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Abstract—The field of research known as artificial intelligence comprises a wide and varied range of topics and subfields. We frequently fail to recognize the significance of AI in our day-to-day lives, even though it can range from fundamental algorithmic operations to neurological capacities that may one day even be able to imitate consciousness. This is although AI may one day even be able to imitate consciousness. Investors have access to a broader selection of quick solutions thanks to the fact that many of the services we provide in the field of financial technology (fintech) are now driven by artificial intelligence (AI) and machine learning processes. AI is a boon to individuals who are tasked with the management of their own money. Personal finance software can completely transform the way you approach long-term planning and budgeting for the future by automating the repetitive parts of the process, keeping an eye on possible issues, and improving the quality of the outcomes.

Keywords—Digital Optimization, Artificial Intelligence, Internet Connectivity, Finance, Management

I. INTRODUCTION

When discussing artificial intelligence, the subject of automation almost often follows close after. This is because AI, by its very definition, presents the possibility for automation. AI, or artificial intelligence, refers to computer programmers that can successfully carry out tasks that were once seen as needing a level of intellect comparable to that of humans. The implications of this term may be found in a very wide variety of contexts, as you would expect. Automation, on the other hand, is the topic that elicits the most response from the general population, and for good reason. There is a risk that employees will be displaced and the economy will change as a result of automation. There is no question that tens of thousands of employees will be unable to make the transition into the new sort of employment, even though some specialists believe that AI automation will result in the creation of more jobs than it eliminates. (D'Acunto & Rossi, 2022)

II. OBJECTIVE

The research aimed to fulfill the following objectives:

- To study Personal Financial Intelligence
- How do we define AI, and what role does it play in the modern world?
- Simplicity and ease of use
- To study 15 examples of AI used in the financial sector.

III. METHODOLOGY

However, when it comes to one's finances, AI automation may take over some of the more boring tasks. Developing a practical budget call for a significant amount of math and careful analysis of the factors involved. You may use the assistance of AI software to build solutions for you and automate best practices rather than meticulously monitor such a budgeting plan on your own. This saves a significant amount of time.

When it comes to putting money aside for a down payment, setting up an automatic savings plan is one of the most beneficial measures you can do. This is because an automatic plan is more difficult to ignore or postpone for another month. Artificial intelligence defies expectations by addressing issues more straightforwardly and efficiently than is possible for humans, such as maintaining a budget. Machines have a more difficult time doing tasks that are relatively easy for people to do, such as avoiding colliding with other objects.

IV. PERSONAL FINANCIAL INTELLIGENCE

There hasn't been a lot of work done to enhance people's methods of managing their own money, even though AI has led to significant advancements in a variety of consumer-focused domains over the last several decades. If we want to foster behavior change that is sustainable over time, the field of personal finance is one in which society as a whole could need a new approach. Trusting that the stock market will continue to increase is the present strategy used by many people to cope with issues like bankruptcy, retirement, and the planning of their children's educations; nevertheless, this method is woefully inadequate. Now that the intricate equation that affects an individual's financial status, goals, the economy, markets, tax rules, and other aspects is thoroughly understood, we have the tools necessary to modify how we interact with money as a direct consequence of this understanding. A new AI-driven framework is now being developed to assist customers in making better-informed choices about their finances. (Flax, 2018)

If the general population adopts a new information and education system, there is a good chance that they will acquire new behaviors for a low cost. Even the most educated members of our society are affected by the pervasive economic illiteracy that may be remedied with the assistance of artificial intelligence.

The only people who currently have access to professional financial advisers who can provide anything even remotely similar to this level of service are those who have a sizable disposable income; however, even the insights provided by these professional financial advisers are extremely limited in comparison to what can be generated by modern computational and machine learning power. Investigate how artificial intelligence technologies such as neural networks and reinforcement learning may be employed to drive this shift.

Find out what differentiates "interface" AI from the kind of AI that can provide in-depth answers to complex questions about your life and money. Find out if the current financial institutions are more likely to embrace these technologies quickly or gradually, and explain your reasoning. Discover how artificial intelligence (AI) may influence your future financial situation. (2008)

➤ Financing and Management using Artificial Intelligence

Major advancements in artificial intelligence (AI) have made it possible to develop sophisticated financial applications that have reshaped the financial services sector. In this way, AI has supplemented human talents to guarantee that clients have access to first-rate assistance. Across the globe, the largest companies are using AI tools to spot outliers and build more profitable investing strategies. Trading algorithms and other innovations should be used to integrate data on the ever-shifting market dynamics and price levels, according to the research on AI applications. Proprietary algorithms that provide fast, efficient trading allow for this to happen. If the company's financial management team wants to see real market benefits after incorporating AI features, they need to make sure that the system captures the primary duties, which include recognizing and assessing risks and preventing them. These distinctive qualities are an integral component of the big interventions of the financial sector, which have been used to improve the provision of cutting-edge consumer-oriented services. The growth of 5 digitalization from a global viewpoint has made it clear to business owners that they need reliable techniques for handling financial transactions. Most importantly, when banks and corporations spend money on various technology applications, they should keep an eye on the developing markets.

