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ARTIFICIAL INTELLIGENCE'S FOOT PRINT AND IT'S IMPLICATION ON BANKING SECTOR CUSTOMER RELATIONSHIP MANAGEMENT

DR. C.D.N. RAKKINI¹, J. ARAVINDASHAN²

¹ Assistant Professor & Research Supervisor, PG & Research Department of Commerce, S.I.V.E.T. College, Gowrivakkam, Chennai

E.Mail: rakkinigratias@gmail.com Mob.: 9566047638

² Ph.D. Full time Research Scholar, PG & Research Department of Commerce, S.I.V.E.T. College, Gowrivakkam, Chennai

E.mail: aravindashan1999@gmail.com Mob.: 8807425602

ABSTRACT:

AI-driven CRM is leading the way in this revolutionary journey, and the banking industry is a testing ground for new technologies. Unquestionably, AI is revolutionizing CRM by providing incredibly efficient and customized services. It improves predictive analytics, automates repetitive operations, expedites consumer interactions, and strengthens security and fraud prevention.

Chatbots are increasingly essential for providing clients with real-time support, greatly accelerating response times and cutting down on customer care expenses. Banks can forecast client needs and suggest customized financial products thanks to predictive analytics, which increases client retention and company expansion.

Keywords: AI, Artificial Intelligence, AI technologies, Automation, Fraud Detection, Banking Sector.

Introduction:

Globalization has led to increasing competition in the banking industry, creating an unbalanced and weak financial system. Banking comprises evaluating application forms, creating safe monetary transactions for clients, and ensuring their continued usage of the institution. Consumers demand better service and an improved customer experience across all interactions with businesses and services. As technology has improved, businesses have implemented cutting-edge innovations, such as artificial intelligence, to deliver better services to clients. Examines AI applications in India's top financial organizations and its use in banking industries. Banks are increasingly using modern technologies such as blockchain, cloud computing, and AI.

In financial institutions, artificial intelligence (AI) technology automates decisions and activities that were previously handled by humans. Commercial banks are using artificial intelligence to address long-standing financial difficulties. AI technology in banking customer relations offers apparent benefits, but scientific research indicates security and trustworthiness concerns due to potential breaches. Recent research highlights the importance of AI-powered automation in providing correct information to bank customers and improving customer service.

Literature Review

Mittal et al. (2023) highlight the growing importance of AI in CRM, with a particular emphasis on improving customer-brand interactions.

According to Jora et al. (2022), the pandemic has shifted consumer priorities, leading to the need for AI-driven solutions to ensure health and safety in retail. According to Johnson (2021), AI-driven solutions play a crucial role in delivering seamless digital and Omni channel experiences

O'Neill and McCormack (2021) looked into how AI-powered financial planning tools provide individualized investment advice based on personal financial data. Their research discovered that these tools could provide more detailed advice, allowing consumers to attain their financial objectives more successfully.

Kshetri (2021) expanded on the use of AI in risk assessment, stating that AI algorithms might analyze credit risks more precisely by examining a broader variety of characteristics, including non-traditional data sources such as social media activity and payment patterns. In comparison to typical credit scoring methods, this methodology provides an additional comprehensive assessment of possible hazards.

Huang et al. (2020) looked at AI's involvement in automating reconciliation and financial reporting procedures. Their research discovered that AI systems could automatically match transactions and provide financial reports, removing the requirement for user engagement. and decreasing errors. This automation not only improves productivity, but it also frees accounting specialists to concentrate on higher-value responsibilities like strategic planning and analytics.

Sommer and Klinke (2020) investigated the application of machine learning to detect fraudulent actions, pointing out that AI systems might evaluate transaction data in real time to identify abnormalities and probable fraud. Their findings demonstrated that AI's capacity to learn from previous fraud instances and adapt to new threats considerably increases detection rates.

Agarwal and Wang (2019) showed how driven by artificial intelligence predictive models could create more accurate projections of market trends and investment opportunities. Their findings emphasized that AI's ability to process large amounts of data and identify emerging trends provides investors and financial analysts with a competitive advantage.

