# THE STATE OF AI IN FINANCIAL SERVICES

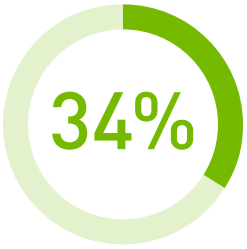
## Survey results highlight that AI provides a competitive advantage in financial services, and banks plan to invest significantly in AI infrastructure to unlock its full potential.

As momentum for artificial intelligence continues to build across financial services, it can be difficult to distinguish the buzz from ground truth. To create a more complete picture of how financial services institutions are using AI and where it's headed, NVIDIA conducted a "State of AI in Financial Services" survey among more than 200 global financial services professionals. The results highlight AI growth opportunities, deployment models, and investment plans for 2021. Questions covered a range of AI topics, including infrastructure spending, top use cases, and biggest challenges. Survey respondents included C-suite leaders, managers, developers, and IT architects from fintechs, investment firms, and retail banks.

## Three highlights stood out among the survey results.

**1** **AI is important** to their company's future success.


**2** Over one-third of respondents say that AI will increase their company's revenue by 20 percent or more.




**3** **Top use cases**

Most cited AI applications from fintechs and investment firms:

- Algorithmic trading
- Fraud detection
- Portfolio optimization

Most cited AI applications from banks and other financial areas:

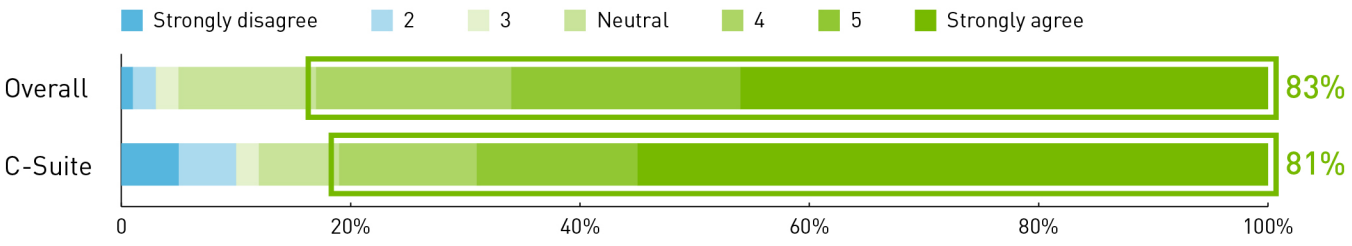
- Fraud detection
- Recommender systems
- Sales and marketing optimization

## The Impact of AI Is Important to Future Success

The impact of AI across financial enterprises is measured in terms of increased revenues, reduced operational costs, and greater customer satisfaction. The combination of these benefits give banks that embrace AI a competitive advantage in the marketplace.

Survey respondents were in widespread agreement on the value of enterprise AI to financial services, as 83 percent overall (and 81 percent of C-suite) believe that AI is important to their company's future success.

Do you believe AI is important to your company's future success?

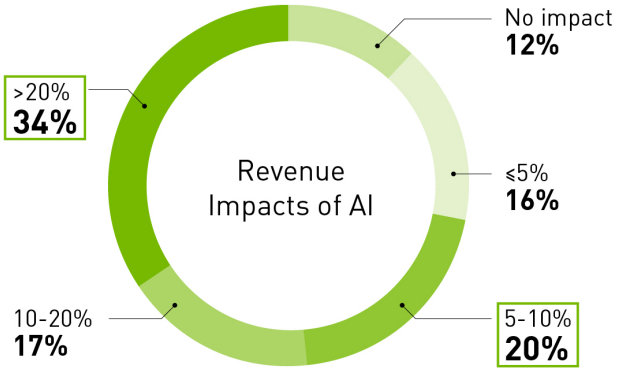


# AI Usage: The Impact of More Accurate Models

There's a wide range of use cases in which banks and insurers employ AI to drive business outcomes, including underwriting, risk management, customer service, fraud prevention, and more. We asked survey respondents to share where they're investing today.

### FINTECHS AND INVESTMENT FIRMS

Survey respondents from these firms highlighted portfolio optimization and algorithmic trading as the top AI use cases their companies are currently investing in. This data makes sense in the context of maximizing client returns on investment.




Excludes those who answered "Don't know."

