

BANKING ON AI: STRATEGIC BLUEPRINTS FOR THE FUTURE OF FINANCE

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ABSTRACT

This article examines the strategic implementations of Artificial Intelligence (AI) in the finance sector, with a particular emphasis on banks. It discusses the ways in which AI is revolutionizing a variety of banking functions, including fraud detection, risk management, customer support, and personalized financial advice. By employing AI-driven algorithms and tools, financial institutions can enhance efficiency, accuracy, and security while offering customers personalized services. The article underscores the importance of AI in promoting innovation and competitiveness, in addition to emphasizing the necessity of responsible adoption and ongoing research to resolve issues and optimize the potential benefits of AI technology. Four major US banks are analyzed, each demonstrating how AI is deployed and the benefits that it brings to the organization.

Keywords: Artificial Intelligence; Finance & Banking

1. INTRODUCTION

The finance industry is undergoing a radical transformation due to the introduction of AI technologies (Lazo & Ebardo, 2023; Lakhchini, 2023). Financial institutions are looking to AI to help them achieve their objectives of increasing decision-making, accuracy, and efficiency (Achary, 2021). Financial markets, investment management, banking, and insurance are just a few of the many services and activities that make up the finance industry. This sector of the economy is vital to risk management, capital flow facilitation, and economic growth. The finance industry has experienced tremendous changes because of the introduction of digital technologies and the exponential growth of data, and the potential for AI to alter how things are done has surfaced (Lakhchini, 2023). AI technologies have been widely adopted and leveraged by the finance industry, especially the banking sector, to boost innovation, optimize operational efficiency, and elevate customer experiences (Detection, 2023). AI has completely changed the way banks function by allowing them to automate procedures, make data-driven decisions, and provide individualized services to their clients (Ai et al, 2024). As a vital component of the world economy, the banking industry facilitates investments, monetary policy, and financial transactions. With advances in efficiency, risk management, and client experience, AI has completely transformed the industry (Karachun, Vinnichek, & Tuskov, 2021). This study aims to present the state of application of AI applications within the financial sector. It aims to help strategy teams, IT staff, and financial executives understand the opportunities as well as the challenges by leveraging AI applications in finance and data management. The evolution, and strategic applications of AI in the finance sector are examined in this study.

1.1 Evolution of AI in Finance

Over many years, AI has undergone a dynamic and revolutionary journey within the finance sector. Since its inception, AI has significantly altered the financial landscape by introducing new capabilities, boosting productivity, and altering decision-making processes. The key turning points in the evolution of AI in finance are reviewed here. Therefore, the concept of AI remains not new; rather, it has been around for a while. The 1980s saw the introduction of rule-based algorithms and expert systems to support decision-making processes, which marked the beginning of AI integration in the finance sector (Lazo & Ebardo, 2023; Maple et al., 2023). These early AI applications, however, were shallow and focused mostly on specialized responsibilities. An important turning point in the finance industry's adoption of AI was the development of machine learning. Big data's widespread distribution and contemporary hardware's rising processing power