



# INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary  
Peer Reviewed Edition :

[www.ijlra.com](http://www.ijlra.com)

## **DISCLAIMER**

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume 2 Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis

IJLRA

## **EDITORIAL TEAM**

### **EDITORS**



### **Megha Middha**

*Megha Middha, Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar*

*Megha Middha, is working as an Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar (Rajasthan). She has an experience in the teaching of almost 3 years. She has completed her graduation in BBA LL.B (H) from Amity University, Rajasthan (Gold Medalist) and did her post-graduation (LL.M in Business Laws) from NLSIU, Bengaluru. Currently, she is enrolled in a Ph.D. course in the Department of Law at Mohanlal Sukhadia University, Udaipur (Rajasthan). She wishes to excel in academics and research and contribute as much as she can to society. Through her interactions with the students, she tries to inculcate a sense of deep thinking power in her students and enlighten and guide them to the fact how they can bring a change to the society*

### **Dr. Samrat Datta**

*Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board*



## Dr. Namita Jain



*Head & Associate Professor*

*School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC -NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.*

*Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi.(2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019*

## Mrs.S.Kalpana

*Assistant professor of Law*

*Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr. Ambedkar Law College, Pudupakkam. Published one book. Published 8 Articles in various reputed Law Journals. Conducted 1 Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.*



## Avinash Kumar



*Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC - NET examination and has been awarded ICSSR - Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.*

## **ABOUT US**

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS  
ISSN

2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

# **AN IMPACT OF ARTIFICIAL INTELLIGENCE** **IN INDIAN BANKING INDUSTRIES**

AUTHORED BY - SAYLI YOGESH SHRINGARPURE

## **INTRODUCTION**

Every business industry is assessing options and adopting new ways to garner more business in this world of competition and create value in this technology driven world. The Indian banking sector is also witnessing earth shattering changes: foremost being the rise in customer- centricity. Techno-savvy customers, exposed to advanced technologies in their day-to-day lives, expect their banks to deliver seamless experiences and that too at a lightening speed. To meet these expectations of the customers, banks have expanded their landscape to retail banking like mobile banking, digital transactions and real-time money transfers. But not all the banks have the requisite infrastructure and manpower to cope up with it. All of these advancements have enabled customers to avail most of the banking services at their fingertips anytime and anywhere, it has also come with a cost for the banking sector as a whole. This study also gives us an insight into the positive as well as negative impact of an Artificial Intelligence using in Indian Banking Industries. The observations and studies are of descriptive nature so all the required and relevant data have been taken up from various journals, magazines for published papers and websites.

## **OBJECTIVE:**

1. To study the meaning and reasons for Artificial Intelligence.
2. To understand the implementation of Artificial intelligence in Banking Industries.
3. To study the positive as well as negative impacts of Artificial Intelligence in Banking Industry.

## **RESEARCH METHODOLOGY:**

This research is of descriptive nature and tells about the meaning of Artificial Intelligence along with the impact of positive and negative impacts of Artificial Intelligence in Indian banking industry. Hence makes use of secondary data. The entire study is based only on observation,