According to **Gartner (2019)**, AI technologies such as RPA (Robotic Process Automation) considerably improve the efficiency of repetitive processes such as data input and invoice processing. Their research revealed that organizations who used RPA saw up to a 50% reduction in turnaround times and a 60% decrease in operating expenditures.

Jin et al. (2018) produced key research that showed how machine learning models improve financial forecasting accuracy by analyzing massive datasets and identifying complex patterns. Their findings revealed that AI-driven models beat traditional statistical techniques in forecasting stock prices and market movements.

Research Objective:

This research was conducted to explore objectively the impact of AI in CRM of banking experience . More specifically, the objectives of the present study are:

- To identify the impact of artificial intelligence on customer support in the Banking sector.
- To study the impact of artificial intelligence on privacy & security in the Banking industry.
- To study the impact of artificial intelligence on Database management systems in the Banking industry.
- To Study about the impact involved in implementing AI in the Accounting and Financial sector.

METHODOLOGY ADOPTED

This study was based on secondary data. Secondary data, which has already been acquired and examined by experts, researchers, authors, and others, is currently readily accessible. Secondary data for this study was acquired from the internet, including websites, publications, research papers, e-books, newspapers, and other sources on artificial intelligence and its impact on the accounting and financial sectors.

DATA ANALYSIS

1. Table shows Artificial Intelligence (AI) impacted the banking

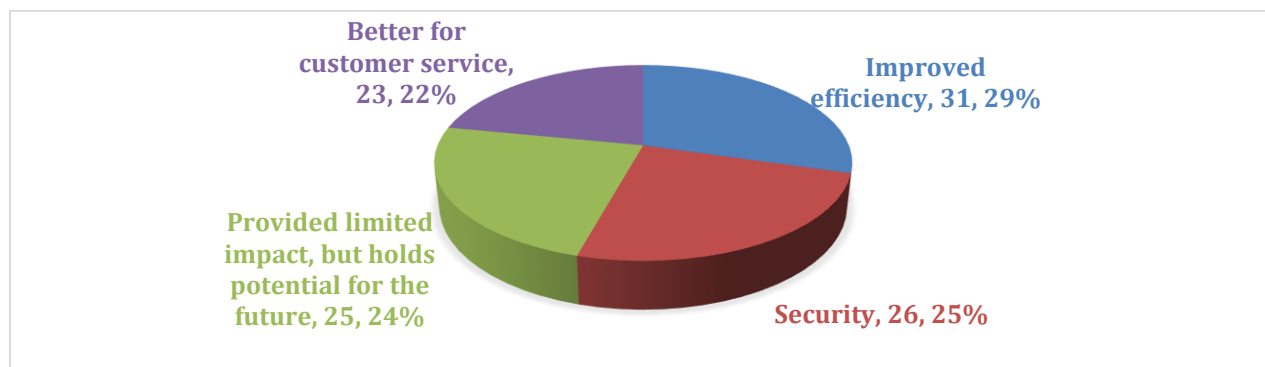
S.No	Factors	No of Respondents	Percentage
1	Improved efficiency	31	29.5
2	Security	26	24.8
3	Provided impact, But holds potential for future	25	23.8
4	Better for customer service	23	21.9
	Total	105	100

Source: primary data

Interpretation

The above table shows 29.5% of the respondents selected improved efficiency, 24.8% of the respondents selected security, 23.8% of the respondents are selected Provided impact, but holds potential for future and 21.9% of the respondents are selected better for customer service.

CHART 1



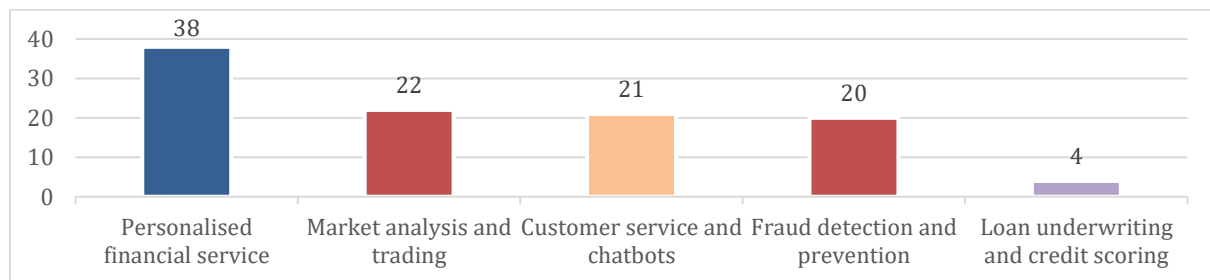
2. Table shows areas were Artificial Intelligence being used in banking

