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Implementation of AI Technology in Banking Sector Based on Coimbatore City

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Abstract
As the internet and early broadband emerged in the 1980s, digital networks connected shops with suppliers and customers, fueling a demand for the first online catalogues and inventory management systems. Early 2000s technological developments in broadband and e-commerce led to a situation that was somewhat reminiscent of the contemporary digital banking ecosystem. Through the following ten years, smart phones became widely available, paving the way for mobile payments outside of ATMs. If banks are to satisfy customer needs, they must continue to focus on creating digital technology that enables agility, scalability, and efficiency. Businesses' capacity for creativity, adaptability, and variety may increase more than ever with the usage of artificial intelligence (AI). Numerous businesses are currently utilising AI to increase efficiency and competitiveness while quickening the digital revolution.

Keywords: Artificial Intelligence, Digital Banking, Block Chain, Internet of Things

Introduction

Digital disruption is redefining industries, and businesses are acting differently as a result. Every industry is assessing its options and putting strategies into place to add value in the technology-driven world. The banking sector is undergoing radical changes, with a rise in customer centricity at the forefront.

Customers are constantly exposed to cutting-edge technologies, therefore banks must offer seamless experiences. Banks have expanded into the retail, IT, and telecom sectors to offer services like real-time money transfers, e-banking, and mobile banking. Even while these developments have made it feasible for customers to access the bulk of financial services whenever and wherever they choose, the banking industry must pay a price for them.

The transportation of critical information through virtual networks that are vulnerable to fraud and cyber attacks has increased as a result of the banking industry's integration with sectors including IT, telecom, and retail. These instances damage the reputation of banks and their connections with customers, which also affects the profitability of the banks.

Artificial intelligence (AI) is now regarded by a wide range of industries as one of the key facilitators of the digital transformation. There is more to artificial intelligence in banking than just chat bots. The banking industry is only one of the many industries that artificial intelligence has dominated. Understanding the impact of AI on modern banking was the main motivation behind this project.

Banks will become more powerful owing to AI by automating their knowledge workers, and the entire automation process will become intelligent enough to remove cyber threats. To cut costs and boost operational effectiveness, banks will be able to provide customised services and optimally integrate AI with human and machine capabilities.

The attainment of all of these benefits is no longer a faraway dream for banks. Leaders in the banking sector have already taken responsible action to use AI and realise these benefits.

Objectives

- To study the areas and the applications where the artificial intelligence is being used by the banks.
- To study the influence of Artificial Intelligence in the banking sector & how AI is changing the face of modern – day banks.
- To know the Overall development and the potential of Artificial Intelligence in the Banking Sector.
- To achieve significant financial benefits from their machines, banks will have to look beyond automation—and focus instead on learning and banking transformation.
- To know the awareness of the AI among the people.
- To know the Cyber security and fraud detection in the banking sector.
- To undergone satisfaction and as well drawbacks in Artificial intelligence

Significance

- In order to facilitate the regulatory compliance and fraud detection done by AI along with machine learning to alert customers as well as banks.
- Providing Better and enhancing Customer Experience by maintaining the information of accounts accurately without any error to provide a smooth functioning for the customers.
- Reduced Operational Costs and Risks in the usage of Artificial Intelligence.
- Improved Loan and facility evaluation by maintaining the credit history of the customer to determine their creditworthiness.
- Data collection and analysis generated enormously for improve the overall user experience.
- Risk management where the AI –driven analytics can give a reasonably clear picture of what is come and help to stay prepared with timely decisions.

Statement of the Problem

Artificial intelligence (AI) is currently a hot topic in banking and finance, and with good reason. The way individuals conduct business and operate has been significantly impacted by artificial intelligence banking technology including machine learning, computer vision, and natural language processing. These developments also have the potential to significantly benefit banks by improving back-office operations, customer satisfaction, and employee morale.

Artificial intelligence use may lead to huge cost savings. Financial services companies are also well-positioned to gain from artificial intelligence. AI in banking cannot exist without data. However, the financial industry collects a lot of data in the normal course of business. It is true that the use of machine learning and artificial intelligence in the finance industry is nothing new. AI can help financial organisations make better investments, reduce human error rates, and offer a satisfying customer experience. Intelligent Decision Management Systems (DMS) help institutions maintain compliance by reducing error rates and cutting the time needed to accurately gather client information.

