

A Study to Understand the Merits of Using Artificial Intelligence in Banking Process with Special Reference to The Indian Banking Sector

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ABSTRACT

Artificial Intelligence is ending up being more extensive in the current business environment especially in financial regions. The advancement of artificial intelligence and its plentiful benefits have prompted the banks to rename their business action by imbue of artificial intelligence development in financial business. It has been comprehensively embraced in financial business as computerization of bank workplaces, web banking office, consistent money moves and focus financial plan. This study focus essentially underlines on to appreciate the various repercussions of Artificial Intelligence and its impact on Banking execution. The assistant data required for the audit was assembled from the reliable wellsprings of yearly reports, research papers and books and it was inspected using quantifiable gadgets like Matched Example T-Test, Relationship and Relapse assessment. The outcome additionally proposed that the client's greater responsibility from agents to the banking and financial services by giving advancement imaginative getting ready to further develop the computer-based intelligence strategies in the working environment.

Keywords: Banking, Financial services and consumer satisfaction, Artificial Intelligence.

INTRODUCTION

Artificial Intelligence is regularly characterized as the capacity of a machine to carry out mental roles we partner with human personalities, for example, seeing, thinking, picking up, connecting with the climate, critical thinking, and in any event, practicing imagination". Notwithstanding, Artificial Intelligence (man-made intelligence) is really a blend of cutting edge computational innovations in differing levels of development.

There are likewise a scope of enhancements in the manner correspondences, client service, and enrolling and resource the board occur all through financial area. Today, for instance, stock money management and money are about specialized abilities and heavenly karma. However later on, with the guide of feeling examination, publicly supported information and calculations, we will actually want to handle cash in a vastly different manner.

Computerized change is among the most notable significant drivers of how organizations convey worth to their clients in a cutthroat, quick changing

business climate. Artificial intelligence (simulated intelligence) is presently generally recognized as one of the main computerized change empowering influences across a critical number of ventures. Artificial intelligence (computer-based intelligence) can possibly work with undertakings. become m Drag creative, flexible, and versatile than ever. Computer based intelligence is as of now being applied to upgrade efficiency and seriousness while likewise driving computerized change in a scope of associations.

LITERATURE REVIEW

Kaur, J. (2020) brought up that in a nation like India where a large portion of individuals were utilizing banking exchanges consistently, it was essential to carry out mechanical developments in banking area to guarantee more noteworthy straightforwardness in banking exercises and accomplish financial consideration. The review depended on the auxiliary wellspring of information and it attempted to make sense of the three-development period of banking area, what began from the historical backdrop of banking and finished with the nationalization and

banking changes occurred after 1991. It gave a standpoint into the different sorts of creative banking, items and services and the electronic frameworks. It clarified the financial development as an instrument for give an answer for the issue of financial prohibition and likewise as a cycle to add more worth added imaginative measures to the current item and administration portfolio to upgrade the banking services to a client situated approach. The review was closed with the explanation that the improvement in efficiency and the proficiency in banking services came about the banking area in India to advance a cutthroat situation with different banks. Developments in the banking area has gone about as an impetus to change over the Indian banking area as an unmistakable forerunner in giving better quality imaginative items and services and to drive the financial framework in India into a higher monetary skill level.

Parimalarani, G., (2020). pointed out that the work of digitalization on the banking area made a huge future among the labor force in both public and confidential area. The computerized change that occurred in banks had changed the hierarchical and the board level plan and employing processes at banks. The expanded robotization in banking area could bring about a gigantic joblessness pattern and a fall in demand for human labor force in banking area. It guided out that the day-toward day banking tasks are going to the speed of digitalization and so the job of work jobs like representatives, center level officials are foreseeing a misfortune in their positions. The digitalization extended the resource of the bank clients so they can get to the services at whatever point and any place they need. While breaking down the pattern of work in banking area its endeavored to call attention to that 70% of the front office occupations are uprooted by artificial intelligence and the positions like tellers, credit officials, client care agents and representative are supplanted by talk bots, voice colleague and robotized biometric innovation. It expressed that the change in banking area plays made a few new parts like network protection trained professional, developer, block chain planner, credit expert and so on. The review inferred that the job of human labor force isn't totally obsolete, crafted by workers alongside the computerized or mechanized innovations will work on the benefit of banks on one

hand and diminish the expense and manual mistakes on other hand.