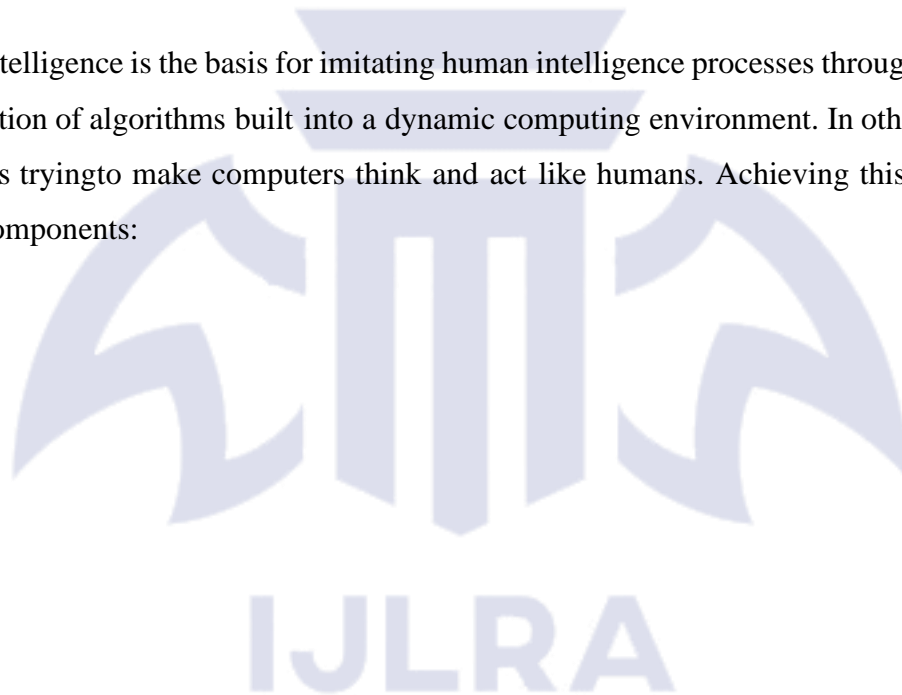
interviews and documentary analysis. Furthermore, the required and relevant data is collected from various Research Papers, Journals, & Publications, websites and many others. A lot of books have also been referred for the theoretical information on the topic as required.

**Observations:**

This part of the study is divided into following sub parts as under:

1. Meaning and Reasons for AI.
2. Implementation of AI in Banking Industries
3. Positive and Negative impact of Artificial Intelligence in the banking industry.

Artificial intelligence is the basis for imitating human intelligence processes through the creation and application of algorithms built into a dynamic computing environment. In other and simple words, AI is trying to make computers think and act like humans. Achieving this end requires three key components:



1. Computational systems
2. Data and data management
3. Advanced AI algorithms

The more humanlike the desired outcome, the more data and processing power required.

### **REASONS FOR ARTIFICIAL INTELLIGENCE**

Today, the amount of data that is generated and needed by both humans and machines, far outpaces humans' ability to absorb, interpret, and make complex decisions. Artificial Intelligence forms the basis for all learning related to computer and has the potential for future of all complex decision making. Computers are extremely efficient and far more faster at calculating these combinations to arrive at the best decision. Artificial Intelligence and deep learning are the foundational future of business decision making.

#### **Artificial intelligence (AI) in Banking**

Artificial intelligence (AI) includes machine learning and natural language, which can be used in the banking industry, It is a method of data analysis which automates analytical model building, Machine learning occurs when computers tend to change their parameters/algorithmson exposure to new data without human intervention to reprogram them. Natural language processing (NLP) refers to the capability of technology to use human communication, naturally spoken or written, as an input that prompts and analyses computer activity, natural language generation (NLG) refers to the ability for technology to produce human quality prose. It sorts through large amounts of available data to produce a human-like response. Artificial Intelligence is termed as a threat to mankind though it has its own merits and demerits. To understand and analyse the AI properly lets observe the same firston the darker side.

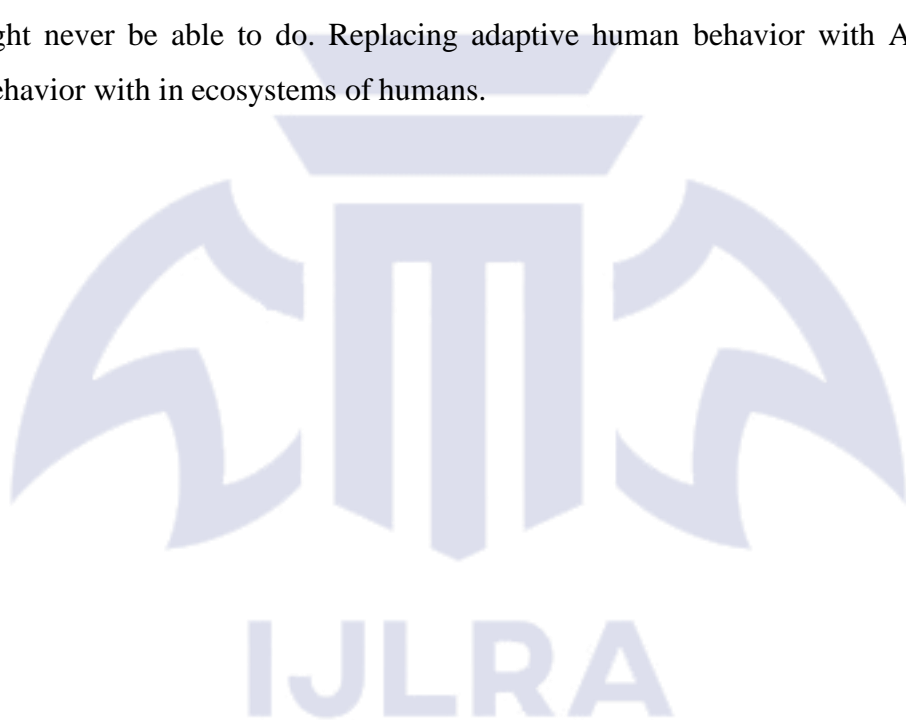
### **NEGATIVE IMPACTS OF AI FOR BANKING SECTOR**

