

## ARTIFICIAL INTELLIGENCE TECHNOLOGY AWARENESS LEVEL AMONG THE STATE BANK OF INDIA CUSTOMERS OF TIRUPUR CITY

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### Abstract

AI has significantly benefited various industries by streamlining processes and enhancing efficiency. AI automates repetitive tasks, allowing employees to focus on meaningful work. It enhances education by providing personalized learning experiences, strengthens cybersecurity with rapid threat detection and response, and helps fashion brands design better-fitting clothing for their customers. This study aims to measure the level of awareness of AI technology among bank customers. To analyze this, the researcher collected data from bank customers using a questionnaire. The level of awareness is measured using mean score analysis, based on constructs such as usability, user satisfaction, work efficiency, and customization. The results show that there is awareness of AI implementation among the selected bank customers in Tirupur City.

### Introduction

Artificial Intelligence (AI) has revolutionized the banking sector by improving efficiency, security, and customer service. AI-powered technologies, including chatbots, fraud detection systems, and personalized banking solutions, have reshaped the way banks engage with customers and handle financial operations. By integrating AI, banks have enhanced decision-making, lowered operational costs, and provided a more seamless and personalized user experience.

AI plays a crucial role in banking through various applications that enhance efficiency, security, and customer experience. AI-powered chatbots and virtual assistants provide 24/7 customer support, handling queries related to account balances, transactions, and loan applications, thereby improving engagement and reducing the workload on human agents. Fraud detection and security measures utilize machine-learning algorithms to identify suspicious transactions and prevent cyber threats in real time. AI-driven systems personalize banking experiences by analyzing customer data to offer tailored financial advice and product recommendations, enhancing satisfaction and retention. Additionally, AI simplifies loan and

credit approval by assessing creditworthiness through data analytics, reducing processing time and improving accuracy. In risk management and compliance, AI helps banks predict financial risks, monitor transactions, and ensure regulatory adherence, minimizing fraud and money laundering. Furthermore, predictive analytics enables data-driven decision-making by forecasting market trends, customer behavior, and financial risks, optimizing investment strategies and overall financial planning.

AI in banking offers numerous benefits, including improved efficiency by automating routine tasks, reducing human intervention, and enhancing operational effectiveness. It also elevates customer experience through faster and more personalized banking services while strengthening security by detecting fraudulent activities and preventing cyber threats. Additionally, AI helps lower operational costs by minimizing manual processes and optimizing resource allocation. Customers benefit from better financial management as AI assists with budgeting, expense tracking, and financial planning through smart recommendations. However, AI implementation in banking comes with challenges such as data privacy concerns, as handling sensitive customer information raises security risks. Regulatory compliance remains a critical factor, requiring banks to adhere to strict guidelines when deploying AI solutions. Integration with legacy systems presents another hurdle, as many banks struggle to align AI with existing infrastructure. Moreover, customer trust and adoption can be a challenge, as some individuals hesitate to rely on AI-driven banking services due to concerns about accuracy and security.

### **Review of Literature**

AsmatAra Shaikh et al. (2024) examine customer satisfaction with AI-powered banking in India, emphasizing its reliability and timesaving advantages. A survey of 189 customers reveals that while AI improves accessibility, human service remains more fulfilling. Rather than replacing human interaction, AI serves as a complementary tool, highlighting the importance of balancing technological advancements with human expertise in banking services.

Dr. M. Anbukarasi, Darshan S., and Sony P. J. (2022) conducted a study to evaluate the performance of banks before and after mergers and acquisitions. The research focused on banks that underwent mergers over time, utilizing the CAMEL model to assess their performance in both pre- and post-merger phases.

Aishwarya Kumar, Ankita Srivastava, and Puneet Kumar Gupta (2022) explore the current state and advancements in financial technology banking. Their study highlights key

themes in the field, including credit risk, AI models, robo-advisory services, and the integration of blockchain technology in banking administration.

Mariya SIRA (2022) conducts an in-depth analysis of artificial intelligence applications in business management through a bibliometric investigation. The study examines how AI technology is adopted in enterprise management and identifies potential research areas that require further exploration.

Nisreen Ameen, Ali Tarhini, et al. (2021) investigate customer experiences in the era of AI. Based on a survey of 434 respondents analyzed using the partial least squares method, the study reveals a significant impact of AI on customer relationships. It also examines how retailers incorporate AI into their services to enhance customer experiences.

### **Objective of the study:**

To assess the level of awareness of Artificial Intelligence technology among State Bank of India customers in Tirupur City.

### **Research Methodology**

This study is based on primary data collected through a questionnaire. 250 samples were gathered, of which only 214 questionnaires were selected for the study, while the remaining data were excluded due to incomplete responses. To assess the level of awareness, mean score analysis was used, and the convenient sampling method was employed as the sampling technique.

### **Analysis and Interpretation:**

#### **MEAN SCORE ANALYSIS OF USABILITY**

<b>S. No.</b>	<b>Statements</b>	<b>Mean Score</b>	<b>SD</b>
1	Digital banking applications and systems enhance the quality of my work and are integral to my job.	1.55	.64
2	They enable me to complete tasks more quickly and efficiently in key areas.	<b>1.51</b>	.76
3	The digital transformation has significantly boosted my productivity and work efficiency.	1.82	.72
4	Overall, digital banking applications and systems simplify my work	1.81	.76

	processes.		
5	I find automated digital banking applications or systems somewhat challenging to use.	<b>2.86</b>	1.17
6	Learning how to operate digital banking applications or systems comes easily to me.	2.14	.94
7	Digital banking applications or systems feel rigid and inflexible in their connections.	2.52	.96
8	Interacting with digital banking systems demands considerable effort from the customer.	2.40	.99

Sources: Calculated & Computed from Primary Data

The table presents the descriptive statistics of personal factors, highlighting the level of awareness of AI technology among selected bank customers in the sampling area. The mean scores range from a minimum of 1.51 to a maximum of 2.86. It helps to complete tasks faster with an essential aspect" has the lowest mean score (1.51), indicating lower agreement, while "I consider it difficult to use automated digital banking applications or systems" has the highest mean score (2.86), suggesting a higher level of difficulty perceived by customers.

