A STUDY ON TRANSFORMATION OF BANKING INDUSTRY DUE TO ARTIFICIAL INTELLIGENCE

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Abstract: The current paper puts light on the impact of Artificial Intelligence in transforming the banking sector from the human intensive sector to machine intensive sector leading to multiple changes like speeding up of the process, overall development and modernisation of the sector. Along with the positive impact the paper also discusses the impact of AI on the overall rate of employment being affected in the said sector.

Introduction:

Artificial intelligence also called machine intelligence is intelligence displayed by machines, in contrast with the natural intelligence (NI) displayed by humans and other animals. At the heart of the AI revolution are machine learning algorithms, software that self-improves as it is fed more and more data, a trend that the financial industry can benefit from immensely.

Artificial intelligence (AI) is intelligence—perceiving, synthesizing, and inferring information—demonstrated by machines, as opposed to intelligence displayed by non-human animals or by humans. Example tasks in which this is done include speech recognition, computer vision, translation between (natural) languages, as well as other mappings of inputs.

As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect. For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology. 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."

Artificial Intelligence (AI) is transforming the banking sector and leading it towards a new era of digitalization. It has the potential to make banking operations more efficient, secure, and personalized. In this blog, we will explore the impact of AI solutions in the banking sector, highlighting its benefits, applications, challenges, and future prospects.

Artificial Intelligence is the simulation of human intelligence in machines that can perform tasks that typically require human intelligence, such as learning, reasoning, and problem-solving.

OBJECTIVES OF THE STUDY

1.   To understand the impact of Artificial Intelligence on the Banking sector.
2.   To study the changes in Customer Relationship Management due to Artificial Management.

RESEARCH METHODOLOGY
3.1   Source of data
The current paper is based on the study from secondary data that is collected from various reports, articles published online.

LIMITATIONS OF STUDY.
-          Lack of previous research studies on the topic.
-          Methods/instruments/techniques used to collect the data.
-          Limited access to data.
-          Time constraints.

REVIEW OF LITERATURE
1.   What is artificial intelligence?[1] explains the concept of artificial intelligence on a comparative basis depending on the definitions by different thinkers of the concept. The article discusses the intersections of various authors. It discusses the various definitions showcasing number of parameters. It discusses the definition given by the father of computer science Alan Turing's definition which falls under the category of "systems that act like humans."
2.   Impact of Artificial Intelligence in Banking Sector[2] The article explains the impact of Artificial intelligence on the banking sector in india. The article discusses the merits and demerits of AI in the banking sector. It also discusses the challenges lying in implementation of AI for the banking sector with special reference to India focusing on parameters such as infrastructural competencies and adaptability.
3.   Why banks need artificial intelligence[3] The article discusses Artificial Intelligence being the future of banking as it brings the power of advanced data analytics to combat fraudulent transactions and improve compliance.it further discusses AI algorithms accomplishing anti-money laundering activities in a few seconds, which otherwise take hours and days. AI also enables banks to manage huge volumes of data at record speed to derive valuable insights from it. Features such as AI bots, digital payment advisers and biometric fraud detection mechanisms lead to higher quality of services to a wider customer base. All this translates to increased revenue, reduced costs and boost in profits.

DATA ANALYSIS & INTERPRETATION
Artificial Intelligence (AI) is transforming the banking sector and leading it towards a new era of digitalization. It has the potential to make banking operations more efficient, secure, and personalized. In this blog, we will explore the impact of AI solutions in the banking sector, highlighting its benefits, applications, challenges, and future prospects.

Artificial Intelligence is the simulation of human intelligence in machines that can perform tasks that typically require human intelligence, such as learning, reasoning, and problem-solving.
The banking industry has undergone significant changes in recent years, with the rise of digitalization and the emergence of fintech companies.
The traditional banking model is being challenged, and banks are looking for ways to stay competitive by providing more personalized and efficient services.

AI is becoming increasingly important in the banking sector due to its ability to process vast amounts of data, automate processes, and provide personalized services to customers. Banks are using AI to enhance their services, reduce costs, and stay ahead of the competition.

●   Benefits of Artificial Intelligence in Banking: Improved Customer Service:
AI-powered chatbots and virtual assistants can provide customers with 24/7 support, answering their queries, and resolving their issues in real-time.

Enhanced Security and Fraud Detection:
AI can help banks detect and prevent fraud by analyzing large volumes of data, identifying unusual patterns, and flagging suspicious activities.

Increased Efficiency and Cost Savings:
AI can automate repetitive tasks, such as data entry and processing, allowing banks to save time and money while improving their operational efficiency.

Personalized Financial Advice:
AI-powered systems can analyze customer data to provide personalized financial advice, such as investment recommendations and debt management strategies.

