

The Combination of AI's Powerful Data Algorithm Capability and Finance

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Abstract: The way many industries function is changing as a result of the advancement of artificial intelligence technology. Under the influence of the digital revolution, the financial industry has seen significant changes and advancements. This paper will explore some specific impacts on the financial data industry from the role of AI in modern society and the expansion of various industries. It is mainly used to explore whether AI really plays an irreplaceable role in the field of finance and related data, as well as its advantages and disadvantages. Through the practical application of AI-related technology, as well as the reflection of the industry being used by people today, the importance of AI is explored by some examples. AI's role in today's world, especially in related fields such as finance, is undoubtedly very important, but there are still many risks that people need to pay attention to.

Keywords: artificial intelligence, automation, identification, network, industry

1. Introduction

Artificial intelligence is the use of computer algorithms and programs to allow technology to work and produce instead of people. Nowadays, with the development of artificial intelligence technology, people have gradually entered the era of digital revolution. Numbers and algorithms are changing the way many industries operate. The financial field has undergone a lot of changes and progress under the digital revolution, and a new financial field has emerged under the combination of the two technologies [1].

In this age of information technology, AI's entry into the financial field has become an irreversible trend. Therefore, under such conditions, whether finance and AI can be effectively combined, whether there are successful cases, and whether people can effectively apply this way in their lives and work, has become a question worth thinking about. We will explore the impact of the AI field on real life and analyze whether AI is really suitable for work in finance-related industries through some practical cases. In addition, we will explain the advantages of combining AI with the financial industry.

2. The Concept of AI

AI, short for artificial intelligence, is an important part of computer science. The rapid development of AI industry makes all walks of life and many industries become the application carriers of

information technology. It is a means of intelligence that transcends the scope of human thought and work. In general, AI has increased work efficiency and improved work structure, especially in banks. People need more efficient and accurate methods to improve their financial work, or financial management needs. It is actually a means to improve productivity and speed up development. As a result, we cannot avoid AI entering the financial field, which will help work in different fields over time. For example, computational Statistics techniques are more likely to have been successful in the broader and more homogeneous macroeconomic-driven classes, like as fixed income and FX, where uses of AI and ML have been significantly less in-depth [2].

In today's financial activities, the financial industry is increasingly demanding the accuracy of results and the integration of data, and the characteristics of AI are amplified in this process. Finance is a highly flexible industry, and many people are willing to choose this popular field as their career prospect or future development plan. Therefore, the combination of AI and finance is undoubtedly a very attractive thing. Up to now, many countries and enterprises have begun to combine finance and AI and give full play to the characteristics of AI [3]. The high computing and working ability of artificial intelligence has become a very good substitute for human labor.

3. Some Basic Applications of AI in Finance

All kinds of convenient ways, measures, and working methods derived from AI itself are the key to promoting the development of the financial industry [4]. For instance, in China, AI is already widely used in the financial sector. There are a lot of related jobs for people to become substitutes, artificial intelligence to create a lot of complex jobs. Research in the field of artificial intelligence includes automation, intelligent recognition, intelligent network and so on. These applications have fundamentally changed the way people work, tools, and efficiency. Artificial intelligence in the new era has been widely applied in relevant fields, bringing more convenience to people [5].

3.1. Automation

Complicated financial activities require a large number of employees to collect data, analyze and model. Searching for information takes a lot of time, and they need to keep an eye on the trends of enterprises or economic markets. In this huge financial model, each link is a crucial cornerstone, and after completing the analysis preparation, the docking and communication with customers or partners also need to consume a lot of energy. The intervention of AI makes computer intelligence responsible for people's work, which undoubtedly liberates labor costs greatly. Automated infrastructure construction, services from intelligent AI when entering the bank, automated data processing and accurate calculation, and error-free data docking. These activities can be perfectly solved in front of AI, and the automated mode improves efficiency and saves a lot of costs. Automated services are also enabling more customers to trust and choose financial services. There is no doubt that AI has opened the door to modern financial operations.

