IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN BANKING SECTOR BASED ON COIMBATORE CITY

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Abstract

Banks use AI to assess customers' financial position, offer digital help and financial advice, and more. Despite the quick adoption of AI across several industries, this technology's effectiveness is largely dependent on how people feel regarding and are loyal to it. Some bank professionals view the use of AI in their work favorably, see these solutions as aids in carrying out regular tasks, and have no fear of being fired. In their daily lives and at business, they employ AI solutions. The concerns that are starting to surface are related to potential technological issues, unauthorized data transmission, a lack of privacy, and unanticipated effects of AI implementation. However, analysts are generally aware that this technology will play a role in the financial sector's future. Employees of few banks claim that customers frequently show some amount of mistrust toward AI, which may be due to a lack of understanding of how this technology functions and how it may affect people's way of life. This research analysis the growth of Banking sector and implementation of Artificial Intelligence in the Banking Sector. 60 Banking Customers where choosed for the study and analysis was made on the basis of the data provided by them. This result would be useful to the banking people and also to the government in getting the views of the bank customers.

Keywords: Banking, Artificial Intelligence, Technology, financial Sector

INTRODUCTION

The digital revolution has transformed industries, and businesses are acting differently as a result. Every industry is assessing its options and developing methods to deliver value in a technology-driven environment. The banking business is undergoing dramatic changes, the most significant of which is a rise in customer-centricity. Customers are constantly exposed to cutting-edge technologies, therefore banks must create seamless experiences. Banks have widened their industrial landscape to encompass retail, IT, and telecom for services such as mobile banking, e-banking, and real-time money transfers. Even while these developments have enabled customers to access the bulk of financial services whenever and wherever they choose, the banking industry must pay a price for them.

OBJECTIVES

- To study the influence of Artificial Intelligence in the banking sector.
- To know the Overall development and the potential of Artificial Intelligence in the Banking Sector.
- To know the awareness of the AI among the people.
- To know the Cyber security and fraud detection in the banking sector.
- To investigate the satisfaction and as well drawbacks in Artificial intelligence

STATEMENT OF THE PROBLEM

Artificial intelligence (AI) is currently all the rage in banking and finance, and for good reason. Machine learning, computer vision, and natural language processing are examples of artificial intelligence banking technologies that have a substantial impact on how people do business and operate. Artificial intelligence could result in huge cost savings. Furthermore, financial services companies are well-positioned to benefit from artificial intelligence. AI in banking is meaningless without data.

SCOPE OF THE STUDY

Digital technology is having an impact on practically every industry, not just altering industries but also changing the way organizations function. Currently, every industry is analysing possibilities and implementing strategies to compete in this tech-driven environment. Nowadays, every country is advancing in terms of digitalization, which is why the number of customers in the banking sector is steadily increasing.

RESEARCH METHODOLOGY

A scientific approach to research methodology is critical

for carefully evaluating the research challenge. The use of the proper procedure will increase the validity of the findings. It is required for research, and the outcome of analysis is largely dependent on the approach used.**STUDY AREA**

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

COLLECTION OF DATA

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

PRIMARY DATA

The primary data those was collected from 60 respondents through questionnaire.

SECONDARY DATA

Books, Lending, journal and Magazines where referred for this purpose from the library to faculty proper understanding of the study.

SAMPLING PROCEDURE AND SIZE

The study is based on convenience sampling methods and data is collected from 60 respondents chosen in Coimbatore city. The information collected is edited for checking the reliability and consistency before presenting it in the master table.

TOOLS USED FOR ANALYSIS

1.   Descriptive analysis
2.   Chi – square Test
3. Correlation
4.   One way Anova

REVIEW OF LITERATURE

1.   **Paramalarani, G. (2020)**, pointed out that 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 chain architect,""credit analyst," etc.

2.   **Kaur, K.,L.,Sharma.M.,Siddiqui Sahdev, L., (2020)** explain in the article the influenceof artificial intelligence on the banking industry and how AI is changing the face of modern-day banks. 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

3.   **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.

4.   **Mohapatra (2020)**: Use the model recommended for different types of retailer and examine organizational challenges.sub theme about challenges with AI . the deficit wasnew dimension. The author recommendations was examine the different variable impacting organizational adoption of AI technologies.

5.   **In Fountain et al. (2019)**, the author described the future research directions as "investigate motivation and barriers to organizational AI adoption and leadership tools to aid in adoption." and the research sub-theme was AI. The author recommended that this research investigate the different factors (e.g., the leader-strategy-ship role) impacting organizational adoption of AI technologies.