When examining a vast number of variables to predict a result, artificial intelligence appears to do better than humans. However, the costs typically outweigh the benefits. In order to assess the use of artificial intelligence in the banking sector according to people's perceptions, the current study has been conducted.

Scope of the Study

Almost every industry is feeling the effects of digital technology, which is not only reinventing entire sectors but also altering how businesses function. Every industry is currently considering its alternatives and implementing strategies to compete in this tech-driven society. Today, every nation is advancing in terms of digitalization, which is why there are more clients in the banking industry than ever before.

It is difficult for industries to satisfy the unique demands of the customers. Customers have extremely high expectations in the industry nowadays. Today's consumers demand a pleasant and easy shopping experience from businesses, and the banking sector is no exception. Customers are technologically savvy and anticipate needs-based service from businesses. In order to provide services like mobile banking, e-banking, and real-time money transfers, the banking industry has expanded its reach into the retail, IT, and telecom sectors. These cutting-edge features undoubtedly provide users access to banking at their fingertips, but they also cost the banking industry money.

Artificial intelligence has a lot of potential in India. Every industry or sector of the economy is exhibiting encouraging signals of growth when paired with artificial intelligence. There is not a single technology that falls under AI that deserves praise. It is a collection of practical technologies, including big data, machine learning, pattern recognition, and self-improving algorithms. According to projections for the demand for AI professionals in the future, no industry will be immune to the effects of this powerful tool. The future years will be quite lucrative for anyone who are interested in a career in artificial intelligence.

Research Methodology

To analyse the research problem methodically, a scientific approach to the research process is absolutely necessary. The validity of the results will increase with the right methodology. It is important since the approach used determines how well the study and analysis turn out.

Study Area

The data for the study has been collected from the respondents of the Coimbatore city.

Collective of Data

Data collection is one of the most important aspects of the study. The data collected from both primary and secondary sources.

Primary Data

The primary data those which are collected from the respondents for the first time through questionnaire.

Secondary Data

The information regarding the data has been collected from the secondary data. Books, Lending, journal and Magazines where referred for this purpose from the library to faculty proper understanding of the study.

Review of Literature

Paramalarani, G. (2020), pointed out that the effort of digitalization in the banking sector created a significant future among the workforce in both the public and private sectors. The digital transformation that took place in banks changed the organizational and management level design and hiring processes at banks. It pointed out that the day-to-day banking operations are going digital. While analyzing the trend of employment in the banking sector, it is attempted to point out that 70% of the front office jobs are displaced by artificial intelligence, and positions like tellers, loan officers, customer service representatives, and clerks are replaced by chat bots, voice assistants, and automated biometric technology. It stated that the transformation in the banking sector has created some new roles like "cyber security specialist,""programmer,""block chainar chi tect,""credit analyst," etc.

Kaur, K.,L., Sharma. M., Siddiqui Sahdev, L., (2020) explain in the article the influence of artificial intelligence on the banking industry and how AI is changing the face of modern-day banks. It points out that AI is now becoming widespread in the banking sector. The results show that AI is valuable in the field of banking, and various technologies have

emerged in AI such as core banking, operational performance, customer support, and analytic

Kaur, J. (2020), pointed out that in a country like India, where most people use banking transactions every day, it is important to implement technological innovations in the banking sector. The study was based on secondary sources of data, and it tried to explain the three evolution phases of the banking sector, which started with the history of banking and ended with the nationalization and banking reforms that took place after 1991. It provided an outlook into the various types of innovative banking, products and services, and electronic systems. The study was concluded with the statement that the improvement in productivity and efficiency in banking services Innovations in the banking sector have acted as a catalyst to convert the Indian banking sector.

Types of Digital Banking

Artificial Intelligence (AI)& Machine Learning (ML)

AI is used by online assistants and chat bots in banking to assist consumers by providing the knowledge they require to resolve issues. Artificial intelligence is also used to manage and analyse data, protect data, and provide a better consumer experience. For instance, AI can identify recurring tendencies by quickly analysing client data. Machine learning is another technology that banks can use to gather, store, and compare user data in real-time. One of the key advantages of machine learning in the banking sector is fraud detection. It is easier to spot any changes in user behaviour and take timely preventive action with machine learning.