3.2. Intelligent Identification

Intelligent recognition is also a major impact of AI on the financial industry to keep up with the times. Intelligent identification takes advantage of AI to simplify and strengthen the process of analyzing discrimination and the impact of distance on people. Intelligent recognition includes biometric recognition, natural language recognition and speech recognition. Biometrics has been widely used in life and financial work, especially in China, where authentication and payment using identification and AI technologies are widely used. Subdivided, fingerprint recognition, face recognition, iris recognition and finger vein recognition are the four biometrics widely used in the financial industry. Fingerprint identification is the collection and preservation of the user's

fingerprint, which in many cases will become an important proof of identity. Face recognition is more widely used to quickly identify objects, and help people complete payments and other means. Relatively speaking, iris recognition and finger vein recognition are more accurate, which is convenient for people to open an account or a large number of operation of the identity and authority for affirmation and authentication, and identification technology greatly simplifies the workflow. In addition, information and network are utilized to narrow the distance between customers and financial projects or companies, and make financial work more perfect by leaps and bounds. The application of natural language recognition is also extensive, which is mainly reflected in the recognition of data languages and the fast processing of data and research objects that are difficult for people to coordinate quickly. Natural languages mainly refer to programming languages. The combination of finance and data analysis and modeling has long been a way of working under the cover of implementation, while the editing of programming languages incorporates AI to increase fluency and greatly reduce errors. This is undoubtedly a great improvement over the previous financial model, and the lack of people's ability to analyze data can be perfectly compensated by AI. Finally, intelligent recognition of speech recognition, speech recognition mainly includes voice record authentication, as well as intelligent customer service. Intelligent customer service reduces labor consumption and workload. Electronic customer service can clearly follow the process to solve problems for customers, while human customer service only needs to directly connect with customers when necessary.

3.3. Intelligent Network

Intelligent branch is the combination of the network and the bank, so as to carry out work and financial related business on the network, which is network banking. The reality of Banks usually in order to increase the competitive ability, and achieve the purpose of business, they will open a huge number of branches and branches. But the emergence of network bank, people can more flexible use of the combination of AI and practical work, and finish their work quickly and efficiently, so the impact to the reality of banking industry. This has also led to some changes in the real network and banking. Intelligent financial management, machine financial management, machine investment and other aspects have also been implemented in all countries in the network combined with AI, which can be more effective and reasonable. Different financial management or investment plans can be created according to the different situations of each customer, which greatly improves work efficiency and makes people more satisfied. The emergence of intelligent networks is undoubtedly a new way of working for the financial industry, and this way of working is more convenient for users, so this way will be promoted and continue to develop. And the original financial model will also be impacted, and will need to make certain changes. This more attractive way to attract customers undoubtedly deserves more attention and investment from the government or enterprises. With the increasing implementation of intelligent networks in recent years, people begin to pay attention to this new office mode and change their investment mode and work mode in related financial industries. Therefore, after automating the research of financial work through artificial intelligence and providing excellent methods such as intelligent identification and intelligent network, AI has had a great impact on the financial industry and has gradually begun to affect people's lives. People in this convenient new system will constantly find new work system.

4. The Pros and Cons AI Might Bring to Financial Work

Obviously, every emerging industry has two sides, so the use of AI in finance is no exception. AI has provided a lot of convenience and efficient means for people's lives and finance-related work, but in this process, people have also faced various problems. In many different countries and

companies, people have encountered varying degrees of problems when applying AI technology to the financial industry.

For example, in China, artificial intelligence in all areas of the financial function has been gradually adopted by banks or enterprises, as the China Construction bank and Bank of Communications has robotic automation services, and in each intelligent node can appear some real-time speech recognition, face recognition, etc., combining identification technology and the network of the emergence of new financial models. At the same time, after the optimization of artificial intelligence cases such as Alibaba, the loss rate can be effectively reduced through modeling with big data technology, and even profit can be turned from loss to profit. Different investment and financial management can be done for different people. At the same time, after the combination of AI and the financial industry, the information of market data becomes very clear.

