Smarter AI for All

Comprehensive AI Solutions for Financial Services

intel®

Get started with Intel AI in Financial Services

Smarter technology for all

Lenovo

Contents

The future of AI in Financial Services

Investment banks, wealth management, capital markets (sales & trading), hedge funds, and insurance companies are all deploying new AI-based systems. Rapidly moving beyond the hype into real-world applications, analytics and data science are firmly embedded in fraud detection, anti-money laundering (AML), and risk management. Now, the industry stands on the brink of an AI revolution.

Just as the introduction of the Internet and smartphones spawned entirely new ecosystems of applications and consumer behaviors, AI, and especially generative AI based systems, are poised to fundamentally reshape how Financial Services organizations work, interact with customers, and manage risk. Organizations that are ready to move are set for transformational shifts in cybersecurity, productivity, efficiency, customer experience and increased revenue generation.

At Lenovo, we believe in Smarter AI for All, bringing AI to your data using a secure, private, hybrid approach. Comprehensive AI products, solutions, as-a-Service models, and a growing partner ecosystem provide our customers with the greatest set of open choices—where and when they need it most.

Delivering AI with Lenovo and Intel

Lenovo and Intel help you deliver secure AI solutions at your financial Edges: mobile, office, bank branches—wherever your business needs full control, security, real-time access to your data, nearly instant verification of security threats, high value customers, local analytics, and customer experience with local and hybrid edge computing solutions.

Also, at your data centers: where your AI apps and agents need high-performance compute, availability, scale and integration with the cloud.

Through a Hybrid AI approach, Lenovo and Intel bring the right size and mix of AI models, devices, infrastructure, operations and expertise to your data across personal, enterprise and public environments.

What's already happening with AI?

It's no surprise that AI has caught the imagination (and investment) of the C-suite. It offers transformative opportunities across almost every business function, driving efficiency, productivity, and enhanced security, while enabling personalized, private, customer experiences.

AI capabilities are increasingly being used to streamline processes such as customer service, fraud detection, mergers and acquisition due diligence, and sustainability and ESG (Environmental, Social, and Governance) reporting. It's helping organizations to efficiently manage risks and comply with complex regulations, such as new governmental sustainability requirements regulating data center, device, and application energy efficiency by country and geo.
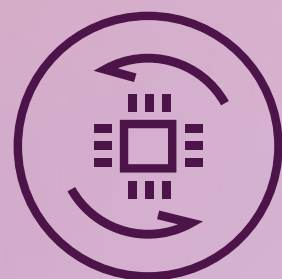
The challenges of implementing AI in Financial Services

The Financial Services Industry (FSI) is highly regulated, and adopting AI presents numerous challenges for organizations looking to unlock its full potential.

Cybersecurity is a top concern, particularly as AI expands the attack surface, introducing risks such as data poisoning and model inversion. Then there is the complex issue of regulations like the EU AI Act, DORA, and GDPR which require careful planning on technical, legal, and operational and economic considerations. As this evolves, many Financial Services firms are considering a mix of public and enterprise AI, with deployment models aligned to their use cases.

Most organizations will also understand the frustrating paralysis that comes after AI proof-of-concept projects: plenty of exciting experiments but no clear ROI.
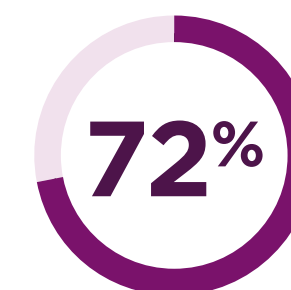
CIOs are concerned about the complexity of building the **right IT infrastructure and ecosystem** to support AI. [3]

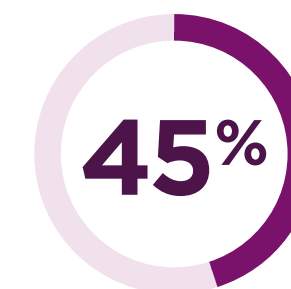The reality is that implementing AI brings a world of worries for organizations, including:

- Knowing where to start

- A lack of strategic approach (AI for the sake of AI)

- The seven Vs of data: volume, veracity, validity, value, velocity, variability, volatility

- Skillset gaps and talent shortages

- Managing evolving cybersecurity risks

- Compliance challenges and staying up to date with evolving regulations, including:
  – EU AI act
  – Digital Operational Resilience Act (DORA)
  – GDPR

