

**PROS AND CONS OF ARTIFICIAL INTELLIGENCE  
IN BANKING SECTOR OF INDIA**

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**ABSTRACT :**

This paper focuses on artificial intelligence (AI) in the Banking and financial services to oversee the application of artificial intelligence methodology in the banks as well as responses from the clients or consumers. To identify the information used in the banking and financial services, the data is collected from secondary sources based on the literature review.

The technology itself is getting better and smarter day by day, allowing more and newer industries to adopt 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. Several Indian banks have begun deploying artificial intelligence in order to improve efficiency and predict customer behavior.

The main objects of study of the banking sector from AI include seeking operational efficiency; means to detect and predict human behavior; and for lowering operational costs. This also signals further progress with the digital transformation of the Indian Banking Sector.. The result of the study is that the banks and financial institutions are using various AI services for the customers' benefit so that customers are satisfied with their services in addition to that financial services to improve services more effectively.

**INTRODUCTION :**

The term Artificial Intelligence (AI) was founded by John McCarthy in 1956. Artificial Intelligence refers to a technology that makes inferences and decisions and mimics human intelligence. Today, AI is integrated into our daily lives in many forms, such as personal assistants (Siri, Alexa, Google assistant etc.), automated mass transportation and computer gaming. AI is fast developing as the go to technology for industries across the world. the technology itself is getting better and smarter day by day, allowing more and newer industries to adopt the AI. one of the first adopters of AI and banks are exploring and implementing the technology in various ways. the implementation of these technologies is largely facilitated by the service companies, banking and financial institutions. AI is the future of banking as it brings in more efficiency to their back-offices and even reduces fraud and security risk. AI also helps the banking sector to reduce risk and by increasing revenue by improving customer satisfaction. Banks are exploring and implementing the technology in various ways bringing smarter chat-bots for customer service, personalizing services for individuals and even placing robots for self service at their specialized digital banking branches. AI will make the banking and financial institutions totally redefine how they work. The adoption of AI in the banking and finance sector is a part of the larger digital wave

occurring within the sector. The use and deployment of AI in consumer banking, financial products and back-end operations is varied and across different stages of operations. AI is technology in computer science which creates machines that can work and react like humans. Or we can say that AI can make machines or computer systems stimulate the human intelligence processes. AI will not replace humans but it will help to enhance their work by making them more efficient and would help people to solve calculations in much quicker and easier form.

### **OBJECTIVES :**

1. To study the usefulness of the artificial intelligence is being used by the banks.
2. To study the systematic approaches and application of Artificial intelligence in Indian banking sector
3. To study of the opportunities and challenges of AI in use in the banks of India
4. To provide consumer satisfaction.

### **REVIEW OF LITERATURE :**

Dr. Shivraj Singh , Dr. Lokesh Agarwal (2019) investigated the role of artificial intelligence in the banking sector and its usefulness for customers, employees and the progress of the banking sector in India. They concluded that artificial intelligence has a positive impact on the banking sector. It increases productivity and reduces cost. But it is also increasing.

EDITH MIHAELA DOBRESU and EMILIAN M. OBRESU (2018) they investigated that the trends and analyzes and perception of artificial intelligence with pros and cons of its integration in all social and economic life artificial intelligence is most advanced technologies in development of today's science that's why the big robotics companies are investing big amount to further development of unprepared third wave of automation and robotization it concluded that artificial intelligence plays an important role and development of economy it provides solution to various challenges of society.

Deepthi. B Priya?Gupta, and Himanshu?Arora (2022) they discussed the significance of various factors ( consumer satisfaction and artificial intelligence knowledge among employees) on implementing the artificial intelligence driven technologies from employees' perspectives at various levels of the organization they concluded that artificial intelligence. technology considerably decreases the cost and improves the customer experience of services.

Dr Sunitha.B.K, Nukala Jahnvi, Khushi V Tibrewal (2020) analyzed the impact of artificial intelligence in the finance sector especially banking in India.many financial sectors have been benefiting greatly by implementing different artificial intelligence applications.its time period is 2015-2020

Ravinder Singh & Manu Sood (2022) presents a discussion on the pros and cons of integrating artificial intelligence into cybersecurity. Artificial intelligence is a kind of digital representation of human intellect so it concluded that an account of some of the currently used frameworks and standards for cybersecurity by various organizations around the world followed by a snapshot of using artificial intelligence in cybersecurity.

Muhammad Tanveer, Shafiqul Hassan and Amiya Bhaumik (2020) investigated that artificial intelligence has also grown in the education field. Artificial intelligence has been applied to resources to

improve skills giving teachers the time and freedom to provide understanding and good performance. it concluded that artificial intelligence's applications, benefits and sustainable development education challenges.

