-informed, data-backed decision.

Credit scoring provided by AI is based on more complex and sophisticated rules compared to those used in traditional credit scoring systems. It helps lenders distinguish between high default risk applicants and those who are credit-worthy but lack an extensive credit history.”²

Beyond loans and improved customer experience, big data and AI in all its forms is transforming financial services. Peiravi points to five major use cases:

Compliance: Creates automated intelligent reporting for financial auditors; enables Anti Money Laundering, Know Your Customer, and stress testing.

Risk Management: Optimizes credit risk evaluation, loss scenarios, and standard deviation of financial portfolios for trading and enterprise risk management.

Wealth Management: Allows for personally tailored, real-time management advisors with virtual assistants.

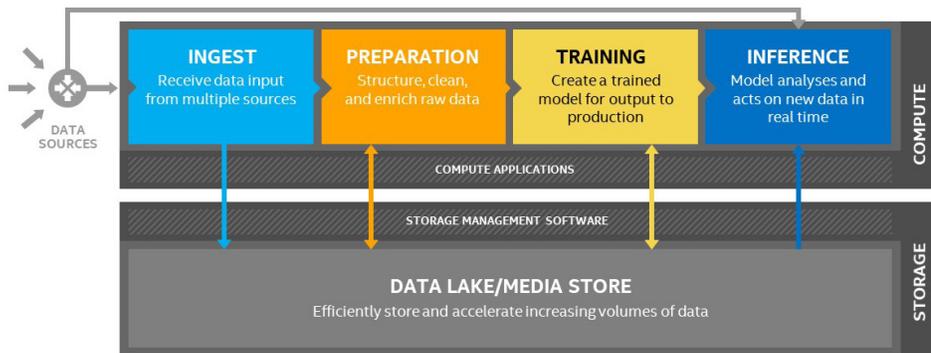
Security: Improves cyber security (based on machine learning for anomaly), fraud detection, malware, data leakage, and insider trading detection.

IT Operation: Enables infrastructure anomaly detection and performance optimization using predictive analytics and machine learning, as well as application development and security vulnerability detection.



Why Storage Matters for AI

AI PIPELINE



Navigating the AI Pipeline

To capitalize on any of these benefits, organizations first need to take a hard look at their data. DeLoitte notes that a fragmented approach will not work: "Rather than taking a siloed approach and having to reinvent the wheel with each new AI initiative, financial services executives should consider deploying AI tools systematically across their organizations, encompassing every business process and function."³

Which means organizations are required to scale and integrate multiple data pipelines. Not an easy task, says Peiravi:

"You may need hundreds of data pipelines, which is cost prohibitive. But the right data architecture along with capable storage, networking and compute technologies can harmonize multiple pipelines in a high performance and scalable infrastructure that delivers data for advanced analytics, deep learning for all forms of AI projects."

In each of these pipelines, the data dramatically changes in volume, velocity, and variety, depending on the type of use cases. To navigate it, you need a partner—and a solution—that understands and solves for end-to-end data pipeline and AI project phases.

Intel and Financial Services

"Your data architecture defines data flow from discovery to storing, processing and delivery. This is primarily driven by application architecture but rely on underlying storage architecture in memory or on persistent storage, such as an SSD" explains Peiravi. And when it comes to supporting multiple AI projects with different types of workload demands in financial services, Intel solutions provide the performance and capacity required.

The combination of Intel® Optane™ technology and Intel® 3D NAND technology provide high performance and high capacity storage needed to access, move, and store large datasets through the required phases of the data pipeline.

Throughout different phases of the pipeline, Intel Optane technology is optimizing storage resources across a wide variety of workloads, access patterns, and block sizes. PCIe-based SSDs with Intel 3D NAND technology unlock the value of stored data while reducing storage space and cost.

Learn More:

How Intel Storage Accelerates AI Deployments

Is Your Storage Ready for AI?

Watch Parviz Peiravi's webinar on Creating a Data and Analytics Platform

[Visit intel.com/optanedatacenter](https://www.intel.com/optanedatacenter)



To learn more, visit [intel.com/AIstorage](https://www.intel.com/AIstorage)

1 Source: Forbes.com - <https://www.forbes.com/sites/adelynzhou/2017/06/30/financial-services-industry-banks-artificial-intelligence-slow-adoption/#363168f24f8b>

2 Source: Towards Data Science.com - <https://towardsdatascience.com/the-growing-impact-of-ai-in-financial-services-six-examples-da386c0301b2>

3 Source: Deloitte.com - <https://www2.deloitte.com/us/en/insights/industry/financial-services/artificial-intelligence-ai-financial-services-frontrunners.html>