Internet of the Things (IOT)

A significantly more personalised and tailored customer experience is made possible by the real-time data analysis enabled by the Internet of Things. Thanks to the Internet of Things and its smart device connectivity, customers may make contact less payments swiftly and easily. By integrating risk management, authentication processes (using biometric sensors), and access to many platforms, the Internet of things has also altered the financial environment.

Block Chain

The implementation of digital banking must include the topic of block chain. Block chain's use in the financial sector has resulted in safer data transfers, more accuracy, and better user interfaces. Consumers today place a high value on block chain technology and believe it has enhanced the simplicity and transparency of banking transactions. In fact, the combination of block chain and IOT has been one of the biggest advancements in digital banking technology (BIOT).

Cloud Computing

By far, the most common technology used by banks and the financial sector is cloud computing. Improved operations, increased productivity, and immediate product and service delivery are all benefits of cloud-driven services. Banks are now more willing to use banking APIS to encourage data sharing and improve the user experience thanks to the integration of the cloud.

Big Data Analytics

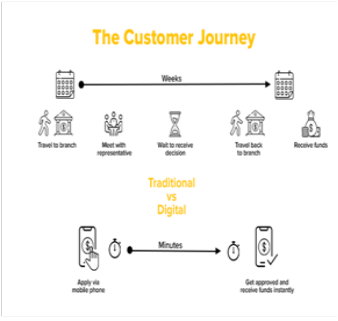
Customers today don't view banks the same way they did ten years ago. All thanks to big data technology, which aids banks in tracking risks, managing feedback, and evaluating customer spending to boost loyalty. Data analytics tools have opened up new opportunities for banking growth and have been quick to satisfy escalating consumer demand. Technology has not only changed the banking industry, but it has also significantly benefited the financial sector.

Benefits of Digital Banking

Whether it's an old person who is sick of standing in line, a working-class professional who is swamped with work, or a regular person who doesn't want to

go to the bank's branch to do a single errand, digital banking enables customers to perform banking tasks from the comfort of their homes. Also included is convenience. In addition to the convenience already provided, digital banking provides users with access to banking services around-the-clock. The excessive emphasis on paper in traditional banking was one of its main flaws. With the advent of digital banking as a service, banking has gone paperless.

To view records, a user can log onto their account at any time. A user of digital banking can set up automatic payments for recurring expenses including credit card, phone, and utility bills. The consumer is no longer required to actively recall the due dates. The customer has the option to get reminders about forthcoming payments and unpaid balances. With payment channels effectively integrated with online buying platforms, online shopping has become a piece of cake. Online payments have benefited greatly from internet banking. The expansion of digital banking to rural areas would appear to be a step toward overall growth. Rural residents may take advantage of digital banking to the fullest extent possible thanks to the availability of inexpensive smart phones and widespread internet connectivity.



A user can report and block lost credit cards with the help of digital banking by simply clicking a button. This benefit significantly improves the level of security and privacy that a bank's clients can expect. Digital banking encourages a cashless culture, which limits the flow of black money because the government can monitor money transfers. Digital banking is anticipated to eventually reduce the requirements for currency minting. Digital platforms not only enhance interactions with customers and expedite the delivery of their demands, but they also offer strategies for improving internal operations. Banks have always been at the forefront of consumer-facing digital technologies, but they haven't fully embraced middle ware's potential to speed up transactions. The use of automation can speed up both internal and external processes, which can improve customer satisfaction. In the wake of the collapse of the financial markets in 2008, risk management has gained increased attention. Banks may not need to hire and educate risk management specialists since risk management software may be able to detect and respond to market developments more swiftly than even seasoned professionals. Regardless of size, all organisations are vulnerable to a growing number of online risks that can damage their reputations. In February 2016, the Internal Revenue Service and several other significant tech companies both acknowledged that they had been hacked the year before. Data protection strategies can be used by banks.