### High Costs

The production & maintenance of artificial intelligence involves high costs as they are very complex machines. Artificial Intelligence consists of advanced software programs that require regular updates to meet the needs of the changing environment. In case of critical failures, the procedure to reinstate the system and recover lost codes may require enormous time & cost.

### Bad Decisions

- Though Artificial Intelligence can learn and improve, it still cannot make judgment calls. Humans are competent to take individual 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 ecosystems of humans.



### Unemployment

AI may result in replacement of the workforce with machines and computers that can lead to wide-reaching unemployment. Moreover, if the use of AI becomes rampant, people will be highly dependent on the machines and lose their creative power. Unemployment is a socially undesirable issue. Individuals without any employment can lead to the devastating use of their minds. Be it just the banking or any other sector; AI can effectively increase the unemployment rate.

### Risk Factors

AI can offer a lot of power to the few individuals who are controlling it, so AI carries the risk and takes control away from humans while dehumanizing actions in several ways. Artificial Intelligence delivered in the wrong hands may turn out to be a serious threat to humankind. If people start thinking destructively, they may create havoc with these advanced machines.

### Replacement of Workforce

Artificial intelligence allows you to replace the workforce with machines that can lead to wide-reaching unemployment, if the use of AI becomes rampant, people will be highly dependent on the machines & lose their creative power, Be it banking or any other sector, AI can increase the unemployment rate, Individuals with nothing to do can lead to the devastating use of their minds.

## **POSITIVE IMPACTS OF AI FOR BANKING SECTOR**

Artificial Intelligence can help the bank understand the pattern of expenses of the customer. The bank can come up with a customized investment plan & assist the customers for budgeting and investing, banks can send the notification about the advice for keeping a tab of checking on the expenses and investments which will be based on the data. The data sources for transactional patterns of the customers can be tracked to help understand the customer's behavior and also the preferences to improve their experience to a higher level. Artificial intelligent can shift through massive amounts of data and identify patterns that might elude human observers. In fact there is one area where this capacity is particularly relevant is in the fraud prevention, Artificial

