



A Study On Artificial Intelligence In Banking Sector

B.Vijaya Lakshmi

ABSTRACT

This research paper focuses on artificial intelligence (AI) in banking and financial services in Hyderabad with an emphasis on client or consumer responses and the implementation of AI methodology in the banks. In order to better track, anticipate, and react to customer behavior, banks and other financial institutions can monitor the financial transaction data produced by the widespread use of digital payments and banking. The data is used to identify the information utilized in banking and financial services. For the purpose of this research study, primary data in the form of questionnaire is gathered from existing customers of banks located in Hyderabad region and secondary data is gathered from popular journals, books and articles related to Artificial Intelligence in banking sector. According to the study's findings, private banks and other financial institutions use a variety of artificial intelligence (AI) services to better serve their clients and ensure that they are happy with their financial services, as some clients are not happy with banking services. The findings also indicated that clients can expect more dedication from bank and financial services personnel by providing creative planning for the advancement of AI practices in the workplace followed by providing insights to the future growth of AI in banking sector.

Key words: Artificial Intelligence (AI), banking, finance, and customer satisfaction

I. INTRODUCTION

Artificial intelligence (AI) technology has been explored across numerous industries, and the banking sector is no exception. Artificial intelligence (AI) has being used in banking sector more and more in recent years. AI provides banks with a number of advantages, from enhanced customer service to more effective operations. The application of AI in banking could, however, come with hazards, including possible job losses and privacy issues.

Definition: According to John McCarthy (1955) defined “Artificial intelligence is making a machine behave in ways that would be called intelligent if a human were so behaving”. ML is a subset of AL that involves building models, mainly statistical models that give analytical results.

By automating tedious and repetitive procedures, artificial intelligence (AI) can also help banks operate more efficiently. Furthermore, by lowering human error and producing more precise forecasts, AI can assist banks in managing risks more effectively. AI can also be used to evaluate client data and offer tailored services and recommendations. Finally, by offering quicker reaction times and better client interactions, AI can be utilized to enhance customer service. In conclusion, artificial intelligence (AI) has the power to completely transform the banking sector and provide banks enormous advantages.

AI Applications in Banking sector:

1. **Chatbots:** Chatbots are one of the most widely used AI applications across sectors because they provide a very high return on investment in cost reductions. Most frequently requested tasks, like fund transfers, mini statement access, balance inquiries, etc., may be efficiently handled by chatbots. By doing this, the workload from other channels—like call centers and online banking—is lessened.
2. **Smart Wallets:** Mobile wallets with Artificial intelligence incorporated to make payments for bus ticket, taxi, event, movie, utility bill payments
3. **Robo advice:** One of the most contentious issues in the financial services industry is automated guidance. By analyzing the information provided by the user and their financial history, a robo-advisor makes an effort to determine the financial well-being of its clients. The robo-advisor will be able to provide suitable investment recommendations in a certain product class, right down to the individual product or stock, based on this research and the client's goals.
4. **Cyber security:** By assessing the data from prior threats and identifying trends and signs that may appear unrelated to detect and prevent assaults, artificial intelligence (AI) can dramatically increase the efficacy of cyber security systems. AI is not only capable of stopping external threats, but it can also keep an eye out for internal dangers or breaches and recommend remedial activities to stop data theft or misuse.
5. **Credit scoring:** AI analyzes data from a variety of standard and non-traditional data sources, which is crucial in assisting alternative lenders in determining the creditworthiness of clients. This facilitates the development of creative lending systems by lenders, even for people or organizations with little credit history, and is supported by a strong credit rating model.

Benefits of Artificial Intelligence in banking industry:

1. Early Fraud detection and prevention
2. Efficient Risk management
3. Improved customer satisfaction
4. Reduced costs
5. Increase in Revenue

The Objectives of the Research Study:

1. To understand how customers or clients perceive artificial intelligence in banking and financial services.
2. To analyze the various tools and software applications related to Artificial Intelligence used in banking sector
3. To assess the future growth of AI in banking sector in India

The Scope of the Research Study:

The study examines the role of Artificial Intelligence in banking sector in India

Research Methodology:

The study is based on both primary data in the form of questionnaire and secondary data from various resources such as Newspapers, journals, reports, e-books and research articles.

Limitations of the Research study: This research paper study is limited to customers perception based in Hyderabad on artificial intelligence in banking sector hence the data is confined to banks located in Hyderabad.

II. REVIEW OF LITERATURE

Dr. Navleen Kumar, Ms. Supriya Lamba Sahdev, Dr. Monika Sharma, Laraibe Siddiqui (2020) According to their study, artificial intelligence has had a huge positive impact on the banking industry, managing massive amounts of data, lowering the likelihood of fraud and scams, boosting employee productivity and efficiency, facilitating effective decision-making, data security, etc., In terms of identifying investment opportunities, AI serves as a financial advisor.