Recent Developement and Trends in Digital Marketing

Radical Transparency and Open Banking

Trust is the second most important consideration when looking for financial solutions, according to research by Raconteur. Banks must develop client trust while keeping in mind current banking trends and increasing competition. The idea of radical transparency, or the propensity to foster an environment that is open and honest for a consumer, was developed in response to this intense need for trust. It's about telling the truth, recognising mistakes, and being open-book about your business. Clients anticipate this.

A bank will need to place more of an emphasis on openness and transparency than just depending on standard retail banking procedures, according to the most recent digital banking trends. A complete app-based online bank established in the UK in 2015 called Monzo, for instance, has more than five million subscribers. Monzo has demonstrated that new financial institutions may fast overtake established ones that have been there for centuries on the market by being transparent and open.

Data as a Predictable Personalization Tool

Big data, AI and machine learning (ML) empower financial marketers to provide consumers with increased personalisation. Personalization in this digital age refers to more than just basic information like a customer's name. Instead, it entails getting to know your clients' preferences and creating customised packages of banking services and products for each client in accordance with their needs and preferences. Customers of each digital bank can receive personalised financial trends.

AI Providing More Targeted Services

In order to learn more about consumer preferences, real-time AI-based bots may be used, according to the predictions for 2022's digital banking trends. These data and cutting-edge analytics can be used by financial marketers to give predicted personalisation and please their clients.

- Quicker real-time comprehension of their consumers' needs.
- Identify these issues and offer evidence-based remedies.
- Run analyses more quickly to increase productivity and efficiency.
- Create important company strategy supported by insightful data.

Automation using Time and Money Effieciently

There are still businesses and institutions operating today that perform a significant amount of manual data work. Unfortunately, higher management is too preoccupied reviewing manual work to develop plans. Instead of writing and reading reports manually, managers may plan and make decisions. Not having to produce manual reports and analysis means they have more time to focus on other valuable tasks.

- Automation and digital solutions can help cut expenses, boost productivity, free up time, and free the banks to concentrate on innovation.
- Automated systems for routine chores like back-office services and customer assistance will likely be implemented by more traditional banking organisations.

No Down Time -Reliability is Key

Given the growing number of consumers using digital banking, a bank cannot afford to have inconsistent server downtime. Their long-earned reputation and goodwill can be ruined in a matter of minutes. For instance, the breakdown of the State Bank of India's system resulted in large income losses. Due to these technological problems, several concerns have been raised about the institution's credibility and reputation. As a result, banks have to invest a lot of time and resources into maintaining an error-free system.

Security and Privacy

Theft and banks have a similar relationship. Customers are now more vulnerable to the risk of losing money because to newer digital banking products and services. For any digital bank, cyber security is now one of the top client demands. according to a current CSI poll.

Speed and Reactivity

Every bank should speed up its cumbersome operating procedures. Any bank can get a competitive advantage through speed. In order to channel their cash more effectively and promptly, businesses today need to make decisions more fast. For this reason, they require a reliable and responsive banking partner.

Importance of Visualization as a Global Trend

In their daily activities, today's generation places a higher emphasis on visuals. The user experience will henceforth have a significant impact on the competitive advantage of any financial organisation. Digital banking needs to create aesthetically engaging platforms in order to maintain customers' attention and interest. It is possible to forecast future changes in digital banking trends, such as the introduction of mobile apps that are more aesthetically pleasing and current. In response to user demand for more user-friendly and functional mobile banking apps, banks will now heavily invest in developing these.

Conclusion

Banks can manage enormous amounts of data at breakneck speeds in order to extract valuable

information from it. A wider customer base may get access to better services with the help of features like AI bots, digital payment advisors, and biometric fraud detection systems. All of this leads to increased sales, decreased costs, and increased profitability. Banks will become more powerful owing to AI by automating their knowledge workers, and the entire automation process will become intelligent enough to remove cyber threats. To cut costs and boost operational effectiveness, banks will be able to provide customised services and optimally integrate AI with human and machine capabilities. The attainment of all of these benefits is no longer a faraway dream for banks. Leaders in the banking sector have already taken responsible action to use AI and realise these benefits.

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