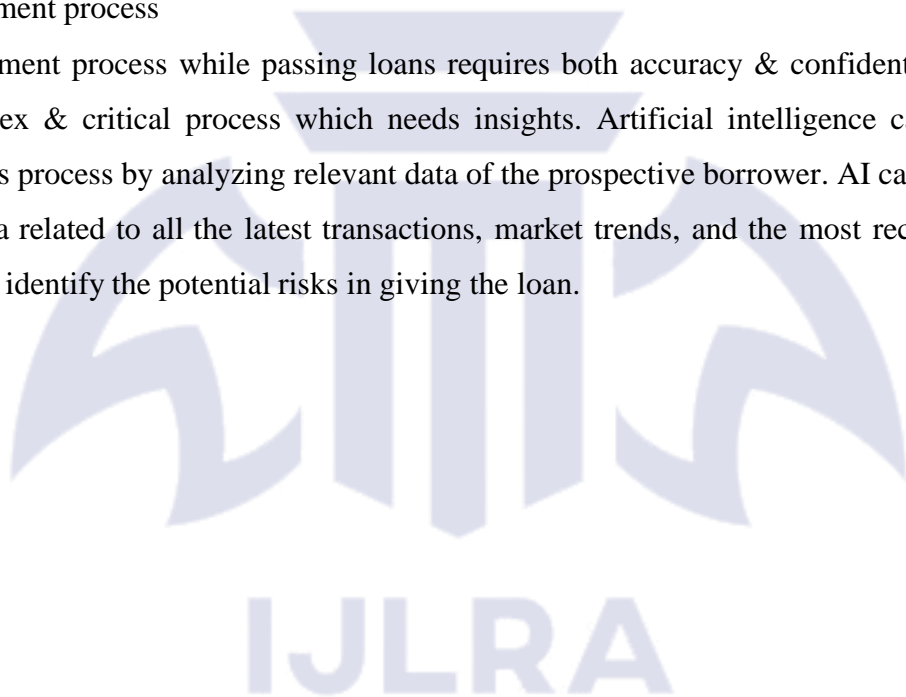
intelligence and machine learning solutions may be deployed by many financial service providers to detect fraud in real time. It enhances the risk management capacity of the banks by providing faster counterfeit solutions.

#### Improvement in Online and Mobile Banking

The online banking and mobile banking has become increasingly important as a tool for 24/7 transaction, AI has enabled Banks to access customer data, such as detailed demographics, website analytics & records of all the offline and online transactions, machine learning can integrate & analyze information.

#### Risk assessment process

Risk assessment process while passing loans requires both accuracy & confidentiality. It is a very complex & critical process which needs insights. Artificial intelligence can handle & simplify this process by analyzing relevant data of the prospective borrower. AI can combine & analyze data related to all the latest transactions, market trends, and the most recent financial activities to identify the potential risks in giving the loan.



### Security & Swift Transactions

Banks must be able to operate for presenting secure & swift transactions, AI is designed to detect the fraudulent transactions on the basis of a pre-defined set of rules, the mobile app can detect any suspicious activity in the customer's account on the basis of customer behavior analysis, any online transaction of a big amount from the customer's account which has a history of small transactions can be detected within a fraction of second.

### Offering High Security

AI can offer high security to the banking sector, AI-based mobile applications can make the transaction quicker & safer, the bank and financial institutions may understand the user's behavior and also offer personalized experiences through an application. Banks can also handle customer-oriented operations easily while reducing the cost of hiring additional employees.

### Shifting tasks from Humans

AI can shift the activities and tasks from humans, so, it can reduce costs, it may speed up response time, keep humans apprised of the latest regulatory changes, and save time by preparing statutory and regulatory reports. The Bank has computer programs that can carry out repetitive tasks ranging from automated programs to respond to the data requests from external auditors.

### Employee Effectiveness & Customer Experience

Artificial intelligence improves employee effectiveness as well as enhances customer experience through emails and other offers to targeted base of customers. It may help in revenue generation. It helps in increasing the productivity of sales, AI offers greater precision & accuracy, From cash transfer to bills payment, cards management, and other support systems. AI can enrich the satisfaction level of the customers, All of these operations can be easily managed through desktops, smart phones, and other mobile devices.

### Identification of Fraudulent Transactions

The finance industry is harnessing new and new machine learning to decrease the operational costs & drive profitability. This field involves both front end-and back end-office activities across all the multiple institutions. Machine learning algorithms can analyze millions of data

