

## A STUDY ON THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON FINANCIAL SERVICES

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### ABSTRACT

Artificial Intelligence (AI) is transforming the financial services industry by enhancing efficiency, improving decision-making, and delivering better customer experiences. This study analyses the influence of AI on financial services with a focus on operational efficiency, risk management, and service quality.

The research is based on both primary and secondary data. Primary data was collected through a structured questionnaire with 120 respondents, while secondary data was gathered from institutional reports and academic sources. Statistical tools such as T-Test and ANOVA were used for analysis.

The findings reveal that AI significantly improves transaction speed, reduces operational time, and enhances customer satisfaction. However, challenges such as data privacy, cybersecurity risks, and regulatory issues remain important concerns.

The study concludes that AI is a powerful and transformative force in financial services, provided that associated risks are effectively managed.

**KEYWORDS:** Artificial Intelligence, Financial Services, FinTech, Automation, Risk Management, Customer Experience, Digital Banking.

### INTRODUCTION

Artificial Intelligence (AI) refers to advanced computational systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, and decision-making. In financial services, AI is widely used in areas such as fraud detection, credit scoring, customer service automation, and investment analysis.

The financial sector is undergoing rapid transformation due to digitalization and technological advancements. AI enables financial institutions to process large volumes of data in real time, resulting in improved efficiency, reduced operational costs, and enhanced customer engagement.

In recent years, the adoption of digital banking, mobile payments, and fintech solutions has increased significantly. Customers now expect fast, secure, and personalized financial services. AI helps meet these expectations by automating processes and improving accuracy. However, the implementation of AI also introduces challenges such as cybersecurity threats, ethical concerns, and regulatory complexities. Therefore, it is important to study the overall influence of AI on financial services.

### **OBJECTIVES OF THE STUDY**

- To analyse the influence of Artificial Intelligence on financial services
- To evaluate the impact of AI on operational efficiency and customer experience
- To examine the role of AI in risk management and decision-making
- To identify challenges and risks associated with AI adoption
- To suggest measures for effective implementation of AI

### **HYPOTHESES**

**H<sub>0</sub>:** There is no significance difference influence of Artificial Intelligence on Financial Services.

**H<sub>01</sub>:** Artificial Intelligence has a significant influence on financial services.

### **MATERIALS AND METHODS**

This study is based on a descriptive and analytical research design aimed at understanding the influence of Artificial Intelligence on financial services.

Primary data was collected through a structured questionnaire distributed among users of financial services. A total of 120 valid responses were collected for analysis. The respondents included students, professionals, and general users. Secondary data was collected from journals, institutional reports, and academic publications. The sampling method used in this study is convenience sampling, where respondents were selected based on availability and accessibility.

**The key variables considered include:**

- Customer Experience
- Operational Efficiency
- Risk Management
- Decision-Making
- Service Quality

**The statistical tools used for analysis include:**

- Percentage Analysis
- T-Test – to analyse the significance of AI impact
- ANOVA – to study variation among different respondent groups

**RESULTS AND DISCUSSION**

The collected data was analysed using statistical tools such as T-Test and ANOVA to evaluate the influence of Artificial Intelligence in financial services.

The results of the T-Test indicate that AI has a significant impact on financial services. Respondents agreed that AI improves transaction speed, reduces processing time, and enhances overall efficiency.

The ANOVA results show that there are differences in opinions based on demographic factors such as age, occupation, and usage patterns. This suggests that the impact of AI varies among different groups of users.

It was observed that AI technologies such as automated systems, fraud detection tools, and digital customer service platforms have improved service quality and customer satisfaction. Financial institutions are able to deliver faster and more reliable services through AI integration.

However, the study also identified certain challenges. Respondents expressed concerns about data privacy, cybersecurity risks, and lack of transparency in AI systems. These issues highlight the need for stronger governance and regulatory frameworks.

**SUGGESTIONS**

- Strengthen AI governance and regulatory frameworks
- Improve cybersecurity infrastructure to protect user data
- Increase customer awareness about AI-based services
- Ensure ethical and transparent use of AI systems

- Provide training for employees to effectively use AI technologies

## CONCLUSION

The study concludes that Artificial Intelligence has a significant and positive influence on Financial Services. It enhances operational efficiency, improves customer experience, and supports better decision-making.

AI has reduced manual effort and transaction time, making financial services more efficient and accessible. Customers increasingly prefer AI-driven digital platforms due to convenience and speed. Despite its advantages, challenges such as data privacy and cybersecurity risks must be addressed. Proper management of these risks will ensure sustainable growth of AI in financial services. Overall, Artificial Intelligence is a transformative technology that will continue to shape the future of the financial sector.

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