- Difficulty integrating simple or complex data from diverse sources, particularly with legacy systems (data silos) and hallucinations

- Ensuring transparency, explainability, and fairness/lack of bias

- Customer trust around data privacy and employee resistance

- Loss of customer data and confidential trading strategies outside the firm (for example, ChatGPT is banned at some large institutions)

- Underpowered hardware and devices

Only 33% of organizations have implemented governance around responsible deployment of AI. [2]

72% of customers express concerns about the use of AI in Financial Services, specifically regarding data privacy and security. [1]

45% of CIOs find it challenging to secure AI-related talent for their teams. [2]

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AI grounded in security

In addition to accuracy, explainability, and transparency, security is a cornerstone of AI integration in organizational processes.

This includes adhering to guidelines such as the EU AI Act, as well as ensuring data privacy and information security. Unlike traditional IT systems, AI solutions must be built on a foundation of strong governance and robust security measures to be responsible, ethical, and trustworthy.

Lenovo's security-by-design approach establishes this foundation, ensuring AI solutions are secure from the component level, where the Intel vPro® platform enables advanced hardware protection, and through our Supply Chain Assurance capabilities. Our commitment to AI security is reinforced by our Global Security Organization, the appointment of our Chief Security & Artificial Intelligence Officer (CSAIO), and our participation in initiatives like the Joint Cyber Defense Collaborative.

CSAIO

Responsible

Ethical

Secure

Trusted

Governance

Put the right foundation in place

Lenovo's security by design approach provides the foundation for responsible AI solutions. Lenovo ThinkShield has you covered at every layer, starting with Supply Chain Assurance to protect your devices from the component level up. It also safeguards your devices from threats below the operating system, all the way to keeping data secure between the operating system and the cloud. And with our partnership with Intel, diverse AI workloads are further secured from data center to edge.

- Lenovo ThinkShield Zero-Trust practices secure devices, infrastructure and networks

- Hybrid AI balances on-premises and cloud processing to protect sensitive data

- Partnerships with leading security vendors create a robust ecosystem

- Lenovo-owned manufacturing ensures security is built into every system and component

- Lenovo-established governance across products and services, to maintain a vigilant focus on customer safety

- Constant innovation in security to continuously earn and deserve our customers' trust

The foundation of responsible AI

To safeguard AI driven applications, AI adoption must be grounded in security. Lenovo's multi-layered approach provides the foundation for responsible, ethical, and secure AI solutions, built upon correct and up-to-date governance.
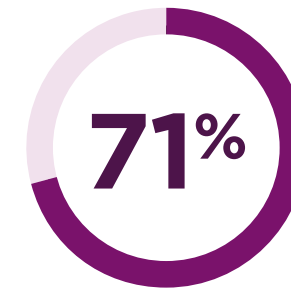
The Lenovo Responsible AI committee covers a wide array of challenges in the AI space. It makes sure AI is legal, ethical, fair, privacy-preserving, secure, and explainable.

The six pillars of Responsible AI at Lenovo are:

1. Diversity & Inclusion
2. Privacy & Security
3. Accountability & Reliability
4. Explainability
5. Transparency
6. Environmental & Social Impact

Security is the priority

71% of Financial Services organizations consider data security **the most critical factor when selecting AI** and machine learning technologies. [4]

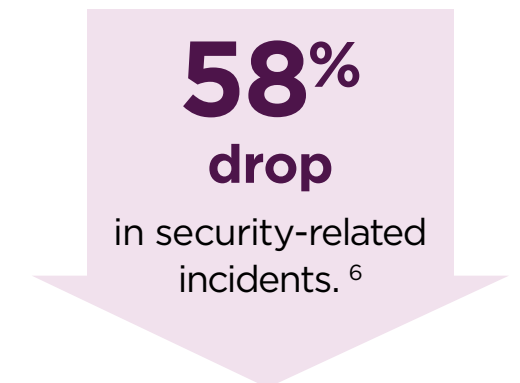**58%** of Financial Services firms using AI have reported **data breaches related to AI systems** in the last year, highlighting the critical need for secure AI implementations. [5]

In 2023, Financial Services firms experienced a **67% increase in AI-related cyberattacks**, with phishing and fraud being the most common. [7]

Lenovo AI-powered solutions can result in a **58% drop** in security-related incidents. [6]

IT should leverage AI using teamwork

As AI increasingly integrates into Financial Services, how we approach IT is evolving.

