

Artificial Intelligence in Banking

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Abstract: *In India Artificial Intelligence is not new this concept is from many years but the new improvement in AI Adaptation as increasing in technology. The technology itself is getting better day by day with various applications. Artificial intelligence (AI) has rapidly transformed various industries, including banking and finance. AI technologies are increasingly indispensable in the BFSI market, and hence, banking institutions must embrace these emerging technologies at scale to remain competitive and relevant. As everyone thinks about CHAT-BOTS only as AI service but many other adaptations are there as it related to services to customer. SBI has a major role in adaptation of artificial intelligence as it is the largest bank in India (As per the Accenture Banking Technology vision 2018 Report). From decades research institutions and universities have been working with various AI technologies especially in the field of Social Transformation. In Banking Sector the AI reduces the cost for customer interaction and increases there efficiency.*

Keywords: Artificial intelligence, banking, finance, technology, service

I. INTRODUCTION

According to the father of Artificial Intelligence, John McCarthy, it is —The science and engineering of making intelligent machines, especially intelligent computer programs. Artificial Intelligence is a way of making a computer, a computer-controlled robot, or a software think intelligently, in the similar manner the intelligent humans think. AI is accomplished by studying how human brain thinks and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of this study as a basis of developing intelligent software and systems

Artificial Intelligence (AI) is fast developing technology for across the world. The banking sector is becoming one of the first adopters of Artificial Intelligence. Banks are exploring and implementing technology in various ways. Artificial Intelligence is getting better and smarter day by day. In this paper, we will discuss how Artificial Intelligence is used in the Indian banking sector, what are the benefits and what are the Challenges facing India's Artificial Intelligence. Development that Artificial Intelligence offers to FinTech and the different ways in which it can improve the operations of an Indian banking sector.

Artificial Intelligence (AI) is fast evolving as the go-to technology for companies across the world to personalize experience for individuals. The technology itself is getting better and smarter day by day, allowing more and newer industries to adopt the AI for various applications. Banking sector is becoming one of the first adopters of AI. And just like other segments, banks are exploring and implementing the technology in various ways.

The rudimentary applications AI include bring smarter chat-bots for customer service, personalizing services for individuals, and even placing an AI robot for self-service at banks. Beyond these basic applications, banks can implement the technology for bringing in more efficiency to their back-office and even reduce fraud and security risks. Unsurprisingly, research firms are bullish on the potential of AI in banking. According to Fintech India report by PwC in 2017, the global spending in AI applications touched \$5.1 billion, up from \$4 billion in 2015. There is a keen interest in the Indian banking sector as well.

Artificial intelligence in banking is revolutionizing the sector in various ways, from enhanced customer support and fraud detection to better decision-making and beyond. Banks leverage AI technologies to automate their operational processes, enhance customer support and mitigate potential risks, eventually increasing efficiency and productivity.

With so many applications and advantages of AI in banking, the future of this emerging technology in banking really seems bright, with further integration across the systems. As the adoption of AI in the banking and finance industry

continues to grow, it has been imperative for banks to embrace the power of this emerging technology to gain competitive advantages in the current digital era. Overall, implementing AI in banking is transforming the banking sector in greater ways, making it an essential tool for banks to grow and succeed.

The implementation of AI in banking applications and software solutions has significantly revolutionized the way companies access and manage their finances. Banks are actually harnessing the potential of AI in various ways to streamline processes, detect fraud, optimize operations, improve efficiency, and provide more personalized experiences to customers.

According to a report by Business Insider, by implementing AI applications, banks are projected to save \$447 billion by the end of 2023. This huge figure demonstrates the revolutionary impact of AI in the banking industry. Here is a quick chart that depicts the region-wise business value of AI in the banking industry worldwide from 2018 to 2030.

Objectives

1. To study the areas where the artificial intelligence is being used by the banks.
2. To study about the application of Artificial intelligence in Banking Sector.

II. METHODOLOGY

The study is descriptive in nature and is based on secondary data. The data are collected from various reports, journals, news articles, various bank portals, RBI portal and internet sources.

Limitation

The study covers the technological developments in Indian banking sector only.

How Banks Use Artificial Intelligence

Banks are leveraging the capabilities of AI in various ways to revolutionize operations and redefine the industry's future. From fraud detection and customer service to process automation and beyond, AI has made a significant impact in the banking industry. Here are some of the most remarkable applications of AI in banking.

Fraud Detection and Prevention

AI applications play a crucial role in detecting and preventing fraud in the banking and finance industry. AI algorithms analyze vast troves of data to identify users behavior, transaction history, pattern, and anomalies to indicate potential fraud. Therefore, by harnessing the power of AI, banks can detect fraudulent transactions, minimize financial losses and protect customers accounts.

Enhanced Customer Experience

AI-powered chatbots and personal assistants are widely used across industries, and banking is no exception. AI-powered assistants use machine learning algorithms and natural language processing to provide instant responses to a wide range of customer queries, assisting with banking processes and offering personalized services. With AI in app development, banks can streamline various operational processes, protect transactions, reduce wait time, provide round-the-clock customer support, and deliver a seamless customer experience.

Data Analytics and Decision-Making

AI technologies empower banks to process large volumes of structured and unstructured data to predict market trends, gain insights, and identify investment opportunities, eventually leading to better decision-making. Data-driven decision-making helps banks boost productivity, reduce costs, and stay ahead in the competitive market.

Trading and Portfolio Management

With its ability to process market data and recognize patterns, AI in banking helps find out potential trading opportunities, providing valuable insights for making better investment decisions. Also, AI-powered portfolio management systems monitor market trends, optimize asset allocation, and make adjustments in real-time, which helps

enhance investment management, mitigate risks, and improve returns. Therefore, by harnessing the power of AI, banks can efficiently make data-driven investment decisions and improve portfolio performance.

Reinforce Cybersecurity System

In today's ever evolving digital landscape, the rate of cybercrime has reached an unprecedented height, keeping sensitive user data at risk of theft. To address this challenge, AI-powered applications have emerged as a cutting-edge tool, strengthening cybersecurity in the banking industry. AI in banking efficiently analyzes previous threats, learns from the patterns, detects anomalies, and significantly mitigates the risk of security breaches in real-time. Artificial intelligence solutions provide banking institutions with a proactive defense mechanism, protecting users' data from potential cyber theft and improving the overall security networks in banks.

Automation of Routine Operations

One of the most remarkable and advantageous applications of AI is the automation of repetitive and rule-based tasks. With AI in banking, organizations can efficiently automate a wide range of routine tasks like data entry, account reconciliation, document processing, etc. This type of automation not only frees up human resources and allows them to focus on more essential tasks but also reduces the risk of errors and accelerates process completion. Furthermore, by automating tasks, AI can help banks increase profitability and reduce costs.

Risk Assessment and Compliance

AI algorithms analyze data to assess credit risk, detect potential defaults, and recognize fraudulent activities. It helps banks make informed loan decisions, mitigate risk instances and ensure compliance with regulatory requirements.

III. CONCLUSION

AI has brought about revolutionary changes in banking. Forget the physical branches, AI brings about a whole new world of modern banks. The expansion and growth is tremendous with the new banking services enabled by AI. The penetration is increased and cost effectiveness has turned to betterment. How we deal with our money is being decided by the dual computational intelligence- AI and ML. The banking sector has been given a new structure of meeting the demands of the customers, in a convenient, safe and smart way. The financial institutions need to notice the need of the hour. They have realized that technology is not expensive or complicated to learn; everything is bundled together in a smartphone that an ordinary man can easily operate (Donepudi, 2017).

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