INTERNATIONAL JOURNAL OF ENGINEERING MANAGEMENT AND SOCIAL SCIENCES (IJEMSS)

e-ISSN : 3139-065X

www.ijemss.com

editor@ijemss.com

Vol. 01, Issue 2, June2026, pp :459-461

Artificial Intelligence in Finance and Accounting: Opportunities, Challenges, and Future Implications for Higher Education and Industry

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ABSTRACT

Artificial Intelligence (AI) is revolutionizing finance and accounting by automating routine processes, enhancing analytical capabilities, and supporting strategic decision-making. This review paper examines the opportunities, challenges, and future implications of AI adoption in finance and accounting. The study is based on secondary data collected from peer-reviewed journals, industry reports, and policy documents published between 2020 and 2026. Key applications of AI include fraud detection, financial forecasting, auditing, risk management, customer service, and regulatory compliance. The findings indicate that AI improves operational efficiency, reduces human error, and enables real-time data analysis. However, challenges such as data privacy concerns, cybersecurity risks, ethical issues, workforce displacement, and regulatory uncertainty remain significant. The paper concludes that educational institutions offering B.Com , BBA, and MBA programs should integrate AI-related competencies into their curricula to prepare students for future careers in finance and accounting.

Keywords: Artificial Intelligence, Finance, Accounting, Machine Learning, FinTech, Auditing, Financial Analytics, Higher Education.

Introduction

The emergence of Artificial Intelligence has transformed the way organizations manage financial information and accounting processes. AI refers to computer systems capable of performing tasks that traditionally require human intelligence, such as learning, reasoning, decision-making, and problem-solving.

In recent years, advancements in machine learning, natural language processing, robotic process automation, and generative AI have significantly influenced the finance sector. Organizations increasingly rely on AI to analyze large volumes of financial data, identify patterns, predict trends, and automate repetitive tasks.

The adoption of AI technologies is particularly relevant in accounting, where accuracy, efficiency, and compliance are critical. Financial institutions and corporations are integrating AI-powered tools into their operations to gain competitive advantages and improve customer experiences. Consequently, higher education institutions must equip students with the skills necessary to thrive in an AI-enabled financial ecosystem.

Objectives of the Study

1. To examine the role of Artificial Intelligence in finance and accounting.
2. To identify the major applications of AI in financial services.
3. To analyze the benefits and challenges of AI adoption.
4. To explore the implications of AI for commerce and management education.
5. To suggest strategies for the effective integration of AI in higher education curricula.

Research Methodology

This study adopts a qualitative review methodology based on secondary data. Relevant information was collected from academic journals, conference proceedings, government publications, books, and industry reports published between 2020 and 2026.

Inclusion criteria included English-language publications focusing on AI applications in finance and accounting. Sources unrelated to business, finance, or accounting were excluded. The collected literature was analyzed

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thematically to identify key trends, opportunities, and challenges associated with AI adoption.

Review of Literature

Recent studies indicate that AI has significantly improved financial decision-making and operational efficiency. Dwivedi et al. (2023) highlighted the transformative potential of generative AI in research, education, and business applications. Kokina and Davenport (2017) emphasized the growing role of AI in auditing and accounting automation.

Sutton, Holt, and Arnold (2016) argued that AI technologies augment the capabilities of accounting professionals rather than replace them entirely. OECD (2024) reported that financial institutions are increasingly adopting AI for fraud detection, credit assessment, and risk management. The World Economic Forum (2025) identified data analytics, AI literacy, and technological adaptability as critical skills for future finance professionals.

Applications of AI in Finance and Accounting

Fraud Detection: AI algorithms analyze transaction patterns and identify anomalies that may indicate fraudulent activities.

Financial Forecasting: Machine learning models improve forecasting accuracy by processing historical and real-time data.

Auditing: AI-powered systems automate document verification, risk assessment, and compliance monitoring.

Customer Service: Chatbots and virtual assistants provide personalized financial advice and support.

Risk Management: Financial institutions use AI to evaluate creditworthiness, assess market risks, and monitor investments.

Regulatory Compliance: AI assists organizations in meeting legal and regulatory requirements through automated monitoring and reporting.

Benefits of AI Adoption

AI offers several advantages to organizations, including improved efficiency, reduced operational costs, enhanced accuracy, and faster decision-making. Automated systems minimize manual errors and free employees to focus on strategic activities.

Real-time analytics enables organizations to respond quickly to market changes. AI also improves customer experiences through personalized services and enhances transparency through data-driven insights.

Challenges and Limitations

Despite its benefits, AI implementation presents several challenges. Data privacy and cybersecurity concerns remain major issues, particularly in the financial sector where sensitive information is processed.

High implementation costs, inadequate infrastructure, and a shortage of skilled professionals can hinder adoption. Ethical concerns, including algorithmic bias and lack of transparency, require careful governance and regulatory oversight.

Implications for Higher Education

The growing adoption of AI necessitates curriculum reforms in B.Com, BBA, and MBA programs. Educational institutions should introduce courses on financial analytics, business intelligence, AI applications in accounting, data visualization, and ethical AI practices.

Collaboration with industry partners, internships, certification programs, and experiential learning opportunities can enhance students' employability and readiness for future workplaces.

Conclusion

Artificial Intelligence is redefining finance and accounting by enabling smarter, faster, and more efficient business processes. While AI offers significant opportunities for innovation and growth, organizations must address ethical, regulatory, and workforce-related challenges.

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Higher education institutions have a crucial role in preparing future professionals with the knowledge and skills required to succeed in an increasingly digital economy. Integrating AI competencies into commerce and management education will contribute to sustainable workforce development and long-term organizational success.

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