Chapter 5
Artificial Intelligence and Blockchain and the Growth of Fintech Industry

Neetal Vyas
https://orcid.org/0009-0004-4926-8443
School of Business, Indira University, Pune, India

Avinash Hanmant Ghadage
https://orcid.org/0009-0000-9877-8520
Global Business School and Research Centre, D.Y. Patil Vidyapeeth's, India

Pradip Sanatkumar Padhye
https://orcid.org/0000-0002-1444-840X
Symbiosis School of Banking and Finance, Symbiosis International University, Pune, India

P. Selvakumar
https://orcid.org/0000-0002-3650-4548
Department of Science and Humanities, Nehru Institute of Technology, Coimbatore, India

T. C. Manjunath
https://orcid.org/0000-0003-2545-9160
Rajarajeswari College of Engineering, India

S. Madhu
https://orcid.org/0009-0000-8816-5798
Jyothy Institute of Commerce and Management, India

ABSTRACT

Financial Technology, commonly known past decade, the FinTech landscape evolved rapidly, with startups and established institutions leveraging innovative solutions to address longstanding inefficiencies in banking, payments, insurance, investments, lending, and wealth management. Among the most groundbreaking technologies reshaping the FinTech industry are Artificial Intelligence (AI) and Blockchain, which have emerged as pivotal drivers of innovation and change. Assess creditworthiness more accurately and inclusively. This not only improves the precision of credit evalua-

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tions but also opens access to credit for underbanked and marginalized communities. AI is also extensively used in fraud detection and cybersecurity. Machine learning significantly enhancing user experience while reducing operational costs. Another significant application of AI lies in algorithmic trading and robo-advisory services. High-frequency trading platforms use AI These innovations democratize investment opportunities and offer affordable asset management options to retail investors.

INTRODUCTION ABOUT THE ROLE OF AI AND BLOCKCHAIN

Financial Technology, commonly known past decade, the FinTech landscape evolved rapidly, with startups and established institutions leveraging innovative solutions to address longstanding inefficiencies in banking, payments, insurance, investments, lending, and wealth management. Among the most groundbreaking technologies reshaping the FinTech industry are Artificial Intelligence (AI) and Blockchain, which have emerged as pivotal drivers of innovation and change. Assess creditworthiness more accurately and inclusively. This not only improves the precision of credit evaluations but also opens access to credit for underbanked and marginalized communities. AI is also extensively used in fraud detection and cybersecurity. Machine learning significantly enhancing user experience while reducing operational costs. Another significant application of AI lies in algorithmic trading and robo-advisory services. High-frequency trading platforms use AI These innovations democratize investment opportunities and offer affordable asset management options to retail investors. In tandem with AI, intermediaries. One of its most prominent applications is in cryptocurrencies such as Bitcoin and Ethereum, which function as decentralized digital currencies independent of traditional banking systems. These digital assets have challenged conventional financial models and opened new avenues for cross-border transactions, micropayments, and decentralized finance (DeFi). Blockchain's immutability and transparency are particularly valuable in areas such as transaction verification, auditing, and regulatory compliance yndicated loans. Moreover, blockchain is reshaping identity managemen. Digital identity solutions powered by blockchain offer a secure and verifiable way of managing user identities, reducing duplication of efforts across institutions and minimizing fraud. These solutions empower users reducing onboarding time for financial service providers. Despite their potential, the adoption also brings challenges. Concerns regarding algorithmic bias, data privacy, and accountability in AI systems necessitate transparent model governance, regular audits, and regulatory oversight. In the blockchain realm, issues legal uncertainty surrounding and decentralized platforms must be addressed to ensure sustainable and responsible growth. Regulators around the world are increasingly focusing on establishing frameworks