IJARCCE



International Journal of Advanced Research in Computer and Communication Engineering

Vol. 10, Issue 2, February 2021 DOI 10.17148/IJARCCE.2021.10215

Review on applications of Artificial Intelligence in financial services

Mr. Satish Kale¹, Mr. Sandeep Shinde²

Lecturer , Department of Information , BVIT, Navi Mumbai, India¹

Lecturer, Department of Information, BVIT, Navi Mumbai, India¹

Abstract: Now day's every sector enhancing their services by adapting digitization, everyone has witnessed fastest growth in the adaption of digitized financial services also. There is a consistently inventing and research on machine intelligence to enhance operational model, business model and revenue model of firms. Artificial intelligence on of sub branch of computer science which provides linguistics, psychology, mathematics, and philosophy, it today mainly utilized as powerful and effective tools for finance sector. Artificial intelligence has a great potential for enhancing positive impacting on financial firms, if it is implemented as a positive approach. In these paper, we focus on addressing crucial, powerful and beneficial tools providing by artificial intelligent for financial firm as well as end user.

Keywords: Artificial Intelligent, financial sector, machine learning, artificial neural network.

I. INTRODUCTION

Now day every information easily accessible all around world. Every micro to large company storing, organizing maintaining and processing huge amount of information. All these information come around from every corner of world using various sources like social media, IoT devices and number variety of application. Artificial Intelligence provides qualitative research method for to analysing such huge amount of information [1][2]. Recently, financial sector giving more focusing to implement Artificial Intelligence provides variety tools easily monitor user behaviour patterns and unusual modification. The use of Artificial intelligence (AI) and machine learning in finance contains everything from task automation, chat-bot assistants to fraud detection. The adoption of AI will be step up for financial institutions (FIs) by increasing user acceptance, technological enhancement and moving regulatory frameworks. Financial institutions and Banks using AI can modify monotonous processes and greatly improve the customer experience by offering 24/7 access to their accounts and financial advice services. In this paper we address on the various application of artificial intelligence in financial sector to improving financial services.

2. Applications of AI in Financial Services:

AI algorithms are implemented by FIs across every financial service for business benefits and keeping mind of techno savvy consumer's here's how:

1) Personal Finance:

AI is a necessary and plays vital role for any financial institution and be a top tool in the industry. The driving force behind adoption of AI in personal finance is many consumer wants financial independence, and providing the ability to manage one's financial portfolio by offering 24/7 financial assistance via chat-bots powered by natural language processing or personalizing insights for wealth management solutions.

2) Corporate Finance

AI is especially helpful in corporate finance because it can better predict and assess loan risks. For companies looking to extend their value, AI technologies like machine learning can help improve loan underwriting and reduce financial risk. AI also can lessen financial crime through advanced fraud detection and spot anomalous activity as company accountants, analysts, treasurers, and investors work toward long-term growth.

4. Benefits of AI in Finance

The enormous benefits of implementing AI in the area finance for delivering personalized recommendations, task automation, fraud detection. Use cases of AI within the front and middle office can transform the finance industry by:

Copyright to IJARCCE

IJARCCE



International Journal of Advanced Research in Computer and Communication Engineering

Vol. 10, Issue 2, February 2021

DOI 10.17148/IJARCCE.2021.10215

- Saving money
- Lowering false positives and human error
- Reducing the need for repetitive work
- Enabling frictionless, 24/7 customer interactions

5. Impact of AI on the finance industry

The business sector- financial industry which is more focused on developing and implementing AI for accuracy, efficiency and speed. AI and machine learning technologies are used to improve service of financial industry. AI in finance is creating a huge impact. Let's take a look how.

1) Personalized financial services

AI expands the extent of monetary services by means of consumer financial services. AI makes it possible to supply consumers with a private financial keeper that automatically lets them decide an appropriate sort of spending, saving, and investing that are supported their personal habits and goals. With AI in finance, it's easily design intelligent model which will learn from the customer's financial data and determine what's working for them and what's not, and help them track their financial activities better.

2) The reduced cost of AI in finance

Main feature of AI in finance provides implicit processes and reduced the time and value of serving end user. While AI has on one side, reduced the value of monetary services, on the opposite, it's made financing extremely convenient to avail. Through various digital servicing channels, AI is providing effective in attracting that enormous section of the population to financial services, which previously found them cumbersome, expensive, and time-consuming.

3) Newer management styles

AI in finance is opening up new direction for banking and insurance leaders to hunt advice. No more are financial experts limited to human opinions so as to form forecasts or recommendations within the field of finance. With AI in finance, these leaders can now ask questions to machines that are related to their business and these machines can, in turn, analyze data and help them take data-driven management decisions.

