

Artificial Intelligence In Banking Sector

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Abstract- AI is at Boom capturing the whole market at a glance. We are just amazed by the takeover of AI in each and every field. Here we are about to focus on how AI has changed the world of Banking sector. This paper focuses on the benefits, limitations and future of Artificial Intelligence in Banking Sector. Also primary data are collected to know the use of various AI based tools at Private as well as public sector banks.

Keywords- Banking, Artificial Tools, Public Sector Banks, Private Sector Banks

I. INTRODUCTION

A number of definitions of artificial intelligence (AI) have come over the last few decades; John McCarthy offers the following definition in his 2007 revised paper, “It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable.”

II. LITERATURE REVIEW

(McCarthy,2007) The journey towards AI has begun when after WWII, the number of people independently started to work on intelligent machines. The English mathematician Alan Turing may have been the first to work upon it. He also gave a lecture on it in 1947. He may have been the first to decide that AI was best researched by programming computers rather than by building machines. By the late 1950s, there have been many researchers on AI, and most of them were basing their work on programming computers.

(Githa,2021) Artificial Intelligence has numerous advantages to offer to us for the financial segment. As per the findings, it can be concluded that Artificial Intelligence in Banking and Financial Services satisfying their clients or customer’s needs. Apart from this Banking and Financial Services consumers have good awareness about Artificial Intelligence applications. Also, Adoption of Banking and Financial Services AI in applications was highest followed by KYC/AML, Chatbots and Security Compliance and helping to fulfill the customer demand faster and easier. The consumers are more commitment from representatives to the banking and financial services by giving development innovative preparing to improve the AI procedures in the workplace. It is also used

to meet the regulatory compliance, assess individual creditworthiness and detect frauds as well.

(Adrian Lee,2017) The paper titled, “Banking on artificial intelligence” – has the purpose to determine the most prominent forms of AI within the banking industry. AI-driven customer service, real-time fraud prevention and risk management-it's the last one that might appeal most to those interested in industry disruption.

(Sabhrwal, 2014), This research clearly suggests that none of the banks selected by the researcher in his research except the new private sector banks uses the artificial intelligence based technological applications. The new private sector banks also use artificial intelligence mainly for the purposes like automatic cheque book re-order facility. For instance, Yes Bank also uses artificial intelligence for Employees performance evaluation, Credit evaluation and portfolio analysis.

It can be concluded that all the Indian Banks should initiate the process of the use of most modern expertise such as Artificial Intelligence based technological applications to provide customized services and products to its customers as well as in Transaction Monitoring.

III. BENEFITS OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

There are many positive points to consider if it comes to the benefits we can avail from AI. Following are the few examples of the same like, Personalized Financial Services, Fraud Detection, Smart Wallets, Reduced cost, mitigate risk, increased revenue and last but not the least is customer satisfaction.

IV. LIMITATIONS OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

AI offers many advantages to the banking industry, but we cannot overlook the challenges and limitations that need to be considered. These include a lack of data quality, minimal human interaction, security risks, full-range regulatory compliance, higher cost, ethical considerations, and limited applicability. Banks need to ensure that the benefits of implementing AI should not outweigh the costs.

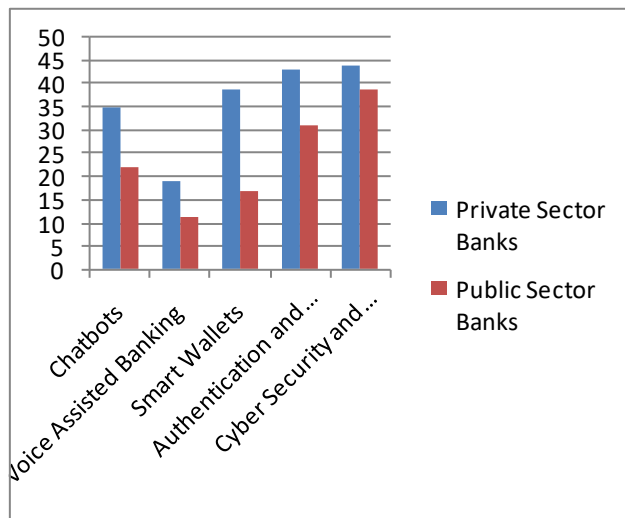
V. TOOLS OF ARTIFICIAL INTELLIGENCE IN BANKING

- Chatbots
- Voice Assisted Banking
- Smart Wallets
- Authentication and Biometrics
- Cyber security and Fraud detection

VI. TABLE 1.1 USE OF TOOLS AT PRIVATE AND PUBLIC SECTOR BANKS

Sr.No	Tools	Private Sector Banks(50)	Public Sector Banks (50)
1	Chatbots	35	22
2	Voice Assisted Banking	19	11
3	Smart Wallets	39	17
4	Authentication and Biometrics	43	31
5	Cyber security and Fraud detection	44	39

VII. CHART 1.1 USE OF TOOLS AT PRIVATE AND PUBLIC SECTOR BANKS



As per above chart the use of AI based tools like chatbots, Smart Wallets, Authentication and Biometrics, Cyber security and Fraud detection are more used at Private sector banks compared to public sector banks. Also it can be seen that tool like Voice Assisted Banking are not much known and opted for use. Proper awareness should be drawn considering such tools. Apart from this public sector should work bit hard to spread the awareness on benefits customer can have using AI based tools.

VIII. FUTURE OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR

AI is becoming increasingly vital in the banking industry, with trends such as increased use of predictive analytics, adoption of explainable AI, expansion of chatbots and virtual assistants, advancements in natural language processing, increased focus on cyber security, greater use of biometric authentication and collaboration between banks and fintech industries. These trends are further expected to shape the future of AI in the banking industry, allowing banks to offer more personalized products and services. Also proper awareness should also been drawn for tools available in the market so that maximum benefits be drawn and public sector should work hard compared to private sector banks.

REFERENCES

- [1] (McCarthy, 2007) What is Artificial Intelligence, 2007
- [2] (Githa, 2021) A Study on Artificial Intelligence (AI) in Banking and Financial services, IJCRT, Vol 9, Issue 9, SEP2021, ISSN:2320-2882.
- [3] (Adrian Lee, 2017) Banking on artificial intelligence, Jan 23.
- [4] (Bonnie G. Buchanan, P. F. 2019). Artificial Intelligence in finance. Retrieved 5 22, 2020, from The Alan Turing Institute.
- [5] (Sabharwal, Feb 2014) International Journal of Artificial Intelligence and Agent Technology, Vol 2, Issue 1, Feb 2014.
- [6] <https://www.linkedin.com/pulse/uses-benefits-risks-future-ai-banking-industry/>
- [7] <https://www.goodworklabs.com/artificial-intelligence-in-banking-industry/>