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Impact of Artificial Intelligence on Managerial skills and Decision-Making Process with Respect to Private Banks, Hyderabad Region

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Abstract: ***Modern human life is influenced by science and technology; it is evident that technology is occupying everyone's lives in single use starting from smart phones up to smart homes. Artificial Intelligence refers to the work practices of machines that would need intelligence if humans applied it. AI system that can perform selection, recruiting, appraising, and training for the employees. All these reasons pushed to ask the question of what extent can robots' effect on management positions, and can they perform accurate decisions instead of humans? In this paper; the impact of AI on the human managerial decision-making process will be investigated. Human Managers who are facing the threat of losing their jobs might be the first cause in delaying the technological advancement as they do not want to be entirely replaced by robots although they enjoy the help of these systems in making the decision process faster and more efficient. The most important question to be asked next is; if robots were able to achieve consciousness such as humans, what will make humans unique or special? The survey was a structured online-based questionnaire on a random stratified sample of executives and managers of private banking institutions applying AI systems.***
Keywords: Management, AI systems, Managerial Decisions, technological advancement.

I. INTRODUCTION

Artificial Intelligence infers to the implementation of workplace tools and machines which use the intelligence of human beings. In other words AI is substituting the complex works with robots to make the process more efficient within short span of time by using more thinking capability and large complex mathematical equations. More scientists called this era as fourth generation industrial revolution where human resource departments are replaced by robots and these robots are capable of performing various HR functions like recruiting, selecting, training and appraising the employees etc. One setback question is pushed in AI is whether robots can take managerial decisions effectively,

AI invasion into management processes needs a strategic approach and ready to accept for change. Systematic planning, proper selection of tools, better data management, and, most importantly, employee training are main factors in the successful use of AI in organizations.

Managers should take the consideration of AI impact on employees; AI will generally automate the regular works. As employees remain common in this technological based economy managers should anticipate the changes in skill set and providing the opportunities to employees to learn new skills and upgrade themselves Watson et al., 2021. A.I. can help managers to improve workflow efficiency and decision making, automate administrative tasks. By implementation of AI tools, leaders can become more strategic, innovative, and tackle complex challenges efficiently. (Peifer, 2022).

An experienced manager will know about the analyzing of steps for decision making. He/she will not directly jump to taking the action. If robots are replaced by human beings, there might be an effect on quality of the decision. According to (Gray,2016) he believes that robots will implement 35% of jobs and that some jobs will disappear, and other jobs will grow or improve. At certain extent, it is difficult for humans to live in this competitive digital world invaded by robots and also humans likes the luxury of making live easy and do their jobs better. This article accepts with the research theory because the decision-making process for the manager at workplace uses more creativity in finding accurate solutions and overcoming obstacles in the work field.

II. LITERATURE REVIEW

Gumusay et al. (2023), pointed that AI has capacity to change the decision-making processes There are three basic decision types including unstructured decisions, semi-structured decisions, and structured decisions.

latestly, the main used type of decision is related to a highly structured decision that focuses on a machine learning model to perform recurring, tactical, frequent, and requiring large amounts of numerical data. Though most utilization emanates from structured decisions, it cannot undermine the other two decision types as they are also used in organizations in shaping their management decision dispositions.

Making decisions is a crucial component of managing a business. Duan's study explains how AI will be used to make decisions. AI takes major judgments to replace humans with AI's participation and integration. Also, it offers a number of advices for those that deal with data frameworks. This article discusses AI in broad and the primary issues concerning AI. The cooperation and coordination required to supplement or completely replace human representatives were also covered. During the past few years, the banking industry has also risen to the top of the list of industries utilizing AI. AI has major benefits for banking, including improved banking services, better customer service, advanced data analytics and the ability to identify fraud there are also significant drawbacks. The primary objective of this research was to analyse how well AI complements human intelligence.

Noreen et al. (2023) , AI intelligence has become vital in various sectors, including banking, in developed and developing countries. Despite being in its early stages of development, AI technology's current and future uses appear significant and have a considerable impact. The widespread use of AI is causing a fundamental shift in how businesses, employees, and customers interact, and the acceptance and adoption thereof are primarily influenced by how people perceive their usefulness, ease of use, and trustworthiness (Qahtani & Alsmairat, 2023) . Achary (2021) emphasizes maintaining a balance between AI and human employees when servicing the bank's clients, as AI currently lacks emotional intelligence.

Fountaine et al. (2019) find that companies must restructure themselves to the compelling value-add of AI. Organizations that use AI should consider having a central division responsible for overseeing various company-wide aspects such as HR, performance management, partnerships, policies, and processes. This division is also responsible for maintaining AI-related systems and standards. The center division should oversee a network of business units with AI product managers and analysts who implement strategies, adopt solutions, and monitor performance at a business unit level.