For financial practitioners, complete and effective information can be obtained, and the original information can be easily extracted and classified to make optimal logical reasoning. The banks use algorithms to generate accurate results, which in turn help enhance customer service and generate better sales performance to deliver profits [6]. Second, in the past, for financial institutions. They will spend most of their energy and cost on developing and maintaining large customers. Correspondingly, small and medium-sized customers will be neglected to a certain extent, and their financial work will be affected. However, AI technology can extend the scope of customers indefinitely. It is easy to classify all customers and classify and summarize all customer information, and carry out relevant analysis and reasoning. Therefore, it is convenient for investors of all levels and sizes to invest in all aspects. Therefore, artificial intelligence can help financial inclusion, expand the financial market, make more people willing to participate in finance, make investors more assured, and make the market more stable. Artificial intelligence helps people do analytics, which makes business predictions more accurate and allows people to work better with those predictions [7].

The application of AI in the financial field has become an important development direction in the financial field in the world, but this method has not been popularized or widely used in all countries or all regions. This is because there are still certain risks and deficiencies in the application of AI in the financial field. Although the data processing of AI is very precise and efficient, errors in basic parameters, or in the basic model and operation process, will lead to a very large chain of errors. Under such circumstances, there is no doubt that investors, enterprises or banks have suffered very, very large losses. So artificial intelligence also needs to be controlled by humans. So far, not all the work can be done without human beings, using only AI and artificial intelligence. Much of the work in finance still depends on people to do it directly. In addition, the introduction of AI means the emergence of network and virtual information. In the process of using AI, people may input their fingerprints or facial information or other very private information. However, the information collected by financial institutions may not guarantee 100% security and privacy. So there is a risk that people's personal information will be exposed, which will also cause great trouble for investors, so some people are still reluctant to use it.

5. Problems/Challenges

However, there are many problems and challenges when AI plays a role in the financial field and promotes the transformation of financial digital models. One of the biggest problems is how AI technology can be combined with real-world scenarios and people's actual needs. Because the purpose of AI is to serve people, it is to enable people to better integrate their own data in the financial field or to improve the relevant work. Therefore, it is necessary for traditional financial institutions to first understand their own shortcomings. Secondly, targeted solutions should be made according to the needs of investors and possible problems in work and business, so as to give full

play to the maximum effect of AI. Putting AI into the production and work of the financial industry undoubtedly requires huge cost, time and energy. Therefore, only by making proper use of AI based on people's needs and work needs can the advantages of AI be maximized, which is the purpose and significance of the combination of AI and the financial industry.

Different regions and countries for the use of AI have different needs and requirements, which means that the practical popularization of AI in the financial sector in each region may be different ways and means. Therefore, people need to adjust measures to local conditions, according to the different requirements of each place and different AI, and the combination of financial and configuration need according to the actual situation. Relatively speaking, different regions have different levels of economic development, which means that the resistance and cost of AI entering the field are different. Therefore, for some small and medium-sized enterprises or relatively backward areas, it is not very easy to universally apply AI to finance. At this point, if the work in the financial field requires cooperation with other banks or related companies, the practical technical integration of AI is required. Different levels of development may lead to new problems in the process. For example, people in one place register information with AI, but they cannot complete the work connection in another place, which will lead to some troubles.

