Dr. Charu Aggarwal
TMU Moradabad
Assistant Professor
TMIMT, TMU Moradabad
Email: charuagarwal.mba@gmail.com
Ph No: 9997741331

Rajni Sharma
Research Scholar
TMU Moradabad
Email: sharmarajnikrishika@gmail.com
Ph No. 9627656599

"Artificial Intelligence for Achieving Sustainable Development through Green Banking Practices"

Abstract:
The use of AI and Green Practices in Banking may be considered a way to foretell Consumer purchases and improve their banking journey. The value of AI is evident in its fundamental components, such as big data, machine learning, and its effective solutions. The idea of big data implies that you can simply separate the substantial volume of data and give services to customers with little manual labor and a reduced carbon footprint. Deep learning, Green banking, and machine learning allow marketers and financial Institutions a quick solution for recognition, sales prediction, language recognition, predictive customer care, customer segmentation, etc. The current research looks into the potential interaction between marketers and AI systems in the future. IT directors, market analysts, financial Analysts, developers, or stakeholders from businesses and business organizations across the industry are looking forward to this technology for Sustainable Development. This paper aims to provide a basic understanding of artificial intelligence. And how it can be helpful to achieve green banking practices.

Key Words: CRM, Artificial Intelligence, Green Banking, Sustainable Development

Introduction

Artificial Intelligence in the banking sector can enhance green banking services by analyzing vast datasets to identify high-impact green investment opportunities and assess their long-term viability. Artificial intelligence (AI) is the concept of letting machines "think like humans—that is, execute activities such as reasoning, planning, learning, and language comprehension. It is a technology that predates the computer industry. It gained popularity with the introduction of personal assistants (Amazon's Alexa, Apple's Siri, and Google's Assistant), picture recognition (My Heritage), Chat GPS, autonomous vehicles, personalized recommendations (the streaming service Netflix and Amazon), search engines (Google), automatic teller Machines, cash deposit machines, UPI services, block chain, Block Chain and other technologies. These developments have been powered by a dramatic increase in computing power, lower-cost technology, and an unclear rate of data generation and consumption. Machine learning, deep learning, natural language processing, predictive analytics, and other terms are frequently used to describe AI. All of these words speak to a future in which our platforms and processes are increasingly automated.

Benefits of Artificial Intelligence in Banking and Investment

- Easy identification of the trends in marketing
- Share Market and Investment trends can be predicted.
- Data can be collected easily.
- The investor journey can be visualized.
- Trends in data can be identified in real time.
- The customer experience will be more convenient.
- Portfolios can be personalized as per the needs of
- AI can be used to analyze financial data.
- Footfall can be decreased.

Banking Services and AI

The application of AI is at a very early stage in India. The upward trend in the growth of artificial Artificial Intelligence (AI) in the   banking sector is revolutionizing and reforming the industry at the global level (Abdulla, Y., Ebrahim, R., & Kumaraswamy, S. 2020). AI (artificial intelligence) is characterized as computerized systems that use communication, reasoning, and knowledge to support intelligent decision-making by recreated machines. If we put it in a simple way, Artificial intelligence (AI), to put it simply, is the process of integrating robots with intelligence equal to that of humans. AI, which can experience emotions and even consciousness, AI, data mining, and machine learning are frequently used interchangeably. The most prominent examples of AI in banking are ATMs, Kiosk deposit and withdrawal machines, currency counting machines, and fake currency detection machines, machines have reduced labor to a considerable extent.

CRM + Artificial Intelligence

In online banking, real-time fraud detection and prevention are examples of how AI is customer-oriented. In order to complete the process of e-KYC and confirm the clients, AI is also being used. An additional area where AI is being invested in is catboats. Due to IT-enabled services and solutions like Core Banking, Internet Banking, Mobile Banking, wallets, and Kiosk Banking, banks have seen a convergence in end-customer banking interactions during the past ten years. The banking industry benefits from technological advancements for both institutions and their clients. The focus of business models is on offering clients IT-enabled goods and services. By moving banking in this way, the burden on labor and the environment has been lessened. More people using cloud computing, less paper is being used, which is good for the environment. On the other side, utilizing e-banking or mobile banking has decreased travel and transaction costs for bank customers, which is a tiny step towards sustainable growth.

Scope and future of Artificial Intelligence in CRM

Artificial Intelligence is the future of banking. As per some reports, more than 85% of customers believe that AI has changed the way they bank. They are more aware of financial products and services now as compared to previous traditional services. Carbon foot printing is reduced. Customers can save time by not going to banks and not standing in long lines. All types of investment services are available at their doorstep. Many customers are now using net banking, which makes it possible to conduct financial transactions without being physically present. The opening of an online savings account or the adoption of paperless banking all move us one step closer to sustainable development by reducing greenhouse gas emissions, deforestation, and eventually the number of natural disasters that occur all over the world. The institutions have placed increased focus on ideas like green loans and green deposits.