III. INDIAN BANK HAS EFFECTIVELY INTEGRATED AI IN ITS SERVICES

1) Customer Service and Chatbots: Many banks were implementing AI-driven chatbots to enhance customer service. These chatbots could handle routine queries, provide information on account balances, transaction history, and even assist in processing certain transactions.
2) Fraud Detection: AI and machine learning algorithms were being employed for fraud detection. These systems analyze patterns in transactions and user behavior to identify unusual or suspicious activities, helping banks prevent fraudulent transactions.
3) Credit Scoring and Risk Management: AI algorithms were used to analyze customer data for credit scoring, allowing banks to assess the creditworthiness of applicants more accurately.

The synergy between AI tools and human expertise creates a dynamic environment where employees are empowered to deliver more strategic, efficient, and client-focused services. The use of AI positively influences service quality by enabling personalized financial services, efficient risk management, and proactive fraud detection. Clients benefit from tailored recommendations, reduced risks, and enhanced security measures. The impact of AI is largely positive, challenges related to employee adoption persist. Resistance to change, concerns about job displacement, and the need for upskilling are obstacles that financial institutions must navigate. Successful integration of AI into workflows requires a strategic approach, including comprehensive training programs and a supportive organizational culture that encourages collaboration between humans and machines.

A. Problem Statement

The problem with the current banking system is to make a decision depended on massive data, it is very cost incurring as well as about twenty to thirty percent made decisions goes wrong due to incomplete and inappropriate information on the organizational plan. A.I. system will use real-time data to coordinate and guide the customer to take immediate decisions and govern according to the rules and regulations. This system will also maintain the profitability of the organization by increasing the multiple customers at the same time on the right way to immediately invest the money in the banking sector.

B. Objectives

1) Identify the role of artificial intelligence in management processes.

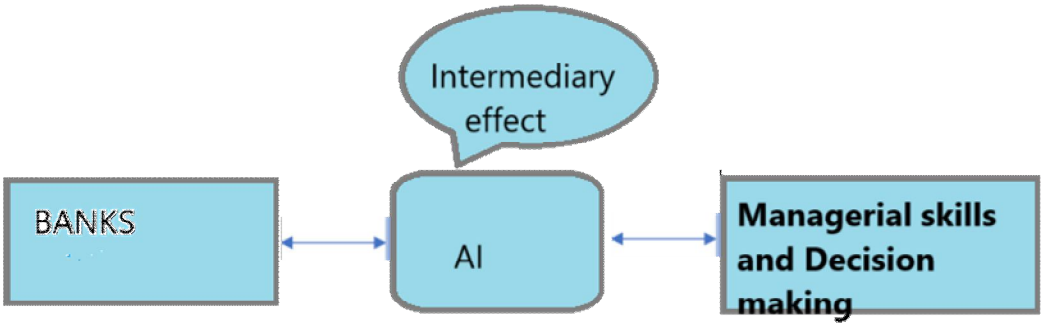
2) To explore the possibilities of using artificial intelligence in decision making process under conditions of uncertainty.
3) To Analyze the benefits and risks of using artificial intelligence in management processes under conditions of uncertainty.

C. HYPOTHESIS

H0: Artificial Intelligence has no positive significance on Managerial skills and Decision Making process
H1: Artificial Intelligence has a positive significance on Managerial skills and Decision Making process.

D. Research Proposed Model

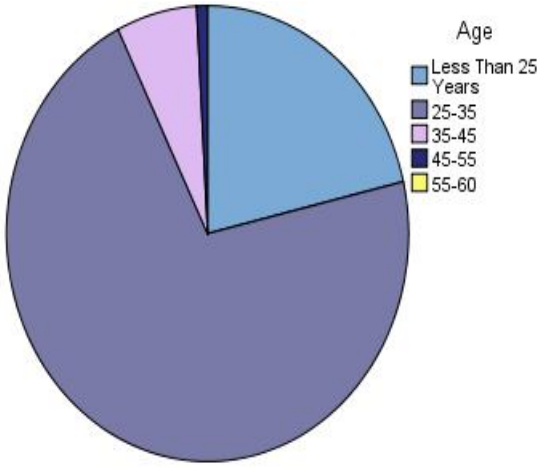
The conceptual model of this study includes Managerial skills and Decision Making process of employees, banks and artificial intelligence.