No longer just a matter of enhancing transaction processing or data management, AI's widespread adoption necessitates a shift towards a more dynamic and proactive role for IT teams who must now act as digital advisors, helping to harness AI capabilities embedded in everything from personal devices to enterprise systems.

Lenovo, as a trusted technology partner with 4 AI Innovation Centers, 18 R&D locations, and an extensive AI partner ecosystem, is uniquely position to support Financial Services organizations at every stage of their AI journey.

From identifying opportunities and use cases to managing data and deploying solutions, Lenovo becomes part of you AI strategy team, wherever you are on your journey.

AI technology: a team approach

Building a scalable, secure, and sustainable AI architecture require a holistic, team-based approach that includes key stakeholders, including division leaders, infrastructure, operations, software development, and data science.

In an industry where most data breaches occur due to compromised user credentials, the human touch remains crucial, even as we embrace automation.
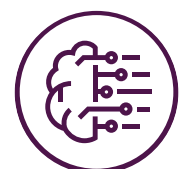
How AI is having an industry-wide impact

Take a deeper look at how AI is already being used in the FSI, and the many ways Lenovo can help organizations drive industry innovation forward.

Fraud detection & security:
AI-driven pattern recognition algorithms can detect anomalies, automate fraud detection, enhance know-your-customer (KYC) compliance checking, and strengthen security by analyzing large datasets and identifying suspicious activities in real-time.

Simulation & modeling:
Creative predictive simulations, deep learning, and reinforcement learning are being used to personalize recommendations, improve supply chains and optimize decision making and forecasting. It also enables rapid analysis of datasets to uncover actionable insights, trends, and patterns that drive smarter decision making and enhance risk management.

Process automation:
AI streamlines repetitive tasks and workflows such as financial reporting, reconciling records, loan processing, and enhancing customer services, while ensuring compliance and security.

Reimagined processes:
AI offers an opportunity to fundamentally rethink business processes, moving beyond simple digitization to create truly intelligent workflows.

AI Ops:
AI technologies can automate infrastructure workflows to accelerate provisioning and problem resolution.

Customer services:
AI is enabling organizations to provide 24/7 support, instant responses, personalized experiences, and more efficient issue resolution, including virtual assistants. The customer is in complete control to dial up or back problem resolution information to protect confidential or sensitive information.

Accelerate due diligence:
Significantly expedite your due diligence process, whether it be contract analysis or as part of mergers and acquisitions, and identify potential synergies as well as risks.

Compliance:
Automated regulatory checks ensure accuracy, reduce risks, and maintain up-to-date records efficiently.

Energy savings:
AI optimization in data centers improves power management and reduces energy consumption. Lenovo has made significant advancements in this area. See the section on the new Neptune™ warm-water cooling systems later in this guide.

Wealth management and personal wealth advisors:
Match your customers with suitable financial products and provide personalized investment advice, and enhance customer satisfaction and operational efficiency, showcasing ROI through improved client engagement and streamlined operations.

Innovating ESG compliance with AI: a groundbreaking proof of concept

Lenovo has helped a major European global bank pioneer a cutting-edge GenAI solution.

This proof of concept (PoC) is designed to streamline and enhance sustainability and ESG compliance, processing vast amounts of critical documents and meeting new EU requirements—from government data and business contracts to regulatory disclosures, energy consumption by data centers and applications, and more.

Unlike generic, publicly available AI models, our bespoke solution is specifically engineered to meet the stringent requirements of ESG compliance. These include transparency, explainability, security, data privacy, and accuracy for highly secure GenAI use cases. The solution increases efficiency and productivity without the risk of data leaks, hallucinations, or misinformation, all within a controlled and auditable environment—key factors that are non-negotiable in the financial industry.

Leveraging machine learning, our AI has been meticulously trained on millions of documents, encompassing financial regulations, legal texts, and business agreements. It can also ingest the latest regulations, with models that can be fine-tuned as needed. In addition, our solution incorporates "semantic AI" to provide powerful context beyond what today's leading commercial LLMs can offer.