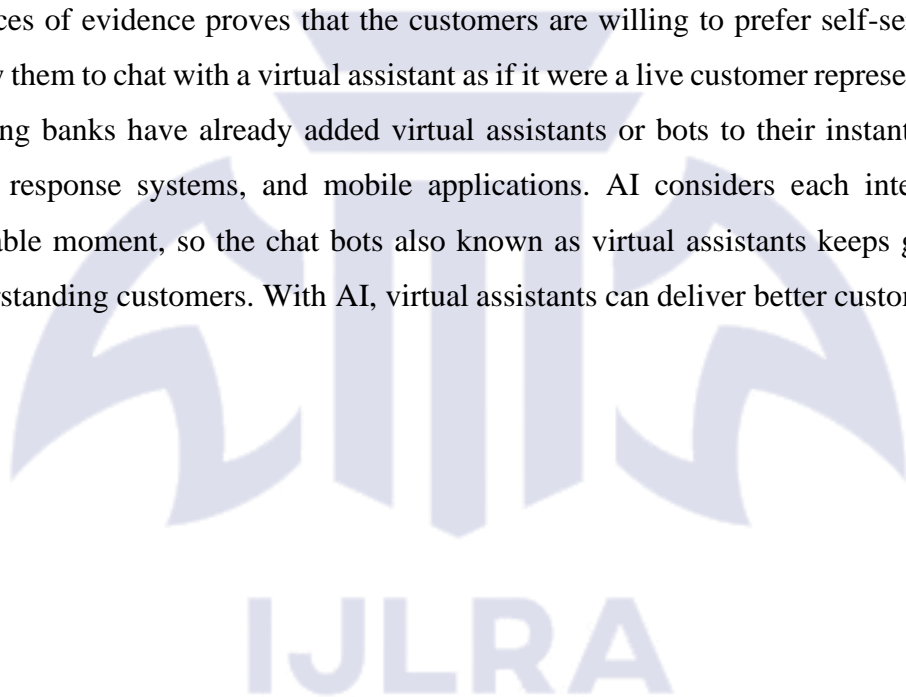
points in real time and also may flag suspicious or plain-right fraudulent transactions, which may result in stopping many fraudulent claims in the process.

### **Increase in Efficiency, Accuracy**

Artificial intelligence helps in increasing efficiency, accuracy, and speed of mathematical calculations, AI can handle larger quantities of data, banks may find the best combination of the initial margin reducing trades at a given time based on the degree of initial margin reduction in the past under different combinations of the respective trades.

### **Better Customer Support**

Several pieces of evidence proves that the customers are willing to prefer self-service options which allow them to chat with a virtual assistant as if it were a live customer representative. Most of the leading banks have already added virtual assistants or bots to their instant website chat bots, voice response systems, and mobile applications. AI considers each interaction as a knowledgeable moment, so the chat bots also known as virtual assistants keeps getting better while understanding customers. With AI, virtual assistants can deliver better customer



support. It also allows the sentiment analysis, so that the virtual assistant can determine when individuals are getting frustrated and instantly transfer them to a live agent.

### Scam Recognition

With an immense growth of banking fraud, scam recognition and reduction has become challenging for the banking sector. Many of the banks tried to identify the factors and powerful solutions but were unable to succeed. However, Artificial Intelligence makes it more easier to detect the exact factors involved in frauds and support investigators. It improves financial security with many advanced fraud prevention tactics. Artificial Intelligence works as a real-time solution from scam for the banking sector while handling complex situations. Based on the advanced data mining and crunching, AI can detect fraud by flagging unusual transactions. It feeds back in to the consumer's profile which subsequently builds a secure environment.

### Advanced Data Analytics

One main advantage of AI is its ability to complete difficult and time consuming tasks through intricate automation, resulting in better productivity. Based on an algorithm, AI can quickly consume and process huge amount of data at an expedited level. The enormous speed brings efficiency and speed to financial services, providing scope for personalized offerings to consumers. Even more, AI makes faster decisions while carrying out actions quickly.

### CONCLUSION

AI is gradually proliferating the whole banking industry to reinforce its financial services. With many advantages and benefits, it is nearly obvious that the majority of banks and financial institutions will adopt AI to stay competitive and try to deliver better customer support. However, several cons along with pros are also associated with a machine learning algorithm. As it continues to learn and grow, the decision-making capabilities may create problems in the forthcoming future. Also, since the manual workforce is being limited, the role of AI is critical in ensuring that banks can serve their customers efficiently and effectively. We hope that this article sheds light on the inevitable need for AI to reduce the dependency on humans in the banking

sector.

