The Ultimate Guide to

# ARTIFICIAL INTELLIGENCE
## *for* FINANCIAL SERVICES

*Banks • Credit Unions • Mortgage • Financial Institutions • Non-Bank Financial*

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The Ultimate Guide to
# Artificial Intelligence *for* Financial Services

Artificial intelligence (AI) is no longer an idea of the future. We encounter artificial intelligence and machine learning in our everyday lives from recommended movies on Netflix to self-driving cars. In fact, you might not even know when you are exposed to AI.

The impact AI has on our daily lives is accelerating. In fact, the latest *McKinsey Global Survey* reports a nearly 25% year-over-year increase in the use of AI.[1] New technologies are emerging every day and it's inevitable that AI will shape the future of the workforce - replacing some jobs, while creating even more jobs that don't exist yet.
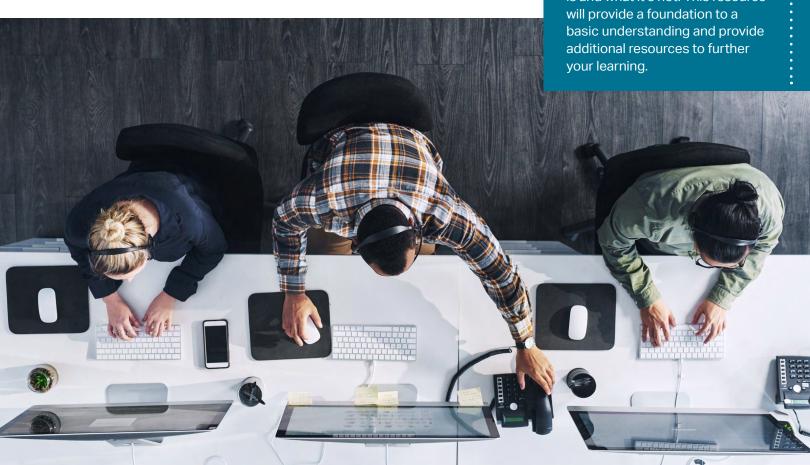
**76%** of Americans "agree" or "strongly agree" that AI will fundamentally change the way people will work and live over the next decade.[2]

**72%** of business executives believe AI will be the business advantage of the future.[3]

## What to Expect

Even though AI is widely used, there is still a lot of confusion on just what artificial intelligence is and what it's not. This resource will provide a foundation to a basic understanding and provide additional resources to further your learning.

## What is
# Artificial Intelligence?

In simple terms, artificial intelligence, or AI, refers to an ecosystem of technologies, where a computer does something that would normally require human intelligence.

Some may use artificial intelligence, machine learning and deep learning interchangeably. However there are several key differences. **AI is the overall umbrella under which machine learning and deep learning fall under.[4]**

Think of it as automation of certain tasks that take a lot of time when done by us humans. Freeing up your time to focus on the most important aspects of your job can potentially increase in a positive way.

### Machine Learning (ML)

The part of AI that empowers computers to act or make decisions without being explicitly programmed. It is described as a program were performance improves over time.[4] More data input results in improved outcomes.

### Deep Learning (DL)

A subtype of machine learning that focuses on algorithms inspired by the brain. Deep learning enables computers to follow the hierarchical learning process humans use to recognize patterns. Deep learning offers vastly greater explanatory power than earlier methods.

### Natural Language Processing (NLP)

The area of AI that helps machines interpret human language. Machine Learning (ML) helps NLP to handle multiple variations of answers. By using ML and NLP together, AI powered computers learn to understand context, so they can manage complicated question-answer sequences that could have multiple outcomes.

While these descriptions are very basic, AI can accomplish much more, and one factor always remains; **we, as humans, are still needed** to do the work behind AI.

# Examples of AI
## *in the* FINANCIAL SERVICES SECTOR

Across all industries, AI is in the here and now. Perhaps you have questions about your account after visiting your bank's website. Ever use an online messenger or chatbot to get your questions answered? If so, then you've interacted with artificial intelligence.

For financial services professionals, success means finding a way to keep pace with the technological shift created by AI and its growing impact. **Here are just a few examples of AI in the financial services sector.**

More examples can be imagined. In this space of financial services, caution needs to be considered when selecting AI technology, as there are laws and regulations that need to be tightly followed. Ensuring that AI and machine learning will not increase risks to compliance, is an important consideration and must be tested.

Nonetheless, AI is here and now and it's your time to jump on board.



## Personalized Financial Reports

AI technologies can understand complex regulations in moments. Financial professionals no longer need to invest hours or days researching. AI can also generate in-depth financial reports, providing a more personalized experience. Bankers can leverage AI to make loan decisions in only seconds. This improvement reduces the risk of default loans and improves the customer experience.[5]

## Enhanced Customer Relationships

Regardless if you're calling your institution about your deposit account, loan, or a general question on interest rates, AI technology allows institutions to create a seamless experience from customer identification/authentication to chatbots and voice assistants to actual insights and recommendations based on your original request.

Financial institutions have a long-standing reputation of trust and security. Mitek reports, consumers are more comfortable sharing their digital identity information with banking institutions (60%) over any other group, including government entities and tech companies.[6]

## Mobile Banking

In these times, we can access our account information anywhere and at anytime with the help of AI. 65% reported that mobile deposit is their preferred method for depositing paper checks.[7]

## Strategic Decision Making

AI systems can provide optimal solutions gathered from real-time available data. These solutions are then kept in a knowledge database to allow banking executives to make strategic decisions.

