International Journal of Innovations In Science Engineering And Management

Recent Developments in AI and Its Impact on Financial Literacy

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Abstract

The convergence of financial literacy and artificial intelligence (AI) presents a promising future for Bharat economic landscape. As the country adopts digital technology, AI is transforming financial education and making it accessible to all. This research examines recent developments in artificial intelligence and the impact on financial literacy. Analysing the integration of AI in financial education platforms and personal financial planning applications, the study examines the effectiveness of these innovations in enhancing financial literacy among diverse populations. The study also discusses potential challenges posed by AI, such as ethical and moral concerns, security risks, and legal and regulatory challenges.

Keyword: Financial, Population, Development, Technology, Digital, Transformation

INTRODUCTION

Digital technologies are rapidly transforming the world economy. As more and more countries adopt digital tools, artificial intelligence (AI) is playing a big role in different sectors, especially in finance. Financial literacy, which means understanding and using financial skills such as money management, budgeting, and investing, is essential to economic freedom and personal financial health. The use of AI in financial education is beginning to make financial knowledge more accessible to everyone. This creates new opportunities to bridge the gap in financial literacy between different groups of people. AI can improve financial literacy by making education more personalized and widely available. AI-powered platforms can study a financial habits and offer advice tailored to their needs, making financial education more relevant and accessible. In Bharat, where traditional financial education can be difficult to access, AI can be a great solution. Leveraging mobile technology and digital platforms, AI can reach these communities, providing them with the tools and knowledge they need to make informed financial decisions. This development is particularly significant in a country where financial inclusion remains a significant challenge, and where individuals need to be equipped with the skills to navigate an increasingly complex financial landscape. The market value of AI in finance was estimated to be $9.45 billion in 2021 and is expected to grow 16.5 percent by 2030.

REVIEW OF LITERATURE

D. Riyani (2023) discuss about the future and the development of artificial intelligence. The face of modern world changed by the industrial revolution, as we depend more and more on Industry 4.0 technologies, such as artificial intelligence, big data, platforms, augmented and virtual reality, 3D printing. The fifth industrial revolution is emerging in unexpected ways by utilizing cutting-edge AI technology; AI has the ability to alter not only style but also financial literacy.

This study employed a library research design with a qualitative research methodology. In the past, gathering data through a network and having it examined by humans was standard procedure in an information society. Nonetheless, in Society 5.0, all entities—people, things, and systems—are interconnected via cyberspace, and the best outcomes produced by AI that surpass human capacity are returned to the real world. Industry and society benefit from this process in ways that were not before conceivable. De La Rosa, W., & amp; Bechler, C. J. (2024) explain the potential of artificial intelligence (AI) to enhance financial well-being is met with great enthusiasm. It is critical to emphasize the possible negative impacts of AI on the financial choices made by customers. Researchers provide the AI- IMPACT model, a comprehensive theoretical framework that explains how AI can affect the financial choices made by customers. Their model describes how AI affects consumer characteristics and psychological processes that are essential to making financial decisions (such as financial literacy and pain of payment). Using the AI-IMPACT model, researchers demonstrate how AI might have a negative impact on financial well-being by lessening the burden of payment for consumers through its effect on the market (e.g., by enabling biometric payment methods), which leads to more spending. Finally, we apply the AI-IMPACT model to pinpoint potential research directions at the nexus of artificial intelligence and financial decision-making.

Fazal, A., Ahmed, A., & amp; Abbas, S. (2024). this research aims to present data on the connection between financial inclusion and artificial intelligence in order to fulfill the 2030 Sustainable Development Goals listed by the United Nations. Eight of the seventeen SDGs are made possible by financial inclusion. The adoption of artificial intelligence in the financial sector was focused in this article because it plays a role important to achieving financial inclusion and the Sustainable Development Goals. In order to demonstrate the importance of AI in reaching high levels of financial inclusion in an economy, this study uses a qualitative research methodology. Empirical data supporting AI-assisted financial inclusion in achieving the UN SDGs target is presented using both narrative and comparison methodologies. The application of AI in finance increases economic growth and decreases poverty by enabling individuals to participate in the formal financial sector. Pattnaik, D., Ray, S., & amp; Raman, R. (2024). This research explain artificial intelligence (AI) and machine learning applications in the banking, financial services, and insurance industry is reviewed in this bibliometric review. To identify important research clusters, the analysis focuses on papers that are indexed by Scopus. After screening 39,498 papers in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses procedure, 1045 articles were found to match the inclusion criteria. 177 distinct terms were found in the article titles and abstracts by N-gram analysis. This work adds to the expanding body of research on bibliometrics by shedding light on the use of AI and ML in the BFSI industry. The discoveries have applications in the real world and deepen our knowledge of how AI and ML may help both business and academia.