FSI organizations **invested**

$35 billion

in AI in 2023 alone. [8]

AI adoption in the finance sector is set to reach

85%

by 2025. [8]

What's more, the solution design prioritizes optimized energy consumption, aligning with the bank's commitment to sustainability, making it a crucial value driver alongside achieving business objectives. This PoC not only sets a new standard for AI integration in secure environments but also demonstrates how innovation can be harmonized with environmental responsibility.

Lenovo Solutions for AI in Action

The result is a powerful tool capable of generating accurate reports with clear citations and reasoning within seconds. This level of precision and speed ensures that teams can confidently rely on the AI's output, knowing it's built on a foundation of high-quality data. By meeting the demands for transparency, explainability, security, data privacy, and accuracy, this PoC not only simplifies compliance processes but also creates trust in the output, positioning the financial institution at the forefront of AI-driven innovation in ESG.

36% of Financial Services executives have successfully utilized AI to

reduce operational costs by 10%. [8]

Over one third of Financial Services companies report an increase of over

20% in revenue due to AI adoption. [8]

Lenovo simplifies AI for the FSI

Lenovo's vision for Smarter AI for All simplifies adoption and brings AI innovation to everyone in collaboration with Intel, through our Hybrid AI model, ensuring AI is delivered seamlessly, responsibly and securely to personal, enterprise and public environments across the Financial Services Industry.

Smarter AI for All extends from personal AI for your staff to work more efficiently, and securely, on devices like AI PCs and smartphones, to Enterprise data centers, edges for your bank branches where you may need real-time access to data and where you need high-performance compute, and public AI where you can scale workloads.

In line with the unique demands of Financial Services, Lenovo brings a hybrid approach, which can blend on-premises and cloud-based processing. Together, Lenovo and Intel jointly enable a broad portfolio for hybrid AI, data center, cloud, edge, and PC—designed to support innovation, enhance customer experiences, and maintain regulatory compliance.

Our Hybrid AI model brings innovation to everyone

Personal

Lenovo puts AI in your hands, enabling you with the most personal tech ever to give you the personal power you need. AI-powered solutions on smart devices like AI PCs predict user needs based on behavior, while keeping data private unless shared with the cloud. We call this **AI for You**.

With Lenovo and Intel, AI is:

- **Personalized**: Harness AI capabilities to streamline workflows, optimize performance, and enhance your UX.
- **Productive**: Transform your workday with AI-driven content creation, predictive experiences, and intelligent decision-making.
- **Protected**: Strengthen your digital defenses with advanced, predictive security measures, robust fraud detection, and cyber-resiliency, safeguarding a secure and efficient digital environment.

Enterprise

Securely and privately develop, tune, deploy, and scale AI solutions (AI apps, agents, tools, models) on-premises, using enterprise data, policies and governance, ensuring compliance with financial services regulations, across multiple devices.

- **Accelerate innovation** with the industry's leading AI portfolio, delivering rapid insights and personalized computing experience
- **Transform your life and work** with enhanced creativity and productivity through scalable and smart AI solutions, infrastructure, services, and support
- **Apply Responsible AI** principles to your solutions including security, ethics, and sustainability

Public

Leverage public cloud AI, which comprises of personal assistants, chatbots, open-source AI frameworks, and public research and datasets to accelerate development, scale workloads, enhance collaboration and optimize costs in financial services, driving innovation and operational efficiency.

- **Custom build, design and delivery**: Develop AI solutions tailored to your needs, boosting performance, ensuring compliance, and reducing costs for long-term growth and competitive advantage.
- **Technology excellence**: Make sure your AI systems are robust, reliable, and perform consistently to minimize downtime and reduce errors, to maintain and enhance business operations and customer trust.
- **Deliver exceptional customer experience**: Better-designed, more intuitive AI solutions lead to enhanced user experience, adoption rates and greater satisfaction.

The Lenovo AI portfolio

Building a scalable and sustainable AI architecture

Building an AI architecture begins with a technology partner like Lenovo that can bridge cross-industry best practices for compliance, security, and data management while providing devices and infrastructure to meet the unique needs of FSI.

Instant AI-driven productivity

Lenovo AI PCs, Workstations, and Edge devices include Intel processors and the new Intel AI-accelerating NPU (Neural Processing Unit) to enhance employee productivity and drive real-time decision-making across every touchpoint.