### COMMERCIAL AND RETAIL BANKS

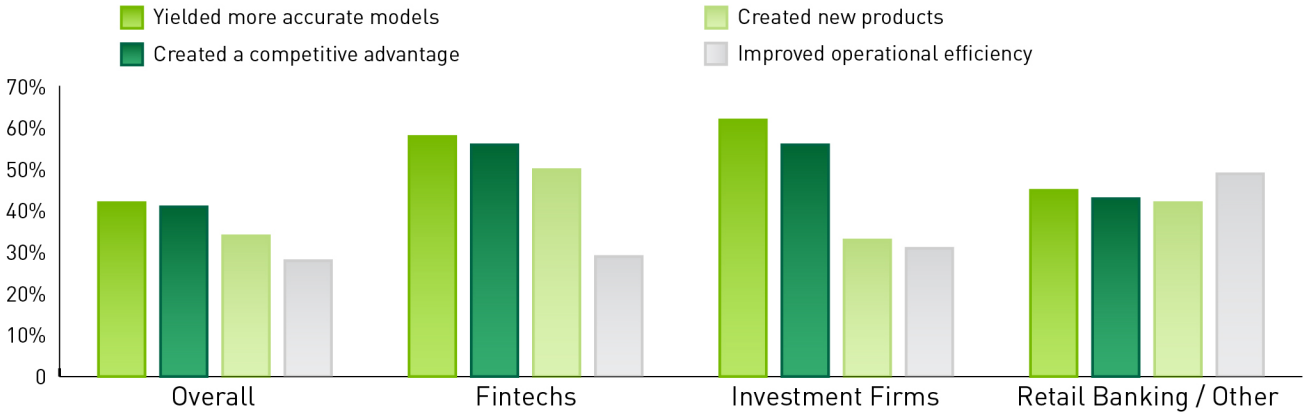
Respondents from banks noted that their companies are mainly investing in AI for fraud detection through payments, transactions, and anti-money laundering. These survey results reflect a primary focus on protecting sensitive financial data for their customers.

## AI'S BIGGEST IMPACT

As a result of investing in AI, including the use cases above, both fintechs and investment firms noted that AI's biggest impact has been in yielding more accurate models, in addition to creating a competitive advantage and building new products.

In contrast to fintechs and investment firms, commercial and retail banks cited improved operational efficiency as the biggest impact.

How has AI impacted your company?

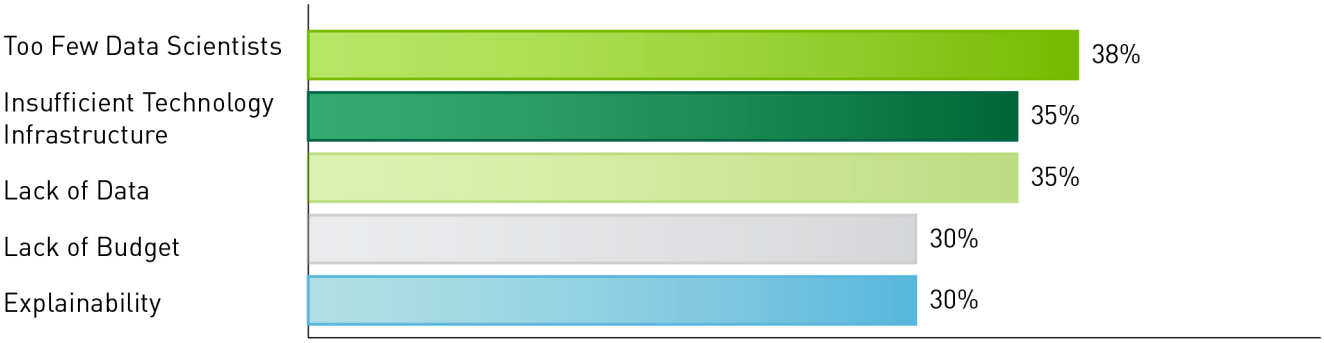



Excludes those who answered "Don't know."

## The Challenges of AI

As with any technology innovation, especially in an industry as complex (and regulated) as financial services, there are challenges in maximizing the impact of AI to achieve the desired outcomes. The survey respondents identified the biggest challenges to achieving their company's AI goals.

What are the biggest challenges in achieving your company's AI goals?




Excludes those who answered "Don't know."

## AI Technologies and Infrastructure

To learn more about how financial services companies are investing for success in AI, we surveyed the industry about the technologies they're currently deploying. Both fintechs and investment firms cited machine learning as their most used technology, with deep learning placing second. Emerging opportunities in high-performance computing (HPC) and natural language processing and understanding (NLP/NLU) are also on the rise.