## Lending

During the loan application process, workflow automation powered by artificial intelligence can analyze documents submitted by the applicant and manage the process more efficiently. The borrower experience will see improvements by the reduction of the time it takes to get an application approved. Improvements to the online application process with AI would include questions based on specific answers provided by the applicant. This would perhaps shorten the process and narrow in on qualifications.
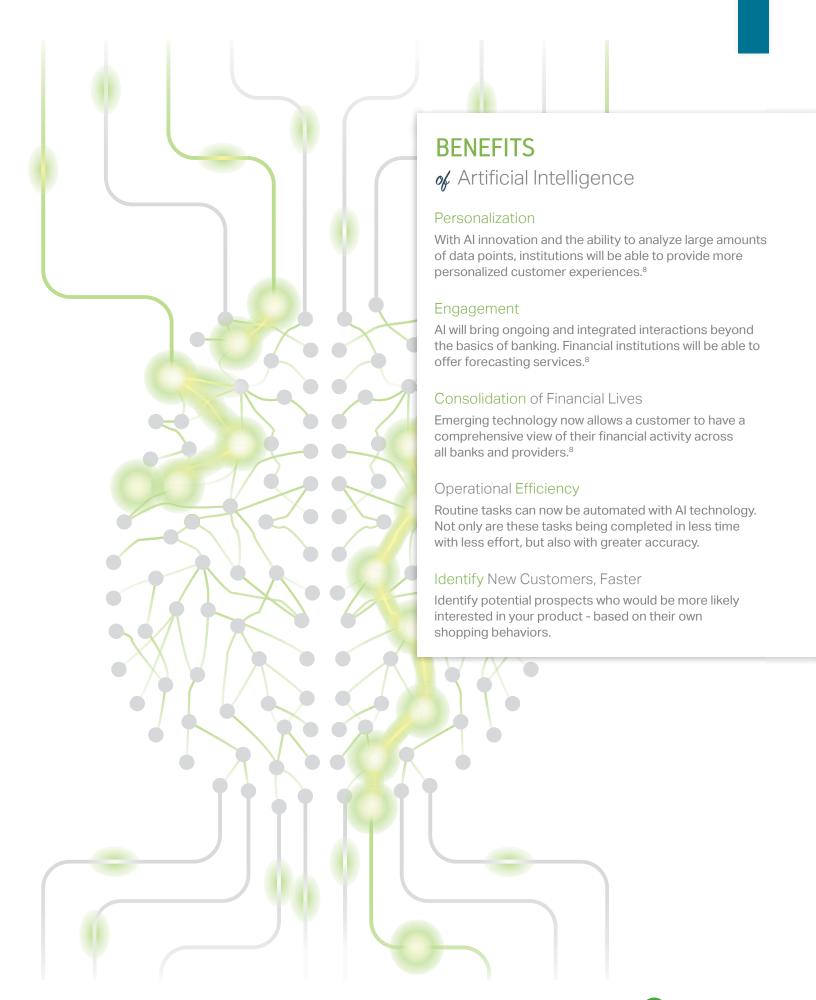
## Risk Management

AI can handle large amounts of data for analysis in a short period of time. Algorithms are used to create models of prediction, and it's done quickly. Forecasting and business planning can experience significant process efficiencies.

## Fraud Prevention / Enhanced Regulatory Compliance

With online transactions, AI has been and will continue to be extremely useful in the prevention of fraud. Think about BSA and the identification and reporting of suspicious activity. Think about automated monitoring of transactions. Also, on the front-end of customer relationships, AI helps with the *Know Your Customer* checkpoints.

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# BENEFITS
*of* Artificial Intelligence

### Personalization

With AI innovation and the ability to analyze large amounts of data points, institutions will be able to provide more personalized customer experiences.[8]

### Engagement

AI will bring ongoing and integrated interactions beyond the basics of banking. Financial institutions will be able to offer forecasting services.[8]

### Consolidation of Financial Lives

Emerging technology now allows a customer to have a comprehensive view of their financial activity across all banks and providers.[8]

### Operational Efficiency

Routine tasks can now be automated with AI technology. Not only are these tasks being completed in less time with less effort, but also with greater accuracy.

### Identify New Customers, Faster

Identify potential prospects who would be more likely interested in your product - based on their own shopping behaviors.

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# 5 Ways to **Make the Most** of AI

**1**

## BECOME AN AI CHAMPION

Take the time to invest in your own education on artificial intelligence. Familiarize yourself with what AI is, what it is not, and the benefits AI can bring you and your organization. There is a world of knowledge on the topic, however it's important that you trust the source.

**2**

## ALIGN ON BUSINESS PROBLEMS AI CAN SOLVE

Since AI is a broad topic, it's key that your leadership team aligns around specific use cases AI could solve or provide significant value. It'll be easy to get lost down the AI rabbit hole of possibilities. Tying your initiative to a business value will keep you and your team focused.

**3**

## START SMALL

Applying AI to a small sample of data rather than too much too soon, will keep the initiative manageable. Start out simple by implementing AI in increments to prove value and collect feedback. Then begin to expand accordingly.[9] Being selective with the type of data will keep your team focused and ensure successful adoption of AI within your organization.

**4**

## BUILD YOUR TEAM FOR THE FUTURE

As AI technologies continue to be adopted by customers and financial providers, the role of the banker will evolve. The skills needed to be competitive over the upcoming years will change. Talent will shift from transactional banking to service providers. Reskilling your talent needs to be a prioritized effort. Get ahead of this trend by providing the education your bank tellers need in order to be successful as financial advisors. Engage a trusted education provider who can provide training from the front line to the boardroom.

**5**

## PREPARE FOR A CULTURE SHIFT

Not only will your organization need to reskill, you must also reshape your culture to ensure you are attracting the right talent with the needed skills. In a recent study by McKinsey, 72% of high performing companies say that their AI strategy aligns with their corporate strategy.[1] This can include redefining roles, providing the right training on the right topics and cultivating an environment that adopts AI and emerging technologies.

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