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AI Applications and its influence on Investors' inclination towards Bank Investment Options

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Abstract

The banking sector trend to achieve significant technological advancements, the banking industry globally is becoming more strategically focused. This is helping them to meet customer expectations while defending market share against increasing competition. New innovations and developing new solutions by taking advantage of data, advanced analytics, digital technologies and new delivery platforms have become critical. Banks and credit unions are innovating faster by targeting, expanding their services, delivering channels, integrating payments and using blockchain technology. This paper mainly focuses on the Artificial Intelligence Applications and its influence on Investors' inclination towards Bank Investment Options. The study has been done upon various innovative Artificial Intelligence applications used by investors in choosing bank investment products. The study sample consists of 110 respondents and convenient sampling technique is used. From the findings it is concluded that opinion regarding Artificial Intelligence influence on investors towards choosing bank investment are highly positive and above the average level since all the value is less than 0.01, which is considered to be good study. The investors are highly benefited through these AI applications while preferring banking investment options. The role of AI and its reliability make better decisions in investor's portfolio AI presents exciting opportunities for the banking industries, but it also poses significant challenges. In order to use AI successfully and ethically, banks must carefully assess the ethical, regulatory, and security consequences of adoption.

Keywords: Bank Investment Options, Current AI Innovations, Investors Predilections, Technological influence

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Introduction

The use of advanced data analytics by artificial intelligence will revolutionise banking by reducing fraud and for enhancing compliance. AI algorithms can complete anti-money laundering tasks that would have taken hours or days will be completed in a matter of seconds. Additionally, AI gives banks the ability to manage massive amounts of data at lightning-fast speeds in order to extract insightful information from it. The industry has become more customer-centric and technologically relevant with the addition of AI to banking applications and services. By boosting productivity and making judgements based on data that is incomprehensible to a person, AI-based systems are already assisting banks in lowering expenses. Furthermore, clever algorithms may quickly detect false information.

According to research by business insider, around 80% of banks are aware of the potential advantages of AI in the banking industry. According to a different McKinsey estimate, the potential growth of AI in banking and finance might reach \$1 trillion. These figures show that the banking and financial industry is moving quickly towards AI in order to increase production, service, and efficiency while lowering costs.

Review of Literature

Alex Kreger (2023) in his paper, writes that AI is able to assess customer data, comprehend their preferences and wants, and utilise this knowledge to offer consumers personalised customer care and support by responding to their questions and concerns in real-time.

Nirvikar Jain (2023) report that the banking and broader financial industries are dealing with issues related to emerging digital banking innovation in a variety of fields, including lending, investment management, payments, and cash management.

Saurabh Singh (2023) in his analysis, Appinventiv can be a technological partner in the banking industry's digital transformation. The top personnel are available at Appinventiv to support their clients, from developing a UX strategy to integrating cutting-edge data solutions.

Alla Klimenko (2023) in his report digital technologies like blockchain, cloud, AI and machine learning, big data, biometrics, RPA, and mobile and embedded devices are driving a huge shift in the banking sector that will improve operations and services.

Suparna Biswas, Brant Carson, Violet Chung, Shwaitang Singh (2020)- Artificial intelligence technologies are increasing integral to the world we live in, and banks need to deploy these technologies at scale to remain relevant. Victory requires a holistic conversion spanning multiple layers of the organization.

Research Gap

As per the studies pertaining to the Banking Investment options there are several studies relating to various Investment institutions and financial institutions on their performance and operations. But there are no studies related to the current AI Applications and its influence on investors' inclination towards bank investment options This study has mainly focused on AI influence on investors towards banking investment options.

Objective

To analyse the effectiveness of AI Applications and its inclination on investors towards preferring bank investment options.

Hypothesis for the Study

Null Hypothesis H₀: Opinion regarding Artificial Intelligence applications on bank investment options among investors are equal to average level (Average=3)

Research Methodology Table

Table 1 Research methodology	
Research framework	Descriptive, qualitative, investigative and expressive research design
Sampling type	Convenience Sampling
Study unit	Keywords- Bank Investment Options, Current AI Innovations, Investors Predilections, Technological influence
Samples, Study Period	110, August 2023
Study mode	Digitally framed questionnaire with score value using a 5-point Likert sale
Collected data	Primary data-Electronic approach to through E-letter and relative form of communication, Secondary Data-Journals
Analytical study	Inferential analysis- one sample t test
Source: Authors compiled data	

Interpretation: Table 1 consists about research methodology framework, type of sampling used for research, specific unit of study, sample size taken for Research analysis, period of study mode of the study to accumulate information and the investigation tools and techniques used for the Research purpose.