From investment banks to insurance companies, Lenovo Edge AI servers, devices, and ISV-based solutions transform operations across your entire Financial Services ecosystem.

Lenovo ThinkStation P Series
Powered by Intel® Xeon® Scalable processors

High-performance workstations which are powerful, ISV-certified, energy-efficient and highly versatile. Ideal for AI applications in analytics.

ThinkStation PX

ThinkPad X1 2-in-1

Lenovo ThinkPad X1 2-in-1
Powered by Intel® Core™ Ultra processors

The ThinkPad X1 2-in-1 Gen 10 Aura Edition combines the versatility of a laptop and a tablet, with AI-driven features that adapt to user preferences and improve efficiency.

ThinkPad X1 Carbon

Lenovo ThinkPad X1 Carbon
Powered by Intel® Core™ Ultra processors

The ThinkPad X1 Carbon integrates AI-driven features like Microsoft Copilot, allowing users to automate tasks and enhance productivity effortlessly.

Lenovo ThinkEdge
Powered by Intel® Xeon® Platinum processors

Purpose-built platforms for compute-intensive applications deployed outside traditional data centers, with the flexibility needed for real-time data processing.

ThinkEdge SE450

Lenovo ThinkSystem
Powered by Intel® Xeon® Scalable processors

High-performance servers optimized for deploying and training AI models, handling large datasets, and complex algorithms.

ThinkSystem SR780a

Lenovo ThinkAgile
Powered by Intel® Xeon® Scalable processors

Integrated systems offering pre-configured servers, storage, and networking to streamline AI adoption and deployment.

ThinkAgile HX650

Lenovo High-Performance Computing (HPC):

Supercomputers are widely used in the FSI to provide real-time insights from vast volumes of data, perform complex simulations, and stress test large portfolios. Lenovo is the world's #1 supercomputing provider.[9] Available as a Service, TruScale for HPC combines Lenovo technology reliability with fully managed, predictable billing and flexible scaling to provide cost-effective solutions for constantly changing business needs. With industry-leading technology and global HPC architects and experts, we take a customer-centric approach to provide the HCP solutions that best meet the needs of evolving financial organizations.

Neptune™ Liquid Cooling

AI technology requires more system power than ever, putting an increased strain on energy demands. Lenovo's Neptune™ Liquid Cooling enables performance without compromise, reducing energy consumption by up to 40% while providing maximum performance and reliability of critical AI systems, ensuring that these systems can operate optimally without overheating or downtime.

The pace of change

Lenovo is passionate about responsible AI practices, while helping organizations keep pace with AI's rapid evolution thanks to an end-to-end AI services portfolio.

Lenovo has developed a Responsible AI committee, an AI Center of Excellence, and an AI Innovators program. Plus our flexible Everything-as-a-Service solutions, scalable AI infrastructure, and managed services provide access to AI expertise whenever it's required.

AI Center of Excellence

The Lenovo AI Center of Excellence (AI CoE) is designed to help customers put AI to work for their organizations quickly, cost-effectively and at scale, with solutions that bring AI from ideation to reality. Lenovo makes AI adoption easier for you by providing workshops, proof of concepts, benchmarking, and performance optimization. Together, with our global partner ecosystem, we help reduce time to value and risk. Lenovo has strategically positioned AI data scientists, solution architects, engineers, and industry consortiums worldwide.

Lenovo AI Innovators program

Lenovo has a comprehensive partner strategy that brings together best-in-class Independent Software Vendors (ISVs) for AI software, hardware and solutions. There are over 50 AI Innovators in the program, providing more than 165 solutions.

Lenovo also provides access to AI Discover Labs—a collaborative platform where partners can develop, deploy and validate their AI solutions with the support of cutting-edge tools, resources and expertise.

- Find specific enterprise AI solutions for Financial Services

- Execute proof of concept and comply with Lenovo's Responsible AI guidelines

- Train your own data without risking confidentiality

Services powered by AI

Lenovo AI Fast Start: helps you quickly prove the business value of Personal, Enterprise, and Public AI platforms. It provides access to AI assets, experts, and partners to rapidly build a GenAI solution tailored to your business, ensuring relevance and speeding up large-scale deployment.