Sustainable Development, AI, and Green Banking

Sustainable Development Goals (SDG) are decided by the UN. The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries, developed and developing, in a global partnership. They recognize 17 goals that are No Poverty, Zero Hunger, Good Health and Well Being, Quality Education, Gender Equality, Clean Water and Sanitation, Affordable Energy, Decent Work and Economic Growth, Industry Innovation and Infrastructure, Reduce Inequality, Sustainable Cities, Responsible Consumption and Production, Climate Change, Life Below Water, Life on Land, Peace, Justice, and Strong Institutions. The Partnership for Goals is decided by the UN and on which all the nations are actively working. One of the biggest problems on earth is Climate change because of environmental pollution. Green Banking services can help achieve sustainable development goals. Because other goals are linked with one of the major SDG 13 goals, which is climate change. Through Artificial intelligence, banks can achieve these goals easily. In order to improve the financial industry and create innovative, long-term business strategies, the novel idea of "green banking" combines environmental management with banking operations (Yadav & Pathak, 2013). According to Mumtaz and Smith's (2019) analysis of Pakistan's green finance system for sustainable development, green finance has enormous potential because it not only increases businesses' commitment to environmental responsibility and competitiveness but also aids in resolving environmental issues. (Bhardwaj & Malhotra, 2013) defined green banking as a bank initiative that supports the growth of environmentally friendly businesses and aids in the restoration of ecosystems. Jeucken & Bouma (1999) investigated the relationship between sustainability and banks and discovered that banks have been adopting a more dynamic approach over the past 20 years to achieve sustainable goals. In all regions of the world, the use of AI in green banking has a significant and positive impact on development and sustainable growth. The study's conclusion is that green banking cannot be ignored in order to achieve sustainability because earlier research supports the idea that, despite its vulnerability, the banking sector fully supports the sustainability issue as a problem facing an economic sector.

Here are some details concerning AI that will influence CRM and Banking in the future:

- **Virtual Assistant**: Also known as an AI assistant, a virtual assistant is a software application that can respond to voice instructions in natural language and carry out the user's requests.
- **Data analytics**: The data is fed into the client engagement process and utilized to forecast outcomes, comprehend designs, recommend relevant strategies, and more. Through this approach, organizations are strategically groomed, and a connection is made with every client, regardless of their size or scope.
- **Internet of Things (IoT):** IoT involves automated, real-time data processing and coordinated communication amongst a wide range of smart hardware and software. Imagine a CRM with AI capabilities that is connected to a hospital's CT scanner and receives organ images and

measurements. The CRM is intelligent enough to detect any inflammation by comparing the organ dimensions to the patient's medical history, and it will then prompt the patient to contact a particular doctor if necessary.

- **Machine Learning (ML):** ML is the central component of AI and entails using little to no code to enable computers to learn from data. In essence, you program the intended outcome instead of programming rules for a computer, and you train the machine to accomplish the conclusion on its own by giving it data, like customized recommendations.

Conclusion:

The devastating effects of natural disasters such as landslides, droughts, flooding, and extreme temperatures that have been experienced by people all over the world, including in India, The goal is to stop global warming and make the planet more sustainable for everyone, which will require action at all levels of society, from the individual to the global. Financial institutions, particularly banks, can play a crucial role in promoting sustainability by allocating resources to projects and schemes that improve environmental vitality and reflect a positive impact on the long-term value of the company.

Banks can also help reduce carbon emissions by investing in cutting-edge technological approaches that absorb or lower carbon emissions rather than in industries with high carbon output. The application of AI in green banking practices is seen as a source of sustainable development that can benefit banks, businesses, and the environment in general.

Reference:

1. Abdulla, Y., Ebrahim, R., & Kumaraswamy, S. (2020). Artificial Intelligence in the Banking Sector: Evidence from the 2020 International Conference on Data Analytics for Business and Industry: Ways Towards a Sustainable Economy (ICDABI)
2. Ahmad, F., Zayed, N.M., &Harun,M.(2013).Factors behind the adoption of green banking by Bangladesh commercial banks ASA University Review, 7(2)
3. Bahl, S. (2012) Green Banking: The New Strategic Asian Journal of Research in Business Economics and Management, 2(2), 176–185
4. Bai,Y.(2011). Financing a green future: An examination of China's banking sector for green finance
5. Bhardwaj, B.R., &Malhotra, A. (2013). Green banking strategies: Sustainability through corporate entrepreneurship. Greener Journal of Business and Management Studies, 3(4), 180–193.
6. Journal of Business and Management Studies, 3(4), 180–193.
7. Bihari, S. (2010). Green Banking: Toward Socially Responsible Banking in India.
8. International Journal of Business Insights and Transformation,4(1)
9. Biswas, D. (2016). Astudyofconceptualframeworkongreenbanking.JournalofCommerceandManagementThought,7(1),39.
10. Zheng, G.-W., Siddik, A. B., Masukujjaman, M., Fatema, & Alam, S.S. (2021).
11. GreenfinancedevelopmentinBangladesh:Theroleofprivatecommercialbanks(PCBs).Sustainability,13,79
12. Sahoo, P., & Nayak, B.P. (2007). GreenbankinginIndia.TheIndianEconomicJournal,55(3),82–
13. Sanford University's 2022 AI Index Report
14. IDC's Global AI 2022 Forecast Report
15. McKinsey & Company's State of AI in 2022 Report
16. State of Connected Customers Report and other research material from
17. https://sdgs.un.org/goals/goal