Data Analysis and Interpretation

Table 2- Demographic Profile		
Valid	Frequency	Percent
Gender		
Female	61	55.5
Male	49	44.5
Age		
18-25	49	44.5
26-35	19	17.3
36-45	17	15.5
46-55	13	11.8
Above56	12	10.9
Family Annual Income		
Less than 200000	59	53.6
Rs200001-Rs300000	12	10.9
Rs300001-Rs400000	16	14.5

Rs400001-Rs500000	13	11.8
AboveRs500001	10	9.1
Educational Qualification		
Graduation	35	31.8
Post Graduation	30	27.3
Doctorate	18	16.4
Other Qualification	16	14.5
Below Graduation	11	10.0
Occupation		
Salaried	11	10.0
Business	13	11.8
Homemaker	16	14.5
Students	62	56.4
Others	8	7.3
Total	110	100.0

Interpretation for Demographic profile: The population profile that out of total 110 respondents in which 44.5% falls the age group of 18-25 years where as 17.3% falls under the age group of 26-35 years, there are 15.5% respondents from the age group of 36-45 years, 11.8% belong to 46-55 years and above 55 years there are 10.9% respondents. There are 44.5% male respondents and 55.5% female respondents. Out of 110 respondents the Annual income earned less than Rs 200000 is 53.6%, Rs 200001 to Rs 300000 is 10.9%, Rs 300001 to RS 400000 is 14.5%, Rs 400001 to Rs 500000 is 11.8% and Above Rs 500001 is earned by 9.1% of respondents. Out of 110 respondents 10.0% respondents are below graduates, 31.8% respondents have bachelor qualification, 27.3% respondents have master's qualification, 16.4% respondents are Doctorate holders and 10.0% respondents have some other educational qualification. The occupational level of collected sample size are 10.0% respondents are salaried, 11.8% are business people, 14.5% are homemakers, 56.4% are students and 7.3% belongs to other category for this research study.

Table-3: Reliability Statistics Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.935	15
Source- Primary data analysis	

Interpretation: The Cronbach's alpha value is found to be 0.935 which is 94% and it is found to be reliable and consistent.

Table 4: AI applications preference by bank investors

Artificial Applications available in bank investment options	Mean	SD	t value	P value
Cybersecurity and fraud detection	3.95	0.794	52.215	<0.001**
Chatbots	4.16	0.862	50.640	<0.001**
Loan and credit decisions	3.81	0.876	45.355	<0.001**
Tracking market trends	3.69	0.950	40.547	<0.001**
Data collection and analysis	3.77	1.015	38.785	<0.001**
Customer experience	3.86	0.972	41.695	<0.001**
Risk management	4.06	0.864	49.132	<0.001**
Regulatory compliance	3.76	1.066	37.031	<0.001**
Predictive analytics	3.85	0.969	41.616	<0.001**
Process automation	3.76	0.928	42.539	<0.001**
Automate tasks	3.75	1.051	37.472	<0.001**
Voice assistants	3.56	1.045	35.763	<0.001**
Robotic process automation	3.86	1.096	36.970	<0.001**
Biometric technology	3.97	1.062	39.237	<0.001**
Smart contracts	3.95	1.065	38.848	<0.001**
Note: ** denotes significant at 1% level				
Source- Primary data analysis				

Interpretation

From the table the highest mean value is chatbots and risk management which is 4.16 and 4.06 indicates that there is a positive option among investors among these AI applications, the lowest mean value is scored by Voice assistants, tracking market trends which is 3.56 and 3.69 indicates that there is negative options among investors among these AI applications. Since P value is less than 0.01, the null hypothesis is rejected at 1% level of significance with regard to all the Artificial Intelligence applications on bank investment options among investors are equal to average level. Hence the opinion regard to all the Artificial Intelligence applications such as Cybersecurity and fraud detection, chatbots, loan and credit decisions, tracking market trends, data collection and analysis, customer experience, risk management, regulatory compliance, predictive analytics, process automation, automate tasks, voice

assistants, robotic process automation, biometric technology and smart contracts on bank investment options among investors are not equal to average level. Based on mean score, opinion regard to all the Artificial Intelligence applications on bank investment options among investors is above average level.

Findings from the Study

Demographic profile: Majority of the respondents were from the age group of 18-25 years who are female respondents studied at Graduation level and are having their annual earning less than 200000 and the majority of the respondents are students.

One Sample t-test: From the analysis it is found that, since P value is less than 0.01, the null hypothesis is rejected at 1% level of significance with regard to all the Artificial Intelligence applications on bank investment options among investors are equal to average level. The mean value of chatbots and risk management is high compared to other AI applications which shows that there is an more inclination on choosing bank investment options by the investors and the voice assistants and tracking market trends application mean score is less compared to other mean score which shows there is less inclination on choosing bank investment options by the investors.

Conclusion and Suggestions

From the findings it is concluded that opinion regarding Artificial Intelligence influence on investors towards choosing bank investment are highly positive and above the average level since all the value is less than 0.01, which is considered to be good study. The investors are highly benefited through these AI applications while preferring banking investment options. Better judgements are made in an investor's portfolio because to the reliability and function of AI. AI offers the banking sectors many exciting potentials, but it also faces many difficult obstacles. To make sure they use the technology ethically and successfully, banks must carefully assess the ethical, regulatory, and security aspects of adopting AI.

Scope for Future Research

The study has limited to the few AI applications used in bank investment platform. There are more AI applications in current technological economy on banking investment platform. The study can be extended into different dimensions of investors towards AI usage and its benefits while preferring bank investment options.

Social Relevance of the Study

Smart technology is also capable of spotting managerial bias, insincerity, dishonesty, and self-serving behaviour, as well as other management problems, and may provide solutions. AI can also enhance internal controls and find fraud. CSR is a data-driven sector that promotes social change. AI is a quickly developing technology that has the potential to greatly increase worker productivity and efficiency. At the same time, AI has the potential to discriminate against employees by automating current employment, exacerbating inequality.

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