Lenovo TruScale Device as a Service (DaaS): Provides comprehensive, scalable Smarter AI devices and frees up valuable IT resources with a predictable subscription-based model—all from a single trusted partner. TruScale DaaS allows for quicker upgrades without upfront costs so organizations can future-proof their technology investments, remain competitive, and gain the flexibility required for their evolving AI needs.

Lenovo TruScale Infrastructure as a Service (IaaS): Unlock the advantages of on-premises infrastructure with the flexibility of a cloud-like experience. Lenovo offers tailored solutions for hybrid and multi-cloud environments, infinite storage, and high-performance computing (HPC).

Our new TruScale GPU-as-a-Service (GPUaaS) offering enhances TruScale for HPC with advanced workload orchestration and usage metering, ensuring availability and maximizing productivity of AI critical GPU resources. Combined with Asset Recovery Services, assets can be securely recycled, reused, or repurposed in an environmentally friendly way to maximize value. In an era of rapid advancements in AI and GenAI hardware and software stacks, this flexibility is crucial. Lenovo provides clients with the broadest range of deployment options.

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Delivering intelligent sustainability

We understand that what's better for people is also better for business, which is what drives every decision and investment we make.

Lenovo sustainability services include robust offerings to help financial services organizations achieve their sustainability goals. Asset Recovery Service (ARS) helps extend device ROI with premium warranty and support offerings, plus hassle-free disposal.

Our innovative Neptune™ Liquid Cooling technology reduces energy consumption by up to 40%, supporting eco-friendly data centers, and Lenovo CO_2 Offset Services allow you to offset your device's carbon footprint.

We also go further with the Lenovo Intelligent Supply Sustainability Analytics (LISSA) tool, which enables transparent monitoring of supply chain sustainability. We ensure that all GenAI solutions that Lenovo enables pass the responsible AI review. This includes advising customers on how to setup their own responsible AI review and stay compliant.

Top 10
Lenovo's ranking in the 2024 Gartner Supply Chain Top 25. [10]

Since 2017, Lenovo has invested more than

$1.7 billion
into AI. [10]

Get started with AI for All

Embarking on your AI journey begins with a thorough assessment of your current capabilities. You'll need to identify what your priorities are and focus on the quick wins that can drive real revenue and rapidly move beyond proof-of-concept to tackle the main challenges head-on.

Lenovo can support your AI initiatives at every stage of your AI journey. Once we understand your unique requirements, we define your desired outcomes, evaluate your data readiness, implement critical milestones, and pilot a use case to demonstrate proof of value and ensure your business is set up for success, providing you with the tools, knowledge and expert guidance required for robust and reliable AI adoption.

Our AI Professional Services cover five critical phases: AI Discover, where we identify how AI can create value for your organization; AI Advisory, which assesses your AI readiness and defines strategic plans and roadmaps; AI Fast-Start, focused on designing and building AI elements; AI Deploy & Scale, implementing secure, scalable, and tailored Hybrid AI solutions; and AI Managed, which ensures continuous optimization.

Visit **www.lenovo.com/financial-services**

Why Lenovo?

You can trust Lenovo to empower your business with intelligent technology, driving innovation and growth in a secure and scalable way.

Embrace AI and redefine the future of your organization with intelligent solutions designed to help you drive medical innovation and personalized patient care forward. From devices and edge computing to infrastructure, servers, storage, and services, Lenovo delivers a complete, sustainable, and secure solution tailored to your needs.

Get a trusted partner. Discover Smarter AI for All.

Contact your Lenovo representative today.

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Get started with Intel AI in Financial Services

1. AI in Financial Services: Survey on Consumer Trust, Accenture, 2023.
2. Emerging Technology Survey, PwC, 2023.
3. CIO Playbook 2024, IDC and Lenovo, 2024.
4. AI-Driven Cybersecurity Risks in Financial Services, PwC, 2023.
5. AI and Data Breach Trends in Financial Services, IBM Security, 2023.
6. Windows 11 Survey Report, Techaisle, February 2022 (Windows 11 results are in comparison with Windows 11 devices).
7. AI in Financial Services: Survey on Consumer Trust, Accenture, 2023.
8. Unveiling the impact and Future: AI in Finance Statistics for 2024, AllAboutAi.com, 2024.
9. top500.org/news/spoiler-alert-lenovo-still-1-global-provider-supercomputers
10. Supply Chain Top 25 for 2024, Gartner, 2024.

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