4) Wealth Management for clients

A considerable investment of AI in banking sector is wealth management. By automating the wealth management process, banking sector will be able to offer personalized, tax-optimized investments to clients, who have less in professional wealth management.

5) Pre-empted fraud scenarios

With AI, it is possible to simulate numerous situations where a fraud or cybercrime may occur. Artificial intelligence in finance, in this way, follows a proactive way to deal with making the monetary administrations' current circumstance safe and penetrate evidence. AI intelligence in account additionally helps keep a severe administrative oversight. AI guarantees that all strategies, guidelines, and safety efforts are as a rule truly followed while planning and conveying any monetary help.

6) Automation

Critical decisions in fields finance can't bear to be defaced by the error engaged with human choices. AI in finance implemented thorough research, reports, and learning over long periods of time and large volumes of data. AI introduces automation in areas that require high degrees of accuracy thereby, safeguarding the trust of consumers.

Copyright to IJARCCE

IJARCCE



International Journal of Advanced Research in Computer and Communication Engineering

Vol. 10, Issue 2, February 2021

DOI 10.17148/IJARCCE.2021.10215

7) Voice Assisted Banking

This innovation engages clients to utilize banking administrations with voice commands instead of a touch screen. The normal language innovation can handle inquiries to address questions, discover data, and associate clients with different financial administrations. The AI framework will be like Apple's iPhone individual colleague, "Siri" and amazon's "Alexa".

8) Business acceleration

Business speed increase alludes to how organizations use AI to assist information based exercises to improve productivity and execution, for example, monetary foundations making venture techniques for their financial backers. While this kind of action is frequently seen as a chance to decrease costs through the computerization of inner cycles, it ought to likewise be considered as far as the association's capacity to change the client experience.

6. CONCLUSION

All in all, the monetary business is encountering a steady development because of the effect of computerization innovations and AI. The appropriation of AI in monetary frameworks is expanding at a remarkable rate, causing a wide reach of positive and negative impacts. This paper gives a conversation of the assignments that apply AI in the monetary business and the impacts brought about by the execution. Simulated intelligence is consistently advancing at a quick rate, firms and experts in the money industry need to adjust to the progressions to guarantee that they profit by the arising devices that are expanding comfort.

REFERENCES

- [1]. Narendra Rao Tadapaneni, Sr. Software Engineer, T. Rowe Price, USA, "Artificial Intelligence in Finance and Investments", IJIRSET, Volume 9, Issue 5, May 2020
- [2]. S. Bhattacharyya, S. Jha, K. Tharakunnel, and J. C. Westland, "Data mining for credit card fraud: A comparative study," Decis. Support Syst., vol. 50, no. 3, pp. 602–613, 2011.
- [3]. K. Chaudhary, J. Yadav, and B. Mallick, "A review of Fraud Detection Techniques: 1, pp. 975–8887, 2012.
 Credit Card," Int. J. Comput. Appl., vol. 45, no.
- [4]. M. Zareapoor and P. Shamsolmoali, "Application of credit card fraud detection: Based on bagging ensemble classifier," Procedia Comput. Sci., vol. 48, no. C, pp.679–686, 2015.
- [5]. Jae Joon Ahn, Suk Jun Lee, Kyong Joo Oh, and Tae Yoon Kim. 2009. Intelligent forecasting for financial time series subject to structural changes. Intell. Data Anal. 13, 1 (2009), 151–163.
- [6]. Burhan Khan, Rashidah F., Asifa Mehraj, Adil Ahmad, and Shahul Assad. 2017. A Compendious Study of Online Payment Systems: Past Developments, Present Impact, and Future Considerations. International Journal of Advanced Computer Science and Applications 8 (2017), 256–271.
- [7]. Frank Z. Xing, Erik Cambria, and Roy E. Welsch. 2018. Natural language based financial forecasting: a survey. Artif. Intell. Rev. 50, 1 (2018), 49–73.
- [8]. V. Van Vlasselaer et al., "APATE: A novel approach for automated credit card transaction fraud detection using network based extensions," Decis. Support Syst., vol. 75, pp. 38–48, 2015.
- [9]. Justin A. Sirignano and Kay Giesecke. 2019. Risk Analysis for Large Pools of Loans. Management Science 65, 1 (2019), 107-121.
- [10]. Bo Wang, Tianyu Fan, Zhiyong Li, and Xiangtian Nie. 2019. Research and analysis on the coordination mechanism of financial innovation and economic growth based on BP neural network. J. Intell. Fuzzy Syst. 37, 5 (2019), 6177–6189.