●   Challenges and Limitations of Artificial Intelligence in Banking: Data Privacy and Security Concerns:
AI solutions require access to vast amounts of data, which raises concerns about data privacy and security.

Ethical Considerations:
AI can raise ethical concerns, such as bias, discrimination, and accountability.

Lack of Skilled Personnel:
AI requires highly skilled personnel, which can be a challenge for banks that do not have access to a talent pool.

Implementation and Integration Challenges:
AI requires significant investment in technology and infrastructure, and its implementation can be challenging due to the complexity of banking operations.

●   Future of Artificial Intelligence in Banking: Increased Adoption and Integration:
AI is expected to become more widespread in the banking sector, with more banks adopting and integrating AI-powered solutions into their operations.

Advancements in Machine Learning and Deep Learning:
Advancements in machine learning and deep learning are expected to lead to more advanced and sophisticated AI solutions in banking.

New Applications and Use Cases:

AI is expected to find new applications and use cases in the banking sector, such as fraud prevention, compliance, and customer retention.

Impact on Employment in the Banking Industry:
AI is expected to have an impact on employment in the banking industry, with some jobs being replaced by AI-powered systems, while new jobs are created to manage and maintain these systems.

●   Applications of Artificial Intelligence in Banking: Chatbots and Virtual Assistants:
AI-powered chatbots and virtual assistants can help banks provide instant support to customers, saving time and improving customer satisfaction.
Risk Management and Credit Analysis:

AI can help banks assess the creditworthiness of customers and manage risk by analyzing their financial data, credit history, and behavior.

Investment Management:
AI can provide investment advice by analyzing market trends, customer preferences, and risk profiles.

Predictive Analytics and Marketing:
AI can help banks predict customer behavior, preferences, and needs, allowing them to tailor their marketing campaigns and offers accordingly.

- <u>AI is strengthening competitiveness of banks through</u>:

Enhanced customer experience: Based on past interactions, AI develops a better understanding of customers and their behavior. This enables banks to customize financial products and services by adding personalized features and intuitive interactions to deliver meaningful customer engagement and build strong relationships with its customers.

Prediction of future outcomes and trends: With its power to predict future scenarios by analyzing past behaviors, AI helps banks predict future outcomes and trends. This helps banks to identify fraud, detect anti-money laundering pattern and make customer recommendations. Money launderers, through a series of actions, portray that the source of their illegal money is legal. With its power of Machine Learning and Cognition, AI identifies these hidden actions and helps save millions for banks. Similarly, AI is able to detect suspicious data patterns among humungous volumes of data to carry out fraud management. Further, with its key recommendation engines, AI studies past to predict future behavior of data points, which helps banks to successfully up-sell and cross-sell.

Cognitive process automation: This feature enables automation of a variety of information-intensive, costly and error-prone banking services like claims management. This secures ROI, reduces costs and ensures accurate and quick processing of services at each step. Cognitive process automation fundamentally automates a set of tasks that improvises upon their previous iterations through constant machine learning.

Realistic interactive interfaces: Chatbots identify the context and emotions in the text chat and respond to it in the most appropriate way. These cognitive machines enable banks to save not only time and improve efficiency, but also help banks to save millions of dollars as a result of cumulative cost savings.

Effective decision-making: Cognitive systems that think and respond like human experts, provide optimal solutions based on available data in real-time. These systems keep a repository of expert information in its database called knowledge database. Bankers use these cognitive systems to make strategic decisions.

Robotic automation of processes: AI reviews and transforms processes by applying Robotic Process Automation (RPA). This enables automation of about 80% of repetitive work processes, allowing knowledge workers to dedicate their time in value-add operations that require high level of human intervention.

CONCLUSION

Hence it can be concluded that Artificial Intelligence is for sure a game changer in today's world. When this AI is backed by extremely good connectivity and all required infrastructural necessities it can transform any targeted sector. Banking sector in India is in the phase of transforming itself, considering the privatization of public sector banks and increase in the number of foreign sector banks. Factors such as better infrastructure and strong financial base supports the banks to switch to Machine Intelligence from Human Intelligence, overall leading to automation of various processes leading to benefits such as faster processing, reduction of human interference and many more. AI will not only empower banks by automating its knowledge workforce, it will also make the whole process of automation intelligent enough to do away with cyber risks and competition from FinTech players. AI, integral to the bank's processes and operations, and keeps evolving and innovating with time without considerable manual intervention. AI will enable banks to leverage human and machine capabilities optimally to drive operational and cost efficiencies, and deliver personalized services. All of these benefits are no longer a futuristic vision to accomplish for banks. By adapting AI, leaders in the banking sector have already taken actions with due diligence to reap these benefits.

Along with the benefits of AI in the banking sector there is a certain negative impact also, that includes the big impact on the employment rate in the said sector, difficulty caused to use the said technology due to non availability of tech savviness and many more

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