S.No	Factors	No of respondents	Percentage
1	Fraud detection and prevention	20	19
2	Personalized financial service	38	36.2
3	Market analysis and trading	22	21
4	Customer service and chat bots	21	20
5	Loan underwriting and credit scoring	4	3.8
	Total	105	100

Source: Primary data

Interpretation

The above table shows 36.2% of the respondents selected personalized financial service were AI has been used, 21% of the respondents selected market analysis and trading, and 20% of the respondents selected customer service and chat bots.

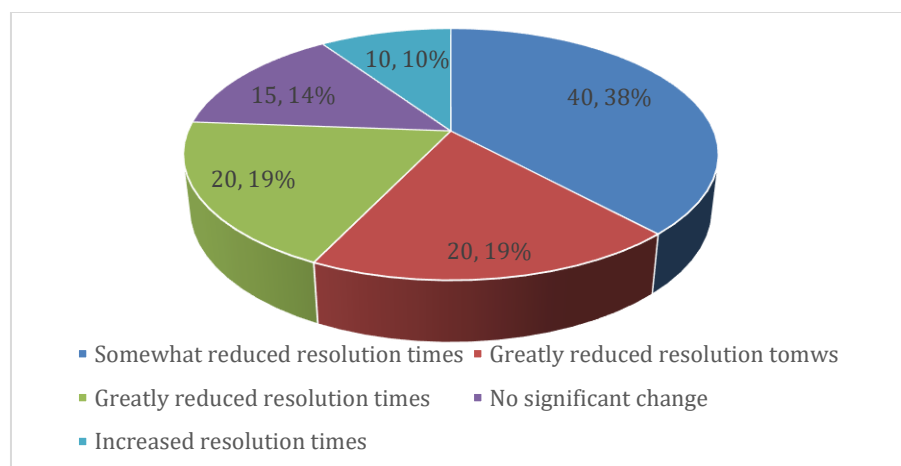
CHART - 2**3. Table shows Artificial Intelligence contributed to faster resolution times for Banking inquiries**

S.No	Factors	No of Respondents	Percentage
1	Greatly reduced resolution times	40	38.1
2	somewhat reduced resolution times	40	38.1
3	No significant change	15	14.3
4	Increased resolution times	10	9.5
	Total	105	100

Source: Primary data

Interpretation

The each 38.1 % of the respondents selected greatly reduced resolution time and somewhat reduced resolution time, 14.3% of the respondents selected there no significant change and 9.5% of the respondents selected increased resolution time.