DIGITAL BANKING

In the 1960s, the introduction of ATMs and credit cards gave rise to the first forms of digital banking. As the internet and early broadband emerged in the 1980s, digital networks connected shops with suppliers and customers, creating a demand for the first online catalogues and inventory management systems.

The first forms of electronic banking stretch back to the 1960s, with the advent of ATMs and credit cards. In the 1980s, early broadband internet connections linked stores with suppliers and customers, creating a demand for early online catalogues and inventory management systems. By the 1990s, the Internet had become widely available, and online banking had begun to become the standard. The advancement of broadband and ecommerce technologies in the early 2000s resulted in what is now known as the modern digital banking world. The growth of smart phones over the next decade opened the door to mobile transactions that went beyond ATMs. Over 60% of users now prefer to conduct digital banking on their smartphones.

RECENT DEVELOPMENT AND TRENDS IN DIGITAL BANKING

1. OPEN BANKING AND RADICAL TRANSPARENCY

According to Raconteur study, trust is the second most important criterion to consider when shopping for financial products. Banks must create trust with their consumers while keeping current banking trends and increasing competition in mind. The extreme demand for trust has given rise to the concept of radical transparency — the inclination to provide a consumer with an open and honest environment. It is all about being open about your company, speaking the facts, and accepting mistakes. Customers are used to it.

2. DATA AS A TOOL FOR PREDICTABLE PERSONALIZATION

Big data, AI I, and machine learning (ML) empower financial marketers to provide more personalisation to customers. Personalization in the digital age does not simply refer to basic data such as a customer's name. Instead, it entails learning your clients' likes and dislikes and creating customised bundles of banking products and services for each consumer based on their needs and preferences. Customers of digital banks can receive personalised financial trends.

3. AI OFFERS MORE TARGETED SERVICES

The digital banking trends for 2022 recommend that real-time AI-based bots be used to acquire information about consumer preferences. This data and advanced analytics can be used by financial marketers to give predictable personalisation and please their customers.

4. TIME AND MONEY EFFICIENT AUTOMATION

There are still businesses and banks that rely heavily on human data entry. Unfortunately, high management is too preoccupied with scrutinising manual work to formulate solutions. Here are some examples of how automation can impact a bank's internal business processes:

a. Instead of manually writing and reading reports, managers can plan and make judgements.

b. They have more time to focus on other important duties because they don't have to prepare manual reports and analyses.

5. NO DOWNTIME - RELIABILITY IS ESSENTIAL

Given the increased use of digital banking, a bank cannot afford unpredictable server downtime. Their decades-long reputation and goodwill can be ruined in a matter of minutes. As a result, banks must spend a significant amount of time and money ensuring that their systems are error-free at all times.

6. SECURITIES AND PRIVACY

Banks and theft have a similar link. Customers are more vulnerable to the risk of losing money with modern digital banking products and services. Cybersecurity is quickly becoming a top priority for every digital bank.

7. RATE AND REACTIVITY

Every bank's bureaucratic working systems must be made faster. Any bank can get a competitive advantage by increasing its speed. Businesses must now make choices more swiftly, necessitating the need of a reliable and speedy banking partner to channel their funds more efficiently and quickly. Due to a lack of cross-functional coordination, 59% of banks lack the potential to have fast systems.

ANALYSIS AND INTERPRETATION

➢ DESCRIPTIVE ANALYSIS

Demographic Factors		NO OF RESPONDENTS	PERCENTAGE (%)
Gender	Male	33	55
	Female	27	45
Age	18-25 Yrs	18	30
	26-35 Yrs	21	35
	36-45 Yrs	13	21.7
	45-60 Yrs	6	10
Marital Status	Married	28	46.7
	Unmarried	32	53.3
Educational Qualifications	School Level	8	13.3
	Diploma/Certificate	4	6.7
	UG	30	50.1

	PG	11	18.3
	Profession	7	11.6
Occupation Status	Student	15	25
	Govt. Employee	8	13
	Business	14	23
	Private Employee	18	30
	RetiredPerson	1	1.7
	Home Maker	4	6.7
Income Status	Less Than Rs.20,000 P.M	15	25
	21,000-30,000 P.M	16	26.7
	31,000-40,000 P.M	11	18.3
	41,000-50,000 P.M	7	11.7
	Above Rs.50,000 P.M	11	18.3
Operating Accounts in Bank	Private Bank	30	50
	Public Bank	17	28.3
	Both	13	21.7
Type of Accounts	Savings A/C	45	75
	Current A/C	12	20
	RecurringDeposit A/C	3	5
Visiting of Banks	Weekly	5	8
	Fortnightly	6	10
	Monthly	33	55
	Rarely	16	27
Satisfaction Level of AI in Banking Sector	Yes	54	90
	No	6	10

Source: Primary Data

➢ CHI SQUARE ANALYSIS

Chi - Square is a statistical tool commonly used for testing the independence and goodness of fit.