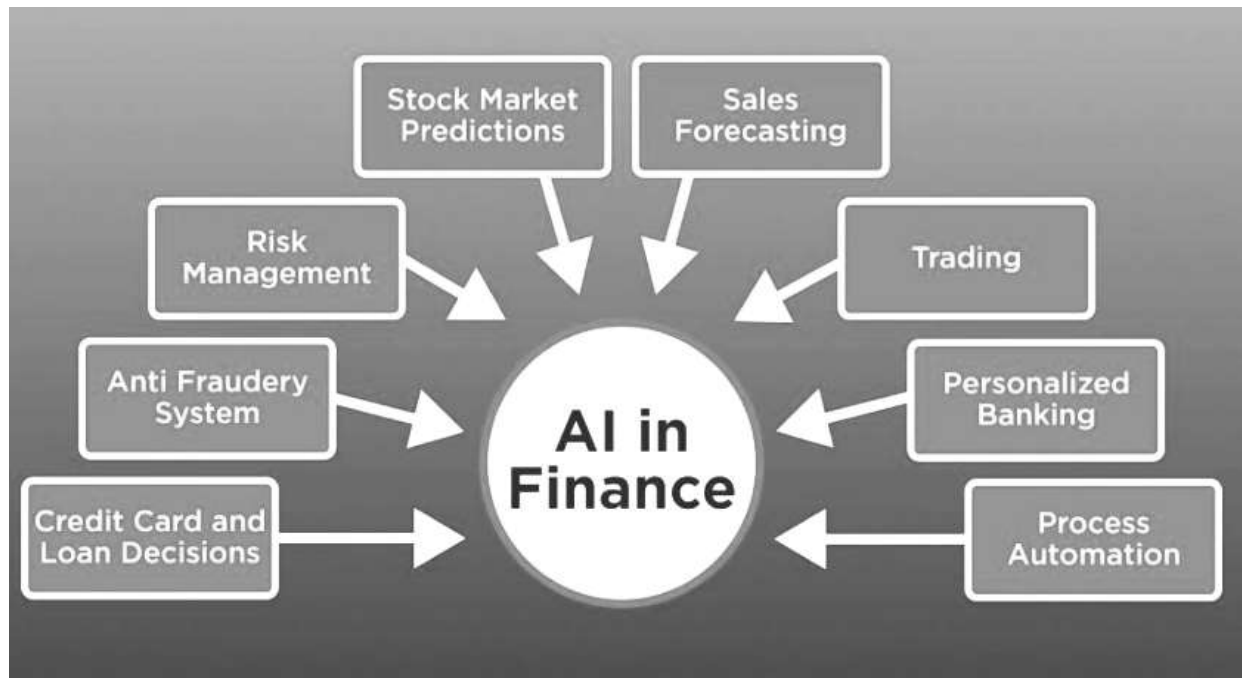


Figure 1: AI In Finance

V. HOW DO WE DEFINE AI, AND WHAT ROLE DOES IT PLAY IN THE MODERN WORLD?

Engineers working in the area of artificial intelligence are responsible for the construction of computer programmers that can "think" for themselves. In this picture-perfect situation, a computer would solve problems with just little input from a person on the other end of the line. The term "artificial intelligence" (AI) refers to software systems that are capable of teaching themselves.

The use of artificial intelligence carries with it several benefits, which may be seen from the perspectives of both companies and the customers they serve:

- Increasing the effectiveness and automation of business procedures may help save costs.
- The financial institution may mitigate losses and increase profits thanks to the A.I.'s role as a revenue generator.
- With the help of A.I.'s analysis and comments on expenditure, customers may get an advantage in their financial well-being (automatic spending insights).
- Chatbots make banking easier for customers.
- Using A.I.-based trading, businesses and individuals alike may automate their investment strategies and reduce their risk exposure.
- With so many potential uses, artificial intelligence (AI) is quickly becoming a hot commodity among tech giants.

