



Prospects Of Using Artificial Intelligence In Fintech Companies

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ABSTRACT

This paper examines the main directions of applying artificial intelligence (AI) technologies in fintech companies, their impact on operational efficiency, and the prospects for further development. The experience of AI application in credit scoring, fraud detection, customer service, and investment management is reviewed, along with the challenges related to data security, model transparency, and regulation. The potential of emerging directions such as generative AI and federated learning is also assessed.

KEYWORDS: Fintech, artificial intelligence, machine learning, credit scoring, fraud detection, digital finance.

INTRODUCTION

In recent years, digital technologies have been fundamentally transforming the financial sector. Fintech companies offer faster, more flexible, and lower-cost services than traditional banks, and this advantage is based on processing large volumes of data and automating decision-making [1]. Artificial intelligence provides exactly this capability. The Financial Stability Board has noted that artificial intelligence and machine learning improve the efficiency of financial services while also introducing new risks [2]. In Uzbekistan, the "Digital Uzbekistan – 2030" strategy [3] and the resolution on accelerating the adoption of artificial intelligence technologies [4] have likewise established this direction as a national priority.

The purpose of this study is to identify the main directions in which artificial intelligence is applied in fintech companies, to analyze the challenges of its implementation, and to assess the prospects for its further development.

The first direction is credit scoring and risk assessment. Unlike traditional scoring cards, machine learning algorithms capture nonlinear relationships among features and make it possible to assess customers without a credit history by using alternative data, such as payment history, mobile usage, and utility payments [5]. The author has previously developed an artificial intelligence-based credit risk assessment model, in which achieved higher predictive accuracy than traditional statistical methods, confirming the practical effectiveness of this approach, confirming the practical effectiveness of this approach.

The second direction is fraud detection and anti-money laundering. Models that detect anomalies in transaction flows in real time can flag suspicious operations within seconds, reducing the burden of manual review. The third direction is customer service: chatbots and

virtual assistants respond to inquiries at any time, while behavioral analysis enables service personalization. The fourth direction is robo-advisory, where investment portfolios are structured according to a client's goals and risk tolerance, allowing low-cost service to be delivered to a broad audience. In addition, customer identification (KYC) and document verification processes are increasingly being automated through artificial intelligence.

At the same time, the adoption of artificial intelligence raises a number of challenges. First, it is necessary to protect customers' personal and financial data and to ensure data quality. Second, complex models often have a "black box" nature, making their decisions difficult to interpret; explainable AI methods such as SHAP partially address this issue [6]. Third, bias embedded in historical data can be transferred to the model, leading to unfair outcomes in lending decisions. Fourth, the legal and regulatory frameworks for applying artificial intelligence in finance are still under development, and a shortage of qualified specialists remains a concern.

Looking ahead, the use of artificial intelligence in fintech companies is expected to expand in several directions. Generative artificial intelligence and large language models will further automate customer communication, document analysis, and report preparation. Federated learning will allow organizations to improve a shared model without disclosing customer data, which is particularly important for a sector with high privacy requirements. Real-time decision-making systems and explainable models will further increase trust. The growth of digital payments and online lending in Uzbekistan is also creating significant opportunities for AI-based solutions.

Conclusion

In conclusion, artificial intelligence is becoming one of the key factors determining the competitiveness of fintech companies. To fully realize its potential, it is necessary to jointly address issues of data security, model transparency, and regulation, while also investing in the training of qualified personnel.

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