IV. RESEARCH METHODOLOGY

Research methodology is defined as a well-planned and methodical academically procedure that is used for gathering the required data for related to a research study for accomplishing all of its aims and objectives effectively (Kothari, 2004). A suitable research method selected for the study facilitates in resolving research issue at hand (Newman and Benz, 1998). This study had employed descriptive and explanatory research methods as it is primarily a quantitative study and these methods aid in collection of quantitative data for getting a better insight on the relationship between various research variables. Explanatory research method is selected here as it is a flexible and casual method for understanding background of the study.

Survey method was selected here to gather data from a wide-geographical area and a large sample population– 100 bank employees from selected banks of Hyderabad region. The research instrument used here for collecting quantitative data was structured and close-ended questionnaire. They were approached and surveyed to understand the areas of implementation of AI and its impact on Managerial decision making of bank employees. The quantitative data analysis was conducted using SPSS software.



The frequency distribution for adaptation of AI in banking sector and application of AI in specific area of banking sector. All the participants in this survey were aware about the application of AI in banking and finance sector. The 100 respondents served as the basis for this analysis.

Most respondents, who are in their 25s to30s, are those most influenced by Artificial Intelligence in the banking industry. Also, most employees think Artificial Intelligence is an incredible innovation with lots of potential in various fields.

Table 1 Descriptive Statistics for individuals attributes taken in this study

	Mean	**Std. Deviation**	**N**
Age	1.87	.562	100
Awareness about AI	1.58	.768	100
Satisfaction with the use of AI	2.27	.973	100
Reduction of frauds & error	1.87	.960	100
Impact of AI in work life	3.26	.960	100
Possibility to change banking sector in upcoming years	1.59	.767	100
Enhancement of employability after training with AI	1.50	.893	100
Satisfaction with the level of comfort comes from AI	2.48	.847	100
Job easiness after using AI	1.72	.944	100
Effect on work frequency due to AI	2.88	.795	100
Involvement of AI with employees	2.25	.796	100
Any negative aspects of AI	3.10	.798	100
Replacement of bank jobs in future	3.29	.808	100

	Mean	Std. Deviation
Age	1.87	.562
Managerial process and decision making	2.3158	4.9751

This is the descriptive analysis of the data, which indicated that, on average, the employees in the dataset are 0 >25 years to 45 years old and have a positive attitude towards the data being measured.

Awareness about AI	Pearson Correlation Sig. (1-tailed)	Age -0.104 0.151
Satisfaction with the use of AI	Pearson Correlation Sig. (1-tailed)	0.065 0.261
Reduction of frauds & error	Pearson Correlation Sig. (1-tailed)	0.062 0.27
Impact of AI in work life	Pearson Correlation Sig. (1-tailed)	-0.124 0.11
Possibility to change banking sector in upcoming years	Pearson Correlation Sig. (1-tailed)	-0.125 0.108
Enhancement of employability after training with AI	Pearson Correlation Sig. (1-tailed)	0.01 0.46
Satisfaction with the level of comfort comes from AI	Pearson Correlation Sig. (1-tailed)	-0.059 0.281
Job easiness after using AI	Pearson Correlation Sig. (1-tailed)	0.007 0.473
Effect on work frequency due to AI	Pearson Correlation Sig. (1-tailed)	0.146 0.074
Involvement of AI with employees	Pearson Correlation Sig. (1-tailed)	0.096 0.171
Any negative aspects of AI	Pearson Correlation Sig. (1-tailed)	-0.083 0.205
Replacement of bank jobs in future	Pearson Correlation Sig. (1-tailed)	0.017 0.433

Correlation is significant at the 0.05 level (1-tailed). Correlation is significant at the 0.01 level (1-tailed)

V. FINDINGS

This research aimed to assess Hyderabad bank employees' managerial skills and decision making regarding artificial intelligence in the banking sector. Findings revealed that most employees were male, and most fell into the age category of 25–35 years.

The affiliation of their banks depicts that the majority were working from 0 to 10 years, followed by 10–15 years and more. Correlation analysis shows that most employees have a neutral to positive attitude towards using artificial intelligence in the banking sector. The above table shows the significant relationship between age and other factors affecting managerial skills and decision making . We can see in above table that the age group of 25 to 45 finds artificial intelligence more appropriate in the workplace and shows a positive attitude towards artificial intelligence. As age increases, we find an adverse connection between artificial intelligence and employees. So while a group of mid-age workers (those 45 and above) believe AI is less appropriate for effectiveness in the workplace.