The use of artificial intelligence (AI) does not come without any inherent risks. The selection of lucrative assets is one of the most popular uses of artificial intelligence (AI) in the financial industry in today's world. However, it is important to bear in mind that the success of this technology is by no means a certain conclusion. As a result of this, it is still encouraged to do one's study into the various markets and assets to find investment opportunities that the AI failed to recognize. (Botterill, 2010)

VI. SIMPLICITY AND EASE OF USE

It was anticipated by Accenture that by the year 2020, fifty percent of customers will contact their banks not in person but rather through mobile apps and other types of online communication. This prediction was made for the year 2020. In the year 2018, this percentage was at just 34%. This is due,

in part, to the fact that A.I.s have made online banking far easier to use and more accessible to all sectors of the general population.

PFMs and chatbots can perform this particular job since the construction of both of these features is only geared toward the purpose of making things easier for the user. Automating transactions, scheduling transfers, and having access to spending insights are more than enough to make mobile banking easier. If you also have "someone" you can ask questions to anytime you want or need to, mobile banking will be much simpler. This is especially true if you have knowledge of your expenditure at your disposal. (2015)

If you are a millennial or even someone much younger than that, it is easy to assume that everyone should be able to utilize their online banking software and make use of all of the features to the fullest degree possible. This is especially true if you are in your 20s. However, it is unavoidable that certain people, particularly those in the younger group, may have problems using this technology. This is especially the case. This is where the previously unimaginable capability of having a conversation with a chatbot in the same natural way as if you were talking to a real person comes in handy; only a few years ago, this was not even remotely feasible. Anyone may now initiate a discussion, input the command "Transfer \$500 to X," and then forget about the chat entirely; the artificial intelligence will carry out the transaction on their behalf. It truly is as simple as that! (Grable & Chatterjee, 2022)

The employment of personal financial managers (PFMs) and chatbots goes hand in hand; in certain situations, the two varieties of artificial intelligence (AI) even collaborate. Personal financial managers may come in the form of stand-alone programmers that access a person's banking information. This is another option. An excellent example of this idea may be seen in the form of the programmed Wallet.ai, which is primarily concerned with the process of creating automated spending insights. It accomplishes this goal by collecting data on the conditions that prevailed during a transaction and offering recommendations for business dealings that may occur in the future.

Because of this, everything that has to do with a person's finances can now be done in a manner that was never before feasible, and we have artificial intelligence to thank for making this possible. (Joo, 2022)

WHICH OF THE FOLLOWING BUSINESS OUTCOMES HAVE THE GREATEST POTENTIAL TO BE ACHIEVED THROUGH THE USE OF AI?

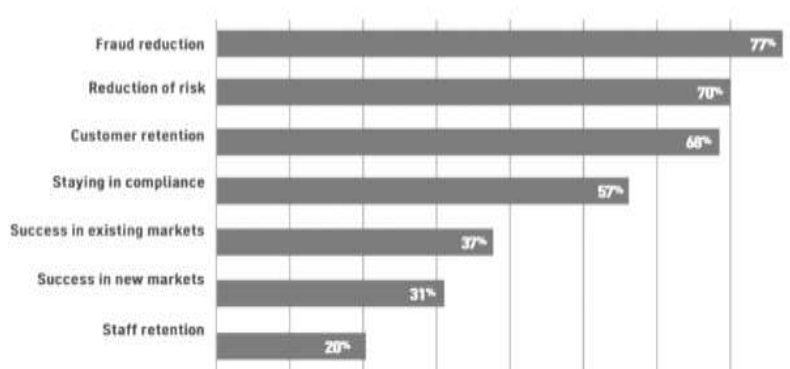


Figure 2. Finance Intelligence

VII.15 EXAMPLES OF AI USED IN THE FINANCIAL SECTOR.

❖ Evaluation of Danger

Is it possible to utilize AI to decide whether a borrower meets the requirements for a loan? Definitely. According to Towards Data Science, machine learning algorithms are being used by banks and applications to do anything from assessing a customer's creditworthiness to suggesting tailored loan

packages. What's the benefit? Artificial intelligence (AI) is objective and can determine loan eligibility more rapidly and precisely than humans. (Xiao, 2022)

❖ ***Incorporating a Risk Management Framework***

Banking institutions have a persistent, but critical, problem in minimizing risk (and practically every other industry). According to Build In, "pinpointing trends, identifying hazards, conserving labor, and ensuring better knowledge for future planning" are all possible thanks to machine learning.