Adil Masood, and Kafeel Ahmad (2021) discussed that in the past few years, artificial intelligence based methods have become the most powerful and forward-looking approaches for air pollution forecasting because of their specific features such as organic learning, strong fault tolerance, and ease of working with high-dimensional data. it concluded that artificial intelligence-based techniques have interest in air pollution forecasting and offer great potential to change the way air pollution is forecasted in the near future

### IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR OF INDIA

1. **Cybersecurity and fraud detection** : Undoubtedly, chatbots are one of the best examples of practical applications of artificial intelligence in banking. Once deployed, they can work 24\*7, unlike humans who have fixed working hours.
2. **Tracking market trends** : Artificial intelligence in financial services helps banks to process large volumes of data and predict the latest market trends, currencies, and stocks. Advanced machine learning techniques help evaluate market sentiments and suggest investment options.
3. **Data collection and analysis** : Banking and finance institutions record millions of transactions every single day. Since the volume of information generated is huge, its collection and registration turn into an unavoidable task for employees. Thus AI is useful in collecting and analyzing the data.
4. **Customer experience** : Customers are constantly looking for a better experience and convenience. For example, ATMs were a success because customers could avail essential services of depositing and withdrawing money even when banks were closed.
5. **Risk management** : External global factors such as currency fluctuations, natural disasters, or political unrest have serious impacts on banking and financial industries. During such volatile times, it's important to take business decisions extra cautiously. AI-driven analytics can give a reasonably clear picture of what is to come and help you stay prepared and make timely decisions.

### PROS OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR OF INDIA

1. **Improved Fraud detection** : It is unsurprising that AI is better at handling vast amounts of data and detecting frauds way before humans can. They can apply different algorithms, without making mistakes, to perform such repetitive tasks with ease. This is one of those benefits that banking and financial institutions are enjoying because of being an already data-heavy industry.
2. **Better customer experience** : Customers are constantly looking for convenience. For example, the ATM was a success because customers could access a vital service even when banks were closed. Thus AI is useful in the banking sector.
3. **Reduced operational costs** : While the banking industry is mostly digital in its operations, some processes cannot be automated and require the help of humans. Banks can face high operational costs and risks due to human error. Such processes cannot be automated but the rule-based digital

tasks that require human intervention can be coupled with other artificial intelligence techniques to achieve better results

4. **Automate Decision Making** : One of the most significant benefits of AI in banking is automating decision-making in underwriting and credit analysis. Banks can use AI-powered algorithms to analyze vast amounts of data, including credit scores, income, and employment history, to make lending decisions.
5. **Improved Compliance and Regulatory Oversight** : Finally, AI in banking can help to improve compliance and regulatory oversights. Compliance is a critical issue for banks, and the cost of non-compliance can be high. Using AI, banks can ensure that they comply with regulatory requirements, such as anti-money laundering (AML) and Know Your Customer (KYC) regulations. Moreover, AI can help identify potential compliance issues before they become major problems, allowing banks to take corrective action quickly.

#### CONS OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

1. **Implementing the proper algorithm** : Although the AI works flawlessly with faster results, its accuracy depends on the algorithm it works on. An improper algorithm or command can bring unnecessary errors and wrong results. So, proper implementation of the algorithm is important
2. **Bad Calls** : Though Artificial Intelligence can learn and improve, it still can't make judgment calls. Humans can take individual circumstances and judgment calls into account when making decisions, something that AI might never be able to do. Replacing adaptive human behavior with AI may cause irrational behavior within the ecosystem of humans and things.
3. **Distribution of Power** : There is a constant fear of AI superseding or taking over humans. Artificial intelligence can give a lot of power to the few individuals who are controlling it. Hence, AI carries the risk and takes control away from humans while dehumanizing actions in several ways.
4. **Unemployment** : Replacement of the workforce with machines can lead to wide-reaching unemployment. Moreover, if the use of AI becomes unruly, people will be highly dependent on the machines and lose their creative power. Unemployment is a socially undesirable issue. Individuals with nothing to do can lead to the terrible use of their minds. Be it banking or any other sector; Artificial intelligence can effectively increase the unemployment rate.

#### CHALLENGES :

1. Lack of skills in the existing workforce for advanced tools of AI in banking. There is surging demand for skilled domain experts and data scientists to use the data in hand with a more accurate and credible approach.
2. To expand AI, Banks must first match the Governments tighter permission and regulatory scrutiny. an increase in automation would clearly increase risk exposure. Hence, net banking and online transactions must come under the radar of tough privacy regulation policies.
3. Currently, incorrect Banking is posing the biggest challenge for using AI in banking. AI excitedly depends on the quality of the data and if the data itself is inaccurate, then a successful AI implementation is far from reality.

4. Data silos and legacy IT infrastructure pose the biggest threat for banks going forward with AI. To build scalable and competitive AI models banks must tear down data silos through effective communication between different systems and departments and entire data integration.
5. Most banks have trouble figuring out what AI can or cannot do for their respective systems. Because reports around AI are polarizing it either as a cure-all for the banking problems or as something that will put us out of our jobs, AI is subject to hype-driven goal setting by banks.

### CONCLUSION :

Artificial Intelligence has numerous advantages to offer for the financial segment. Based on the findings, it can be concluded that Artificial Intelligence in Banking and Financial Services satisfies their clients or consumer's needs. Banking and Financial Services consumers have good awareness about Artificial Intelligence applications. Adoption of Banking and Financial Services AI in applications was highest followed by KYC/AML, Chatbots and Security Compliance and also helping to fulfill the customer demand faster and easier. It is also being used to meet regulatory compliance, detect fraud, and assess individual credit worthiness. Artificial intelligence is changing the financial and banking industry for the better : AI provides banks a channel to identify suspicious activity quickly. AI allows financial institutions to make better investments and accommodate a broader customer base. AI creates a user-friendly experience for clients with its increased accessibility and flexibility. We don't know what kind of new features artificial intelligence will surprise us in time but one thing is certain: the banking sector needs to take advantage of the power that it offers.

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