VI. CONCLUSION

The deployment of AI will result in the creation of new job roles in the absence of human labor, a phenomenon that has been observed in recent years for a number of reasons. As we can able to correlate age with managerial skills and decision making and can see, a direct positive relationship exists between artificial intelligence with the bank employees who are in their 20s, 30s, and early 40s.And also an inverse relationship between elderly employees who are in their late 40s and 50 and above. Furthermore, the utilization of AI can be considered an advisory tool for the leadership of an organization. The use of AI is particularly important in the operations of organizations for crisis prediction and management (Unhelkar and Gonsalves, 2020). Artificial intelligence has the potential to support decision-making and facilitate resource allocation. By harnessing the power of artificial intelligence, managers can be better equipped to effectively deal with crises that may arise. This research has significant managerial implications as today's leaders need a combination of technical expertise in many areas to effectively harness the power of artificial intelligence and lead their organizations to success. Future research can focus on more aspects related to AI and management. For example, future research can be conducted (on the impact of cultural aspects) on managerial decisions and aspects regarding customer satisfaction.

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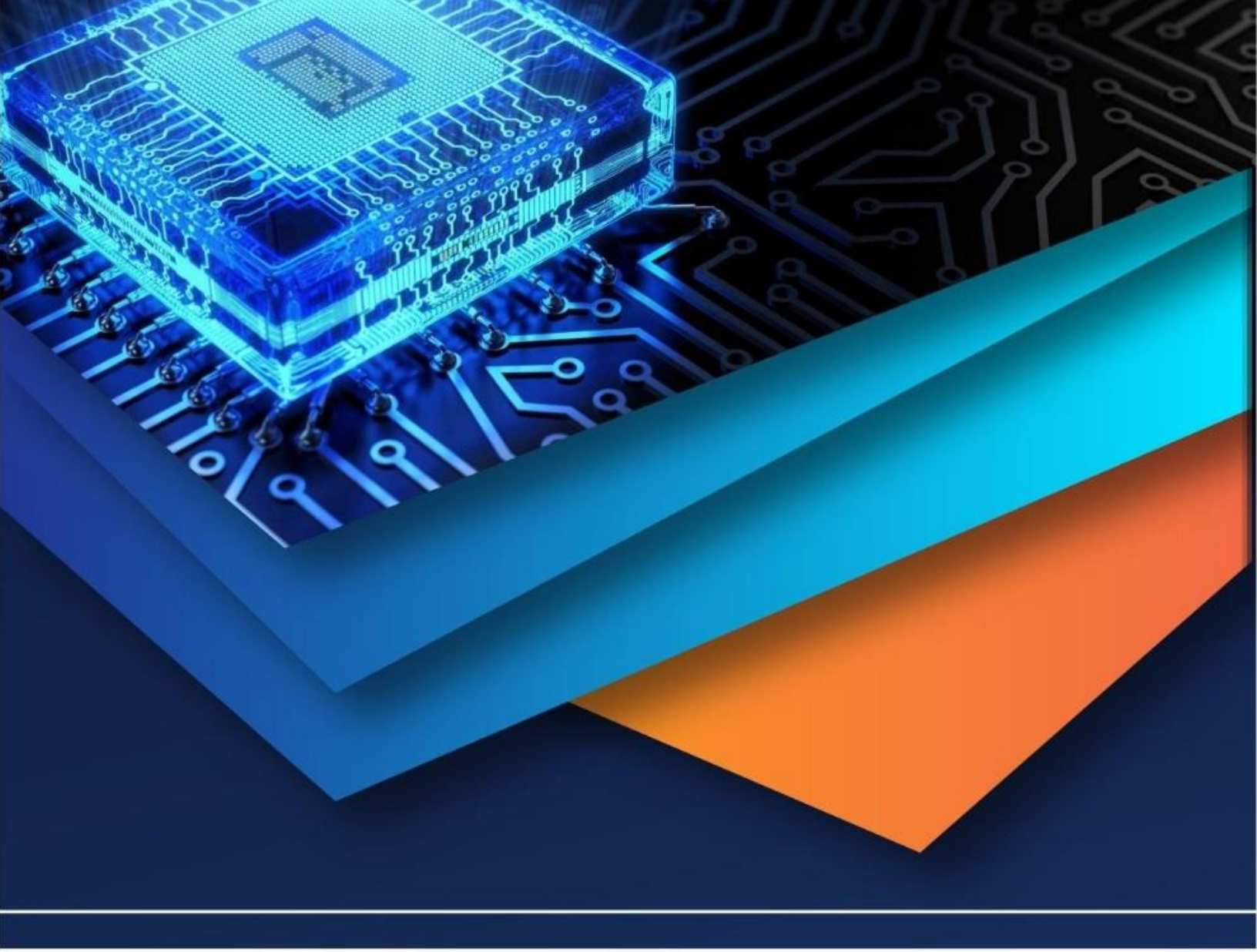

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