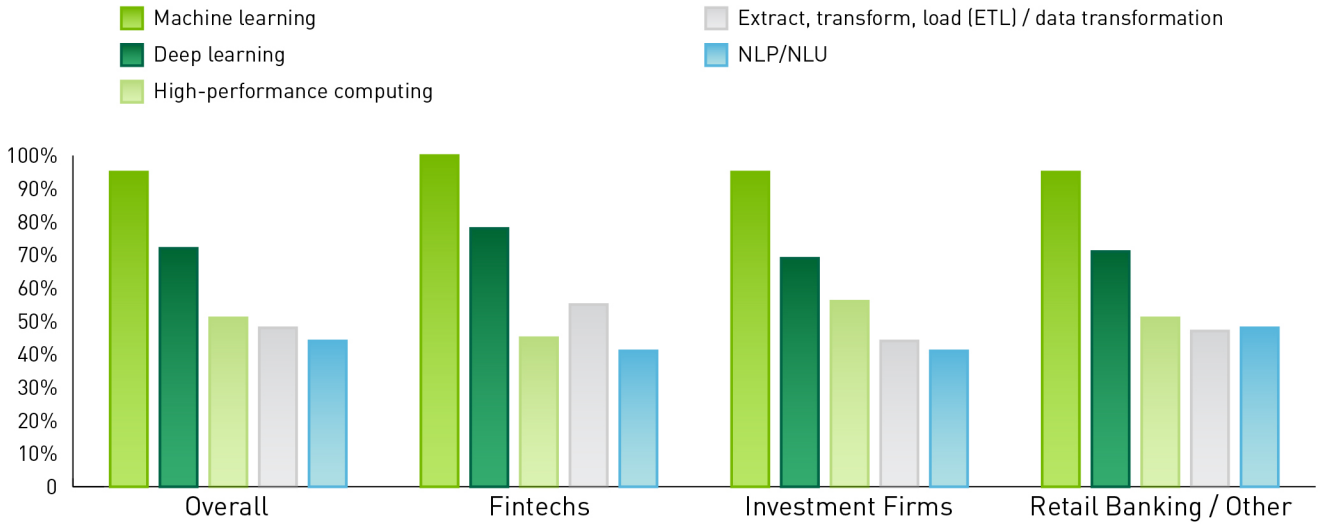
**MOST USED TECHNOLOGY**

Fintechs and investment firms say

**1. MACHINE LEARNING**

**2. DEEP LEARNING**

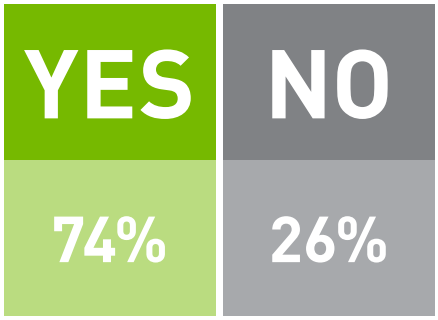
Which of the following technologies is your company using today?



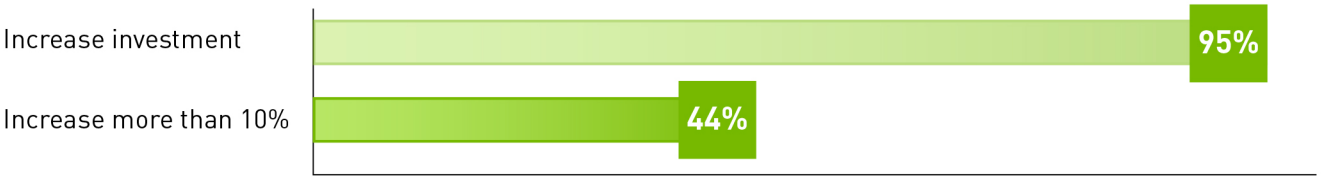
As for infrastructure, 74 percent of those who know confirmed that GPUs are currently being deployed to accelerate computing for AI training and inference. Given the vast amount of data in financial institutions, data scientists need GPUs to more rapidly train their models and produce more accurate and effective algorithms. Beyond training, GPUs are critical to inference for use cases such as running complex fraud detection models in milliseconds or delivering realistic conversational AI interactions to customers.

Given the growing demands for AI-enabled applications across the enterprise, the vast majority of survey responses indicated that their companies plan to increase spend on AI infrastructure in 2021.

**DOES YOUR AI INFRASTRUCTURE INCLUDE GPUs?**




How much will your company's spend on AI infrastructure change in 2021 (from 2020)?

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## Conclusion

This survey brought to light several key insights into the current state of AI in the financial services industry. The first is that financial services firms are committed to increasing their AI investments across infrastructure, model development, and deployment. Second, AI is critical to business success by augmenting or creating high-value services, reducing operational costs, and protecting critical customer and business data. Finally, among the dozens—if not hundreds—of applications financial services firms are planning to enable with AI, algorithmic trading, fraud detection, and portfolio optimization are the top AI use cases cited by the survey respondents.

To learn more about driving the future of finance with AI, explore NVIDIA's **AI solutions** and **enterprise-level AI platforms** for financial services.



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