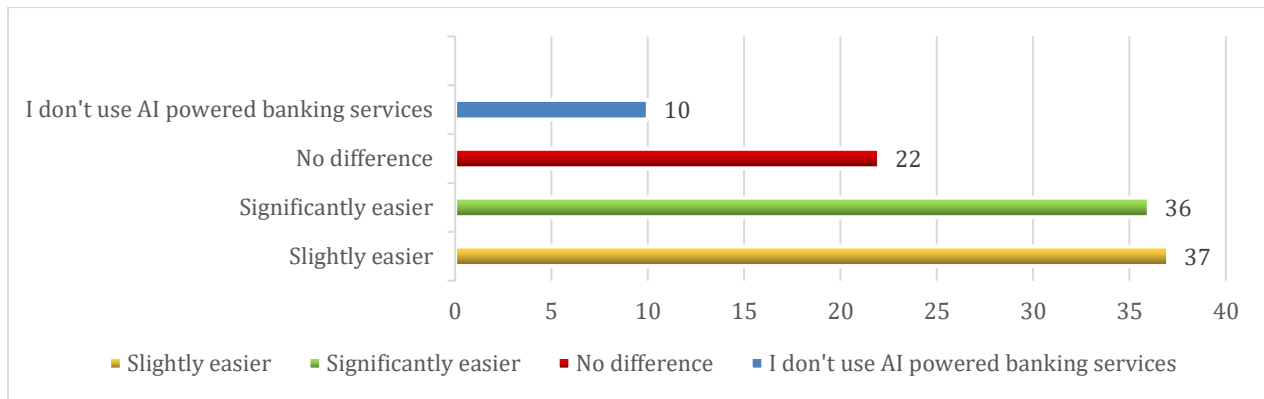
CHART 3

4. Table shows the use of Artificial Intelligence in banking made your financial transaction easier

S.No	Factors	No of respondents	Percentage
1	Significantly easier	36	35.2
2	slightly easier	37	34.3
3	No difference	22	21
4	I don't use AI powered banking service	10	9.5
	Total	105	100

Source: Primary data**Interpretation**

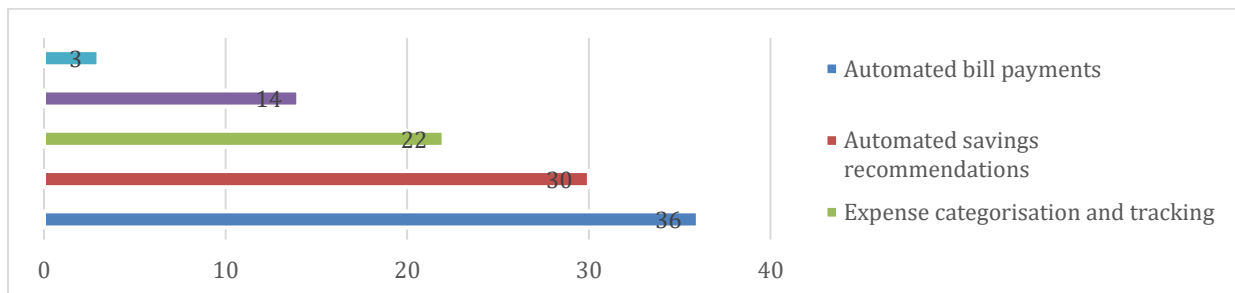
The above table shows 35.2% of the respondents says significantly easier, 34.3% of the respondents says slightly easier and 21% of the respondents choose there is no difference.

CHART 4**5. Table shows most helpful AI assisted banking task**

S.No	Factors	No of respondents	Percentage
1	Automated bill payments	36	34.3
2	Expenses categorization and tracking	22	28.6
3	Automated savings recommendations	30	21
4	Real time spending notification	14	13.3
5	Automated investment portfolio management	3	2.9
	Total	105	100

Source: Primary data**Interpretation**

The majority 34.3% of the respondents says automated bill payment as a helpful one and 28.6% of the respondents choose expenses categorization as a most helpful AI assisted banking task.

CHART 5

CONCEPTUAL FRAMEWORK

The integration of Artificial Intelligence (AI) into financial analysis and accounting is reshaping the way businesses and organizations manage their financial processes. Traditionally, accounting and financial analysis have been labor-intensive, reliant on manual data processing, and prone to human error. However, with the rise of AI, there is a profound opportunity to transform these practices by automating tasks, enhancing decision-making and optimizing efficiency across the board.

This **Conceptual Framework** provides a strategic outline for harnessing the capabilities of AI to revolutionize financial operations. It addresses the growing need for real-time insights, increased accuracy, predictive analytics, and smarter decision-making in an increasingly complex and data-driven financial landscape. The framework envisions a future where AI is seamlessly embedded into the financial ecosystem, enabling firms to not only streamline operations but also to uncover new opportunities for growth and risk mitigation.

Key areas of focus within this framework include automating routine accounting tasks, leveraging AI for predictive financial modeling, improving fraud detection, and enhancing audit processes. Additionally, it aims to address the challenges posed by the rapid pace of regulatory change by enabling AI-driven compliance management and reporting.

By outlining clear objectives and pathways, this framework serves as a guide for businesses looking to adopt AI technologies to revolutionize their financial analysis and accounting functions. Ultimately, it positions AI as a catalyst for driving innovation, improving accuracy, reducing costs, and increasing overall efficiency within the financial domain.