❖ ***The identification, administration, and prevention of fraud***

When you make many transactions on your credit card, does your credit card company ever contact you? According to Towards Data Science, AI-powered fraud detection systems scrutinize a user's purchasing habits and sound an alarm if they identify anything that doesn't fit with the user's typical spending habits.

❖ ***Decisions Regarding Credit***

The book "Towards Data Science" describes how AI can swiftly and properly evaluate a prospective client based on several characteristics, including information gleaned from their smartphone (and, unlike humans, robots are not prejudiced). (Calandra & Hoffmire, 2022)

❖ ***Providers of Advice on Financial Matters***

Do you want to keep up with current economic developments? Do you want a critique of your portfolio? To get the answers, you need as soon as possible, artificial intelligence algorithms may examine a person's portfolio (or the newest trends or most forms of essential financial information), as reported by Forbes. (2008)

❖ ***Managing finances/personalized banking***

With the rise of chatbots and virtual assistants, the time spent on hold waiting to talk to a customer service agent has been drastically reduced, if not entirely removed, from the process of managing money and using customized banking. According to Towards Data Science, customers can now do things like check their balance, schedule payments, look up account activity, ask questions of a virtual assistant, and get individualized banking advice whenever and wherever they please thanks to technological advancements and artificial intelligence. (Calandro & Hoffmire, 2022)

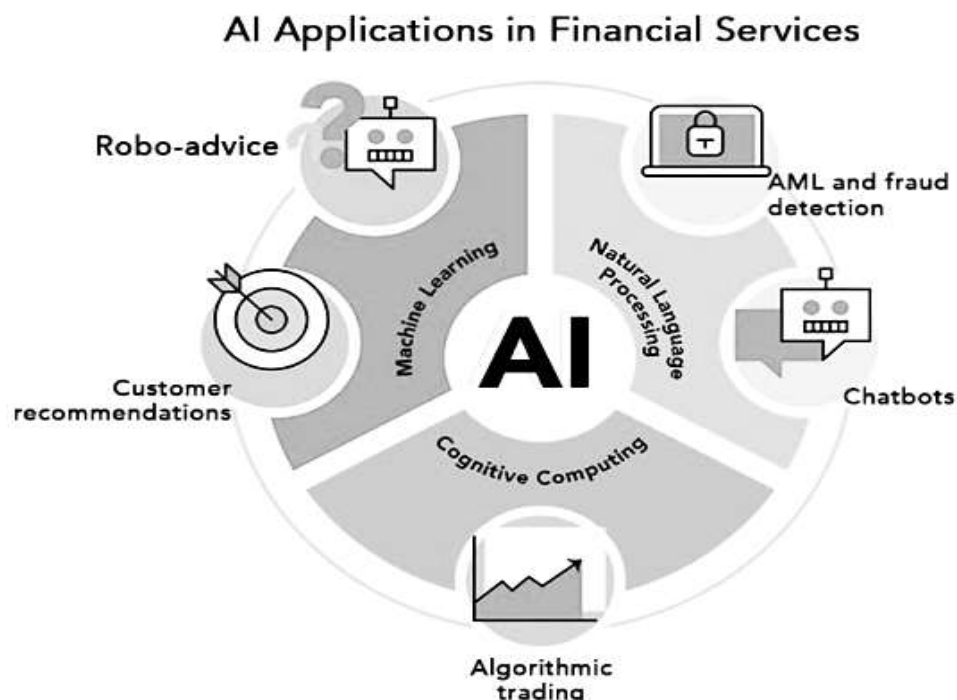


Figure 3: -Artificial Intelligence In Financial Service

CONCLUSION

Artificial intelligence is already changing the face of personal finance, whether it be via personal financial robots (PFRs) or algorithmic trading. There is no reason to doubt that the trend of artificial intelligence will continue as the technology continues to advance and more companies join the bandwagon each year. In any case, AI has already had and will continue to have a substantial impact on the financial lives of individuals in the future as well. This is but a sample of how this technology is already making people's lives better, but artificial intelligence is always developing and growing, which means that the future will bring even more opportunities. Attention to detail and an acute understanding of one's circumstances are the only prerequisites for effective budget management. Intelligent systems not only supply an abundance of them but also tailor the services they provide to the specific requirements of each user. As a consequence of these enhancements, which will eventually become typical in the normal customer's day-to-day financial management, the average customer will be able to make better judgments in the future about their finances. Tools for personal finance management that are powered by artificial intelligence (AI) are a prominent illustration of how technology may enhance the financial life of people. Incorporating artificial intelligence into your personal use of fintech systems is one way to experience the benefits of utilizing these systems for the first time.

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