OBJECTIVE OF THE STUDY

1. To examine the latest advances in artificial intelligence related to financial literacy.
2. To study the impact of artificial intelligence on financial literacy.
3. To identify the issues and challenges of AI.

RESEARCH METHODOLOGY

The presented work is based on secondary data. which is collected from various public sources, research papers and articles etc.

Overview Of AI Technologies

AI technology is advancing rapidly, bringing new tools that are changing the way people learn about finances. Technologies such as machine learning, natural language processing (NLP) and predictive analytics are key in this shift. Machine learning studies large amounts of financial data to provide personalized advice to users, helping them understand complex financial topics. NLP allows AI to communicate with users in everyday language, making it easier to access financial information through chatbots and virtual assistants. Predictive analytics enables individuals to predict financial outcomes, such as spending trends or investment performance, thereby improving financial management.

Recent Developments In AI

Recent advancements in AI have transformed financial literacy by making financial knowledge easier and more useful. AI-powered platforms and apps now offer personalized financial advice, automate investing, and help users make better decisions. AI is improving financial education by providing customized content and interactive

learning that suits each individual's needs and learning style. Making financial resources more accessible is helping to bridge the financial literacy gap, allowing more people to achieve financial wellness. AI also helps detect fraud and improve financial security, giving users more confidence in managing their money. As AI continues to develop, its impact on financial literacy will grow, empowering more people around the world.

AI In Financial Education Platforms

AI is transforming financial education, making learning more personalized, interactive, and easier. AI uses adaptive learning to adjust content based on each user's needs and knowledge, ensuring they get the right information when they need it. AI tools provide customized lessons, quizzes, and feedback to help them better understand and remember financial concepts. AI- powered chatbots and virtual tutors provide instant support, answer questions, and guide users through difficult topics, making learning more interesting. AI also uses games that make financial education much easier. These advanced AI tools like financial education platforms are helping more people gain the skills and knowledge needed to better understand finance, improve financial literacy, and help people make better financial decisions.

Personal Financial Planning Applications and AI

Artificial intelligence is one of the fields of the computer science that focuses on building intelligent machines that think and works just like humans. These machines have the capacity to learn, organize, and understand the data in order to provide accurate predictions. As a result it become an important technology in the banking, financial services and insurance sector and revolutionizing the way of providing goods and services to their customers. AI-powered financial planning apps are changing the personal finance management. These apps use AI to study your spending habits, financial behavior, and investments. Then, they offer advice according to your financial goals and the risk you are willing to take. AI makes financial planning easier by automating tasks like budgeting, saving, and managing investments. This makes it easier for more people to use. These apps can also predict future financial trends and offer advice to help users make better decisions for their finances. AI provides real-time analysis and monitoring, helping users stay on track with their financial goals, improve their financial knowledge, and make better financial decisions. AI helps people get good financial advice, so that they can manage their finances better for their future.

Impact AI on Financial Literacy

A wide range of information includes in financial literacy from managing sophisticated investment strategies and retirement planning to comprehending fundamental budgeting and saving. Globally, financial literacy rate are still very low. Many people have lack of knowledge and abilities needed to make wise financial decision, which results in bad credit and rising debts level. These are a few ways that artificial intelligence is improving financial literacy.

Personalized Financial Education

Based on the each person's particular financial circumstances AI is able to offers individualized financial education. AI powered platform are able to evaluating an individual's financial data, spending patterns, aspirations and provide personalized advise and educational content to each individuals. This personalized approach makes financial education become more interesting and relevant which raise the possibility that people will understand and apply the information.