Table showing the Comparison between Income and Awareness for the Factors of AI Technology

H0: There is no significant association between income and awareness factors of AI Technology.

H1: There is significant association between income and awareness factors of AI Technology.

CHI – SQUARE TESTS			
	VALUE	DF	ASYMPTOTIC SIGNIFICANCE (2-SIDED)
Big data Interpretation	17.348	16	0.363
Chat bots	11.581	16	0.772
Banking Apps	8.327	8	0.402
Biometric withdrawal System	10.544	16	0.837
AI Enhanced System	15.638	16	0.479
Forward and Backward Thinking	25.715	16	0.058
Business Intelligence	30.263	16	0.017
Machine Learning	11.802	12	0.462
Instant Feedback on Service Quality	18.896	12	0.091

raud Detection	16.369	16	0.428
Generation of personalized portfolio tatement for customers	19.126	16	0.262
Digitalization of KYC Process	21.681	16	0.154
inancial Advisory Services	25.367	16	0.064
Digital Lending	30.350	16	0.016
Alarm System	12.650	16	0.698
Robotic Process Automation	12.592	16	0.702

Source: Primary Data

INTERPRETATION:

In this table, the value P value of factors of awareness is greater than the significant value (0.05), so the null hypothesis is accepted. It can be concluded that there is no association between income and awareness factors of AI Technology.But, for the factors of Business Intelligence and Digital Lending are lesser than the significant value (0.05), so the null hypothesis is rejected. It can be concluded that there is association between income and Business Intelligence and Digital Lending.

Table showing the Comparison between Gender and Satisfaction Level for the Factors of AI Technology
H0: There is no significant association between gender and satisfaction level for the factors of AITechnology.
H1: There is significant association between gender and satisfaction level for the factors of AITechnology.

CHI – SQUARE TESTS

	VALUE	DF	ASYMPTOTIC SIGNIFICANCE (2-SIDED)
g data Interpretation	1.518	4	0.823
hat bots	6.076	4	0.137
anking Apps	4.852	2	0.088
ometric withdrawal System	3.654	4	0.455
Enhanced System	3.105	4	0.540
orward and Backward Thinking	5.027	4	0.285
usiness Intelligence	5.140	4	0.273
achine Learning	2.083	3	0.555
stant Feedback on Service Quality	2.721	4	0.606
aud Detection	4.310	4	0.366
eneration of personalized portfolio atement for customers	3.794	4	0.435
igitalization of KYC Process	1.691	4	0.792
nancial Advisory Services	2.676	4	0.613
gital Lending	3.632	4	0.458
arm System	2.336	4	0.674
obotic Process Automation	2.652	4	0.618

Source: Primary Data

INTERPRETATION:

In this table, the value P value of factors of satisfaction is greater than the significant value (0.05), so the null hypothesis is accepted. It can be concluded that there is no association between gender and satisfaction level for the factors of AI Technology.

➢ **CORRELATION**

Correlation is the study of linear relationship between two variables. When there is a relationship of quantitative measure between two sets of variables, the appropriate statistical tool for measuring the relationship and expressing each in a precise way is known as correlation.

RELATIONSHIP BETWEEN OCCUPATION OF THE RESPONDENTSAND AWARENESS FOR THE FACTORS OF AI TECHNOLOGY

CORRELATION		
	PEARSON CORRELATION	ASYMPTOTIC SIGNIFICANT VALUE(2 – SIDED)
Big data Interpretation	0.103	0.434
Chat bots	-0.128	0.332
Banking Apps	-0.035	0.791
Biometric withdrawal System	0.241	0.063
AI Enhanced System	0.195	0.136
Forward and Backward Thinking	0.324	0.012
Business Intelligence	0.290	0.025
Machine Learning	-0.171	0.193
Instant Feedback on Service Quality	0.223	0.087
Fraud Detection	0.333	0.009
Generation of personalizedportfolio statement for Customers	0.303	0.018
Digitalization of KYC Process	0.398	0.002
Financial Advisory Services	0.144	0.274
Digital Lending	0.439	0.000
Alarm System	0.477	0.000
Robotic Process Automation	-0.053	0.686

Source: Primary Data

INTERPRETATION:

In this table, it is stated that the relationship between occupation of the respondents and Awareness towards the factors of AI Technology.The Calculated value for most of the factors of AI technology is greater than the significant value (0.05), so the null hypothesis is accepted. We conclude that there is no relationship between relationships between occupations of the respondents and Awareness towards the factors of AI Technology.But, the calculated value for Forward and Backward Thinking,

Fraud Detection, Digitalization of KYC Process, Digital Lending, Alarm System is lesser than the significant value (0.05), so the null hypothesis is rejected. We conclude that there is relationship between occupations of the respondents and Awareness towards the factors of AI Technology.