1. Design AI Algorithms for Improved Financial Forecasting

- Objective: Develop advanced AI and machine learning models that enhance the accuracy and reliability of financial forecasts by analyzing both historical and real-time data.
- Outcome: Predictive models capable of better projecting market trends, financial risks, and organizational performance.

2. Investigate AI-Driven Automation in Accounting Tasks

- Objective: Explore the potential of AI technologies to automate routine accounting processes such as bookkeeping, invoicing, and financial reconciliations.
- Outcome: Increased efficiency and cost savings, along with reduced human errors in accounting operations.

3. Research AI Solutions for Fraud Detection and Prevention

- Objective: Develop AI techniques that identify anomalies in financial transactions and detect fraudulent activities in real-time.
- Outcome: Advanced AI-based fraud detection systems that enhance transaction security and reduce financial crime.

4. Examine AI's Impact on Real-Time Financial Reporting and Data Analytics

- Objective: Study how AI can provide accurate, real-time financial reporting and in-depth data analysis across multiple platforms.
- Outcome: AI-driven tools capable of generating real-time reports and insights to support informed financial decision-making.

5. Explore Ethical and Regulatory Challenges of AI in Accounting

- Objective: Investigate the ethical, regulatory, and compliance issues associated with integrating AI into financial analysis and accounting practices.
- Outcome: Development of frameworks to ensure the ethical use of AI, regulatory compliance, and minimization of bias in AI systems.

6. Optimize AI for Intelligent Cost and Expense Management

- Objective: Research AI algorithms that can intelligently categorize, analyze, and manage expenses to drive cost efficiency in organizations.
- Outcome: AI-driven tools that provide smart suggestions for expense management and cost reduction strategies.

7. Analyze AI-Enhanced Continuous Auditing Methods

- Objective: Study the application of AI in conducting continuous auditing and develop AI models that automatically detect discrepancies in financial records.
- Outcome: AI-powered auditing tools that ensure accurate, continuous compliance with accounting standards and regulations.

8. Study Human-AI Collaboration in Financial Decision-Making

- Objective: Explore how AI can complement human financial analysts in decision-making, focusing on improving the synergy between AI systems and human expertise.
- Outcome: Hybrid AI systems that combine human judgment with AI-driven data analysis for more comprehensive financial insights.

9. Investigate AI-Powered Personalized Financial Planning

- Objective: Develop AI systems that provide personalized financial recommendations by analyzing financial patterns and individual goals.
- Outcome: AI-driven financial advisors capable of creating tailored strategies for individuals and businesses based on their specific needs.

10. Assess the Scalability of AI Solutions in Financial Systems

- Objective: Explore the scalability of AI technologies across different types and sizes of financial institutions, from small businesses to global enterprises.
- Outcome: Scalable AI solutions that can be adapted to financial systems of various sizes, ensuring broad application.

These research goals aim to push forward the adoption of AI in financial analysis and accounting, driving improvements in efficiency, accuracy, security, and ethics.

Conclusion:

The rise of AI in CRM has heightened concerns about privacy issues. Collecting and analyzing client data raises concerns about security and privacy. Banks must strike a delicate balance between using client data to improve services and respecting their privacy. Strong data protection procedures are necessary to maintain a delicate balance and prevent violations of privacy standards. Particularly in the banking sector. Customers are more confident

now that AI plays a larger role in fraud prevention and real-time security monitoring. Additionally, it has raised awareness about the importance of internet safety procedures. Customers are increasingly seeking more secure techniques to protect their digital assets. To fully realize the revolutionary promise of AI, banks must demonstrate adaptability and agility.

AI-powered solutions must conform with legal requirements while maintaining data security and client privacy. Customer-centricity and tailored experiences are key to success in the market. Banks should welcome innovation and push the boundaries of AI capabilities. It should be mentioned that the trajectory of AI in CRM.

The banking sector is still developing. Banks must navigate the ever-changing world of AI, maximizing its potential while managing the challenges and obligations that come with it. As AI advances, Indian financial institutions may become global leaders by developing a customer-centric CRM architecture that is both efficient and secure.

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