Interactive Financial Tools

AI powered financial planning solutions are simplifying money management and long term financial planning for people. With the use of these tools users can set financial objectives, monitoring spending and develop their financial budget. AI powered apps can examine the users spending patterns and recommend area for cost reduction which enable users to save their money wisely. AI also help to evaluate various financial situations and possible consequences of their financial decisions to make their better financial decisions.

Real Time Advice

One of the main advantages of artificial intelligence is to offer real-time financial advice. Chatbots and virtual assistants driven AI are able to provide 24/7 advice and answers on finances. By using these tools quick financial decision such as weather to make a specific purchase or how to divide up money can be made easier. AI-driven advice promptness guarantees that people have access to the information they require at the appropriate time. Gramification of Financial Learning- AI is also improving the financial literacy by gramification. By introducing game like features into financial education AI powered platform can learning about the money management for engaging and fun. As the users develop the financial literacy they can track their progress, earn rewards, and

meet the challenges. Gramification not make financial education more interesting but also helps in learning and motivating users to continue improving their financial literacy. Investment Education and Guidance- Robo-advisors with AI capabilities are revolutionizing the investing industry. Based on user's financial objectives, risk tolerance and market circumstances these platforms deliver investigating recommendations. Robo-advisors facilitate the process of building and managing investment portfolios for individuals by automating the investment process.

AI has a huge impact in bridging the gap between financial knowledge and financial literacy. In places where traditional financial education is hard to find, AI tools provide personalized financial advice and education based on each individual needs. Mobile AI apps work well because so many people use smartphones. These apps give users real-time tips on budgeting, saving, and investing. Here are some examples of mobile AI apps that help increase financial literacy: Mint, Betterment, Yolt, Qapital, etc These platforms simplify complex financial ideas. AI also provides information in various local languages, so that everyone can learn about finance regardless of their language.

ISSUES AND CHALLENGES

AI can greatly improve financial knowledge, but it also comes with challenges. A major issue is the digital divide. Not everyone has access to AI tools or a reliable internet connection, which can make existing inequalities even worse. AI for financial advice has some risks. People may rely too much on it without fully understanding financial concepts, which may lead to wrong decisions. There are also concerns about privacy and data security as AI needs access to sensitive information that may be at risk of being breached. If AI's advice is not clear or easy to understand, it can lead to distrust. It is important to tackle these issues to ensure that AI helps improve financial literacy in a useful and unbiased way.

CONCLUSION

Recent developments in artificial intelligence (AI) are helping to improve financial education in Bharat. Financial literacy, which means knowing how to manage, budget and invest money wisely, is crucial for economic independence and personal financial well-being. The market value of AI in finance was estimated to be $9.45 billion in 2021 and is expected to grow 16.5 percent by 2030. Research has found

that AI is making it easier for more people to access financial knowledge. AI allows financial education to be customized for each individual, making it more personalized and widely accessible. AI-powered platforms and apps provide financial advice, automate investments and help users make better financial decisions. As AI technology is rapidly evolving, it is bringing new tools that are changing the way people learn about finance. AI tools provide personalized lessons, quizzes and feedback to help users better understand and remember financial concepts. AI-powered chatbots and virtual tutors provide instant help, answer questions and guide users through difficult topics, making learning more interesting. AI also uses games to simplify financial education. In places where traditional financial education is hard to find, AI tools provide personalized financial advice and education based on each individual needs. Mobile AI apps work well because many people use smartphones. AI also provides information in different local languages, so everyone can learn about finance regardless of their language. The use of AI in financial education is starting to make financial knowledge more accessible to everyone. This creates new opportunities to bridge the gap in financial literacy between different groups of people. The research also found that recent developments in artificial intelligence (AI) are helping to improve financial education in Bharat, but there are challenges associated with it. A major issue is the digital divide. Not everyone has access to AI tools or a reliable internet connection, which can make existing inequalities even worse. AI for financial advice has some risks. People may rely too much on it without fully understanding financial concepts, leading to wrong decisions. There are also concerns about privacy and data security as AI needs access to sensitive information that may be at risk of being breached.

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