#### MEAN SCORE ANALYSIS OF USER SATISFACTION

S. No.	Statements	Mean Score	SD
1	AI-enabled digital banking provides users with reliable and credible information.	2.15	1.12
2	Communication through AI-powered digital banking is more efficient and productive.	1.90	0.93
3	AI-driven digital banking significantly saves time.	2.04	0.92
4	I am satisfied with the services offered by AI-enabled digital banking.	<b>1.80</b>	0.75
5	AI-enabled digital banking meets my expectations	2.15	0.93
6	Overall, I am pleased with the digital banking experience enhanced by AI	2.18	0.89
7	AI-powered digital banking applications have an appealing visual design	<b>2.19</b>	0.97

8	The interface of AI-enabled digital banking applications is aesthetically pleasing	2.17	0.88
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Sources: Calculated & Computed from Primary Data

The table presents the descriptive statistics of personal factors, reflecting the level of awareness of AI technology among selected bank customers in the sampling area. The mean scores range from 1.80 to 2.19. The statement "AI banking ensures ease and security" has the lowest mean score (1.80), indicating lower agreement, while "The banking sector urgently requires AI to enhance efficiency, security, and customer experience" has the highest mean score (2.19), suggesting relatively stronger agreement among respondents.

#### MEAN SCORE ANALYSIS OF WORK EFFICIENCY

S. No.	Statements	Mean Score	SD
1	Users are satisfied with the convenience and comfort provided by AI.	2.22	1.11
2	The integration of AI simplifies job tasks and workflows.	<b>1.88</b>	0.78
3	The presence of AI influences work frequency and efficiency	2.10	0.93
4	AI actively engages with employees in various work processes	1.95	0.79
5	AI has certain limitations and challenges	2.07	1.03
6	AI may lead to the potential replacement of bank jobs in the future.	2.01	1.04
7	Users report high levels of satisfaction with AI-driven solutions.	1.97	0.82
8	AI contributes to the reduction of fraud and errors.	2.22	1.01
9	AI has a significant impact on work life and professional dynamics.	2.22	1.04
10	The banking sectors expected to undergo major transformations due to AI advancements.	<b>2.28</b>	1.06

Sources: Calculated & Computed from Primary Data

The table presents the descriptive statistics of personal factors, indicating the level of awareness of AI technology among selected bank customers in the sampling area. The mean scores range from 1.88 to 2.28. The statement "Voice-powered search enables users to perform searches using spoken commands or queries" has the lowest mean score (1.88), reflecting lower awareness, while "The banking sector may undergo significant transformation in the coming years" has the highest mean score (2.28), suggesting a relatively higher level of agreement among respondents.

**MEAN SCORE ANALYSIS OF CUSTOMIZATION**

<b>S. No.</b>	<b>Statements</b>	<b>Mean Score</b>	<b>SD</b>
1	I believe banks that offer AI-enabled digital banking have a strong reputation.	<b>2.31</b>	1.09
2	AI-enabled digital banking provides good value for money	1.94	0.92
3	I appreciate and have a positive perception of banks that offer AI-enabled digital banking	1.93	0.77
4	AI-enabled digital banking services are trustworthy and deliver on their promises	2.02	0.98
5	This AI-enabled digital banking system aligns with my personal needs.	1.96	0.83
6	Customization enhances my transaction experience compared to non-customized digital banking applications.	<b>1.86</b>	1.00
7	AI-enabled digital banking offers unique and valuable features not found in traditional digital banking.	2.18	0.89
8	AI-enabled digital banking allows me to conduct transactions based on my preferences	1.98	0.93
9	AI-enabled digital banking provides insights on the latest trends in digital banking services	1.93	0.91
10	AI-enabled digital banking delivers up-to-date information on digital banking services.	1.96	0.98

Sources: Calculated & Computed from Primary Data

The table presents the descriptive statistics of personal factors, highlighting the level of awareness of AI technology among selected bank customers in the sampling area. The mean scores range from 1.86 to 2.31. The statement "AI-enabled digital banking allows me to complete tasks more quickly" has the lowest mean score (1.86), indicating lower agreement, while "I believe banks providing AI-enabled digital banking have a good reputation" has the highest mean score (2.31), reflecting a relatively higher level of agreement among respondents.

**Conclusion**

The analysis reveals varying levels of awareness in AI technology among bank customers. While some recognize AI's potential to enhance efficiency, security, and the banking

sector's transformation, others find digital banking applications challenging to use. The relatively lower mean scores for ease and speed of AI-enabled banking suggest a need for improved user education and system accessibility. Overall, these findings highlight the importance of enhancing AI-driven banking services to improve customer adoption and satisfaction. The findings indicate varying levels of awareness in AI technology among bank customers, while some recognize its benefits in enhancing efficiency and security; others find the digital banking application challenges. The results highlight the need for improved user education and more accessible AI-driven banking solutions to enhance customer adoption and satisfaction. In conclusion, the study tells that bank customers in Tirupur City have a certain level of awareness regarding AI technology in banking services. The analysis, conducted through a questionnaire and measured using mean score analysis, highlights key factors such as usability, user satisfaction, work efficiency, and customization. These findings suggest that AI adoption in banking recognized by customers, which may influence their banking experiences and expectations.

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