Moreover, the combination with the actual scene needs to be differentiated according to the different types of enterprises or companies in the financial field, so that the needs of each investor are different. Therefore, when AI is applied to these investors, it is necessary to distinguish their functions in the financial field according to different investment purposes, or financial management purposes. Moreover, people's needs and decisions are always uncertain and changeable. The financial field has never been a field in which the development and changes of things can be predicted effectively. Just like when people speculate on stocks, they cannot be very sure what the next stock trend will be. So, AI has less flexibility in this respect than human labor. When he is combined with the actual situation, he cannot make his own changes and changes in a very short period of time to adapt to the current situation. These situations may cause people to consume a lot of money and cost a lot of money to invest, but fail to produce good returns in some cases, and then investors refuse to use the application of AI in finance. Therefore, whether the AI industry can leave the cooperation of human labor in finance also needs to be decided according to the actual situation. However, the definition of these situations is often very vague. At the beginning of our investment, expenditure and construction of AI-related products, we do not take into account certain things that will happen in the future, and these uncertainties will affect the role of AI in the actual scene. Therefore, these risks are uncertain and variable. As well as the instability of AI's judgment on data and analysis, the application of AI in the financial industry still has certain risks [8].

6. Future

While applying AI completely in the financial sector is not a very mature body constitution, but artificial intelligence (AI) is also in constant development, constant progress. Until now, we can only stay in the preliminary stage of the integration, so that the industry has very big development prospects and development space. In order to solve these obstacles caused by the current AI application in the financial field, people need to pay attention to the problems in a targeted way. In terms of consumers and customers, they should improve their understanding of AI, and should not rely too much on the analysis and use of artificial intelligence. They should learn to make reasonable use of the convenience brought by artificial intelligence, rather than blindly following artificial intelligence to facilitate their work or investment. In addition, the combination of financial work and AI will be decided according to each person's different situation. It may depend on where you live, or what company you work for, or what project you work on. Then we need to make a comprehensive judgment based on these actual situations to determine whether we can make good

use of AI to improve our work efficiency. If not, we should take other measures in time. The use of AI needs to be regulated, and potential algorithmic bugs paid attention to, so that the benefits of AI can be properly exploited [9].

For financial companies, banks and other enterprises, it is necessary to strengthen the protection of customers' personal information and to deal with and solve problems in a targeted manner. Meanwhile, it is necessary to ensure that the operation of AI is correct so as to prevent fundamental mistakes and bring more hidden dangers and drawbacks to the cooperation and trust between the two parties. This requires investors and financial companies to have the right values and ways to use AI. Similarly, when companies and governments carry out AI-related construction in local areas, they should also take into account the local actual situation, as well as changes and differences in investors or policies, so as to use different means in different areas to achieve the most appropriate and efficient combination.

Although artificial intelligence has drawbacks and is not fully mature, in this information age, the combination of AI and finance will undoubtedly become more and more profound, and one day it will really complete a very good mutual assistance and promote the development of the financial industry. Therefore, for the future prospect of the combination of AI and finance, it still has a very large market and room for improvement, which is also a very important project that people will mainly study and develop in the next stage. In the following development and exploration process of artificial intelligence, people will mainly focus on solving known and existing problems, finding accurate and more detailed means to better connect AI with the financial industry, expanding new businesses and changing the old fixed model. To find combinations that are more efficient, more convenient and easier for people to use. Nearly every sphere of civilization will be impacted by AI. AI promises to customize healthcare, improve security, boost transportation, and increase the effectiveness of education, to name just a few. The fact that private investments in AI exceeded 70 billion last year, representing an astounding average annual growth rate of 48 percent is consistent with the possibility of disruptive growth [10]. The future of AI in general is very promising.

7. Conclusion

Generally speaking, the application of artificial intelligence in the financial field has achieved some achievements at the present stage and will be widely valued by people and continue to develop in the future. Artificial intelligence, however, brings us convenience and efficiency. People also need to strengthen the regulation of artificial intelligence, and supervise the use of artificial intelligence. As AI technology combined with the financial sector has become an essential trend, so such an industry has also attracted more people to participate in and continue to make their own efforts and contributions to the development of this industry. However, in this research paper, there are relatively few descriptions and statistics on the application of specific data and examples. In the following research, more thoughts will be focused on specific case analysis, as well as the construction, establishment and description of relevant data models, which will make specific situations related to AI and finance more clear.

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