➢ **ONE WAY ANOVA:**
One-way Anova When examining whether variations or varying levels of a single independent variable, or factor, have a detectable impact on a dependant variable,

ANOVA is frequently utilised.
Relationship between Gender of the Respondents and

Factors Of AI Technology

ONE WAY ANOVA					
	SUM OF SQUARES	**DF**	**MEAN SQUARE**	**F**	
BETWEEN SQUARES	0.460	3	0.153	0.597	0.620
WITHIN GROUPS	14.390	56	0.257		
TOTAL	**14.850**	**59**			

Source: Primary Data

INTERPRETATION:

In this table, shows the relationship between gender of the respondents and Factors of AI Technology.The Calculated value for most of the factors of AI technology is greater than the significant value (0.05), so the null hypothesis is accepted. We conclude that there is no relationship between gender of the respondents and factors of AI Technology.

FINDINGS
DESCRIPTIVE ANALYSIS
▪ Majority 33 (55%) of the respondents are Male.
▪ Most 21 (35%) of the respondents are belongs to the age group of 26-35**.**
▪ Majority 32 (53.3%) of the respondents are Unmarried.
▪ Majority 35 (50.1%) of the respondents are Under Graduate.
▪ Most 18 (30%) of the respondents are Salaried persons.
▪ Most 16 (26.7) of the respondents earning 21,000 – 30,000 p.m.
▪ Majority 30 (50%) of the respondents are operating their accounts in Private banks.
▪ Majority 45 (75%) of the respondents are having Savings A/c.
▪ Most 23 (38%) of the respondents are more aware about Banking apps.
▪ Majority 60 (100%) of the respondents are satisfy towards AI Technology.

CHI SQUARE ANALYSIS
▪ There is no association between the income of the respondents and awareness factors of AI Technology.

▪ There is association between income and Business Intelligence and Digital Lending.
▪ There is no association between gender and satisfaction level for the factors of AITechnology.

CORRELATION
▪ There is no relationship between the occupations of the respondents and awareness towards the factors of AI Technology.
▪ There is relationship between occupations of the respondents and Forward and Backward Thinking, Fraud Detection, Digitalization of KYC Process, Digital Lending, Alarm System.
▪ There is no relationship between occupations of the respondents and Satisfaction level towards the factors of AI Technology.
▪ There is no relationship between occupations of the respondents and AI Enhanced System, Business Intelligence, Fraud Detection, Digitalization of KYC Process, Digital Lending, Alarm System, Robotic process.

ONE WAY ANOVA
There is no relationship between gender of the respondents and factors of AI Technology which are specifically taken for the analysis are chat bots, Banking apps, Biometric Withdrawal System, Machine Learning, Fraud Detection.

SUGGESTIONS
▪ A developing trend that has the potential to completely change how banks work is the use of AI technology in the banking industry. An investigation into the possible advantages and difficulties of integrating AI technology into the banking sector in Coimbatore City is the goal of the project on the deployment of AI technology in the banking industry located in Coimbatore City.
▪ Bank must ensure their customer's service is competitive in Current Scenario. Thus, the banks are

suggested that through AI Technology it is useful to improve only if their concern for security concept is more. Thus, bank must concentrate further on security and to hold their customers and improve their services.

▪ Bank may decreases additional charges while using digital banking with AI Technology. Therefore, it can be concerned that "Information Technology" is not the end itself, but useful tool in the hands of the banking industry to leverage industry to prospects in its favor and enhance efficiency. In addition, they should ensure the customers that their functionality it's easy to find and use.

CONCLUSION

The banking sector can benefit greatly from artificial intelligence. Banks can manage enormous amount of data at breakneck speeds in order to extract valuable information from it. Wider customer base may get access to better service with the help of features like AI bots, digital payment advisors and biometric fraud detection systems. To cut costs and boost operational effectiveness, banks will be able to provide customized services and optimally integrate AI with By providing creative training to advance the AI processes in the workplace, consumers will see increased dedication from representatives to banking and financial services. It is also used to comply with regulations, spot fraud, and determine a person's creditworthiness.

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