

THE ANALYSIS OF IMPACT OF ARTIFICIAL INTELLIGENCE ON FINANCIAL INCLUSION

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Abstract:

Financial integration refers to the ability of an individual to access and use relevant financial services available to meet their needs. However, despite recent advances, most of the world's population remains inadequately serviced in terms of financial services. Artificial intelligence (AI) overcome this gap, improve access, reduce costs and increase the efficiency of financial systems. This research article examines the role of AI in the promotion of financial integration, deals with the advantages and potential problems and considers real applications and thematic studies. It consists, offering recommendations for politicians, financial institutions and technologies developers to ensure the financial integration, the controlled AI is fair and stable.

Keywords : Banks, Artificial intelligence, financial inclusion.

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Introduction

Financial integration is important to stimulate economic growth and reduce poverty. According to the World Bank, around 1.7 billion adults around the world often remain non-centered from geographical, economic or social barriers. The financial exception does not allow people to access the tools necessary to save, invest and protect their financial future. In recent years, the emergence of digital technologies, in particular artificial intelligence (AI), has created new opportunities to extend access to financial services.

AI refers to the development of algorithms and systems that can imitate intelligence similar to a person, such as training, problem solving and decision -making. During the possibility of financial services, AI can provide personal experience, reduce operating expenses and improve decision -making processes in areas such as loans assessment, fraud detection, customer service and risk management. As the world continues to be numbers, AI has the potential to transform financial integration, providing

more people to access affordable financial products that more people respond to.

This research paper aims to study the role of AI in stimulating financial integration and to solve its applications, benefits and problems in the context of under-served communities.

Objective :

- To study the impact of AI in financial inclusion
- To understand the challenges of AI in financial inclusion

Research Methodology :

The secondary data collection method is used for preparing this research paper. The data is collected from various online financial sites, bank's sites, articles and journals.

Review of Literature:

The primary area of research focuses on how AI is spreading access to financial services, particularly in regions with

less banking infrastructure. Several research studies have shown that AI-powered digital platforms can facilitate remote access to financial services,

particularly through mobile phones (Narayan et al., 2020).

AI-driven systems improving access to payments as well as enabling more sophisticated financial products, such as savings plans and loans, that were initially were not available to the unbanked population (Sriram & Sudarshan, 2020).

AI mitigates the cost of providing financial services, by reducing the need for manual operation, and enables financial institutions to pass these savings on to consumers in the form of less fees and more affordable services, thus contributing to greater coverage financial inclusion (Singh & Verma, 2021).

The impact of AI in Financial Inclusion:

Improved Access to Financial Services:

One of the primary ways AI is fostering financial inclusion is by improving access to financial services in excluded regions. In many developing countries, people live in remote areas without access to banks or financial institutions. AI-powered mobile banking applications and chatbots enable users to interact with financial services via smartphones, providing an efficient alternative to brick-and-mortar institutions.

AI technologies such as voice recognition and natural language processing (NLP) have further simplified the process of interacting with financial services. For example, individuals in areas with low literacy rates can access banking services through voice commands, which are then processed and executed by AI systems. In regions where traditional banking infrastructure is lacking, AI can fill the gap by enabling digital banking solutions that are calculable and accessible to everyone.

Credit Scoring and Risk Assessment:

Access to credit is one of the most significant barriers to financial inclusion, particularly for people without formal credit histories. Traditional credit scoring systems often rely on extensive financial data, which

many low-income individuals or small businesses do not possess. AI helps address this issue by analyzing alternative data sources such as social media activity, mobile phone usage, utility payments, and transaction histories to assess creditworthiness.

Machine learning algorithms can assess the likelihood of a person or business repaying a loan based on these non-traditional data points, offering a more inclusive and accurate method for evaluating credit risk. This AI-based credit scoring system helps excluded populations, including those with no formal credit history, gain access to loans and other financial products.

Personalized Financial Products:

AI has the capability to design personalized financial products tailored to the specific needs and behaviors of individuals. For example, AI can analyze an individual's spending habits, income patterns, and financial goals to recommend personalized savings plans, investment strategies, and insurance products. By leveraging AI-driven insights, financial institutions can offer customized services that cater to the unique financial circumstances of excluded populations, promoting a more inclusive financial system. Additionally, AI can create adaptive financial services that grow with an individual's or business's financial progress, ensuring long-term financial inclusion.

Cost Reduction and Efficiency:

Traditional financial services often incur high operational costs due to the need for physical branches, personnel, and manual processes. AI reduces these costs by automating many of the tasks that were previously manual, such as customer service inquiries, fraud detection, and transaction monitoring.

Robotic Process Automation (RPA), machine learning models, and AI-based fraud detection systems enable financial institutions to provide

services at a lower cost, which can be passed on to customers in the form of reduced fees and charges. This cost reduction opens up financial services to previously excluded individuals who may have been priced out by high service fees and charges.

Financial Literacy and Education:

AI can also play a pivotal role in improving financial literacy, which is a key element of financial inclusion. Many excluded individuals lack access to financial education resources and often make uninformed decisions about saving, borrowing, and investing. AI-powered educational platforms can offer interactive and personalized learning experiences that help users understand financial concepts.

For instance, chat-bots or virtual assistants powered by AI can guide individuals through basic financial concepts, such as budgeting, saving, and managing debt, in a way that is engaging and relevant to their personal circumstances. By promoting financial literacy, AI helps empower individuals to make informed financial decisions and navigate the complexities of financial systems.

Challenges and Risks of AI in Financial Inclusion:

While AI offers significant potential for enhancing financial inclusion, there are several challenges and risks that need to be addressed:

Data Privacy and Security:

AI systems often rely on vast amounts of data to function effectively, raising concerns about data privacy and security. In many developing countries, there are limited regulations surrounding data protection, making individuals vulnerable to misuse of their personal data. Ensuring that AI systems are transparent and comply with data protection regulations is critical to maintaining trust and preventing exploitation.

Bias in AI Models:

AI models are only as good as the data they are trained on. If the data used to train these models is

biased or incomplete, it can lead to discriminatory outcomes. For instance, AI-based credit scoring systems that rely on biased data could unfairly exclude certain populations from access to financial services. To mitigate this risk, it is important to ensure that AI models are regularly audited for fairness and accuracy.

Digital Literacy Divide:

Although AI-powered financial services can provide greater access to untapped populations, there remains a significant digital literacy divide. Many individuals in rural or low-income areas may lack the skills or resources to use digital banking services effectively. Addressing this gap through digital literacy programs is essential to ensuring that AI-powered solutions benefit all individuals, not just those who are already digitally savvy.

Regulatory Challenges:

As AI technology rapidly evolves, regulatory frameworks may struggle to keep pace with the innovations in financial services. Governments and regulatory bodies need to establish clear policies around the use of AI in financial inclusion to ensure consumer protection, prevent misuse, and promote innovation.

Conclusion:

Artificial Intelligence is undoubtedly transforming the landscape of financial inclusion, offering innovative solutions to long-standing challenges in accessing financial services. By improving access, reducing costs, and providing personalized services, AI holds great promise for expanding financial inclusion, particularly in excluded populations. However, addressing the risks associated with data privacy, bias, digital literacy, and regulatory issues will be crucial to ensuring that AI's benefits are equitably distributed. The future of financial inclusion lies in the responsible and ethical implementation of AI technologies, ensuring that they

serve as tools for empowerment and economic participation for all.

This research paper provides an overview of the key ways AI contributes to enhancing financial inclusion, addressing both opportunities and challenges, and calling for responsible use of technology to benefit marginalized populations.

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