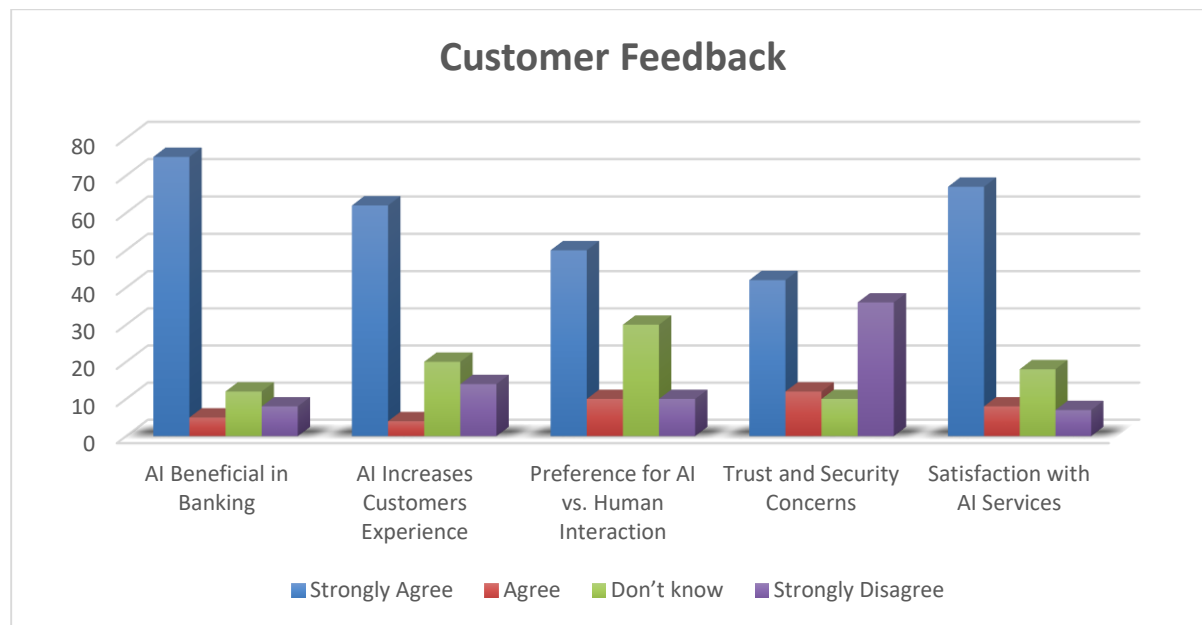
AI has been used by banks to enhance client retention and experience. Artificial Intelligence's impact on the banking industry and how it's transforming modern banks.

Dr. Munish Sabharwal (2014)- The study will examine how Indian banks are utilizing AI-based technology and their many applications. The majority of Indian banks use artificial intelligence (AI) for portfolio analysis, employee performance reviews, credit evaluations, and automated check book reordering. Indian Banks must start to apply AI based technology for more complex purposes like Signature Verification, Damage/ Risk Assessment, Employee Performance Evaluation and Investment Forecasting etc. which will enable to run operations much easier.

Saloni Tripathi, Riya Garg and Krishna Varshini (2022)- This paper will examine the evolution of artificial intelligence over time as well as the factors that led to the banking industry's adoption of AI, including risk management, self-employment, and operational efficiency. The implementation of Artificial Intelligence tools in the banking business such as user interface, customer insights and personalization etc.

III RESEARCH ANALYSIS and FINDINGS

Figure: 3.1 Customer adoptability AI with banking survey opinion



Interpretation 3.1 figure Majority of the customers are very satisfied with AI is its very much supportive and beneficial. Observed highest disagree with trust and security point of view as awareness and creating trust in believing will it support security over a period of time as higher age group population needs time to accept the change. Tremendous Increase in Customer experience post implementation of AI in Banking Sector.

Figure: 3.2 Different AI Tool supportive to Customers

AI Tools	Supportive		Not Supportive		Total
	Count	%Age Contribution	Count	%Age Contribution	
Chatbots	92	92%	8	8%	100
IVA	84	84%	16	16%	100
Mobile App Assistance	94	94%	6	6%	100
Fraud Detection	97	97%	3	3%	100
Credit Scoring Modelling	97	97%	3	3%	100
Personalized Financial Advice	89	89%	11	11%	100
Customer Relationship Management (CRM)	98	98%	2	2%	100

Interpretation 3.2 figure All the different AI tools quickly accepted and well adopted by the client with proper utility. Customer Relationship Management application with highest rating with 98% supportive highest among all the AI tools. Secondly top rated with Fraud Detection and support in Credit Score advises with 97% supporting. Need to be more interactive with voice assistance (IVA) with 84% as Indian diverse with different language dependence.

IV THE FUTURE OF ARTIFICIAL INTELLIGENCE IN BANKING:

As AI technology develops, AI will become more potent and every client will be able to have a more secure banking experience. Artificial Intelligence will lay the foundation for increased productivity and the generation of new jobs. AI also has the ability to change the banking industry's customer experience and create a new business model. Humans and technology must work together to get the best results, which will require training and a reassessment of the future of banking jobs. Additionally, the realization of substantial future potential hinges on mass customization, which is exclusively achievable with the aid of block chain and artificial intelligence technology. By adopting technological rigor, banks use AI's potential to offer creative customer experiences through a range of solutions and to set new benchmarks for the Indian financial industry. This allows them to navigate a new path. Using AI technology, data is transformed into a digital format. Better client experiences are also benefited by it. Customers and banks alike benefit from time savings. It helps to lessen errors made by people. Building a solid and devoted customer base is facilitated by it. Large cash inflows and outflows are made easier by it. It makes cashless transactions possible at any time and from any place.

Conclusion: The financial industry can benefit greatly from artificial intelligence in several ways. Based on the results, it can be said that artificial intelligence is helping banking and financial services serve the expectations of its customers. The general public's knowledge of uses of artificial intelligence in banking and financial services is high. The most popular uses of AI in banking and financial services were those that helped faster and more easily meet customer demands, followed by chatbots, KYC/AML, and security compliance. Customers have demonstrated a greater level of devotion to banking and financial services from representatives by providing creative preparation for the advancement of AI practices in the workplace. It's also utilized for detecting fraud, determining an individual's creditworthiness, and complying with regulations.

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