Rajesh, R., Palpandi, (2015). analyzed the effect of innovation on the banking area in southern Tamil Nādu. The data innovation embraced in banking area offered the saves money with advantages, for example, quick and dependable client care, improvement of new items, data framework on constant premise and so on. The review was directed to investigations the variables for the client's administration openness and to analyze the potential procedures for further developing the innovation driven services. Distinct exploration configuration was utilized and unassuming poll was utilized to gather the information. The variables of administration availability of the clients were concentrated on based on six factors, for example, banking services, add on services, front office services, innovation empowered services, security and unwavering quality of services, utilizing head part factor examination. It showed that the fundamental variable that impacting the client in getting to support is the banking services. One example t/test was utilized to distinguish the procedures to further develop the innovation empowered services and found that the week after week accounts articulation, email alarms, SMS office for cash exchanges were the main methodologies that requirements to create. The review was presumed that it was expected for the banking area to give a client accommodating methodology and give cost effective innovation empowered services to the clients.

Arabyat, Y. (2014) examined the job of interest in data innovation in working on the proficiency of the banking area in India. It brought up that the innovation was following three bearings, right off the bat, logical information which makes the expected application, furthermore, developments and disclosures that are made from the utilization of logical information and in conclusion the logical application, which targets accomplishing results through the commonsense use of the apparatuses. The review uncovered that to accomplish the positive outcomes from the interest in data innovation, it was important to make long haul interests in associations, necessities to set up for every one of the prerequisites that are fundamental for the best utilization of the IT

and sets out new position open doors. Outskirts effectiveness investigation was utilized to gauge the proficiency of banking area and creation and intermediation approach were utilized to recognize the banks data sources and results. The discoveries showed that the medium measured banks had the presence of more expense scale economies than that of the little and huge estimated banks. It made sense of the IT assets that influences the banking execution in four distinct levels, IT framework which contains progresses applications, IT HR which incorporates specialized and different administrative abilities and experience, IT specialized information which alludes to the fundamental expertise expected to construct IT applications and client relationship.

Shukla, T., Singh,A.(2014).analyzed the main considerations that influence the representative discernment towards the innovation in banking area. The review led was exploratory and scientific in nature. The variables that influence the representative discernment towards innovation was recognized via completing an exploratory element investigation. Reception of innovation and innovation empowered arrangements had rolled out an underlying improvement in the workplace for bank representatives, who are expected to reskill, overhaul and retrain to offer proficient and quality types of assistance. It called attention to that individuals, cycles and innovation are the most supporting exercises to make noteworthy worth in the field of banking. The aftereffects of the review showed that representatives are on the assessment that the innovation has decreased the dull undertaking and it likewise helps in resolving different issues like security of organizations, banking applications. The element investigation was finished on different factors, for example, on coordination, abilities, the executives support, worker learning, IT speculation, using time effectively and that examination showed that the representatives have a positive connection towards the innovation.

Jain,M., and Popli,G.S.(2012).stated that the banking area involved a significant and critical job in the monetary advancement in the Indian economy. With the development of data innovation into the field, banks turned into the financial hypermarket, with the improvement of front-end exercises with the back-

end exercises and ready to accomplish the reducing down of exchange expense and arrangement of significant worth added services to the clients. It brought up that the expanded utilization of data innovation had made a way for the banking area to go past their customary tasks. The review which depended on the auxiliary information, attempted to examinations the course of computerization of banking branches, the different advancement arose and the ATM strength in the public area banks. As to the computerization of bank offices, it was viewed that as 97.8 % branches are completely modernized and the different advancements occurred in the banking area incorporates the NEFT, RTGS, card installments, ATM and so on. It likewise examined the strength of ATMs in the banking area and saw that as the 70% of the ATMs were in metropolitan regions and the public area banks had more arrive at in provincial regions. The review was inferred that. the data innovation in banking area has helped the banking area not exclusively to overhaul their interior cycles and exercises yet additionally to work on the items and services in light of the client needs and necessities.

RESEARCH METHODOLOGY

This Exploration depends on Engaging and Illustrative examination. The information utilized for this study is auxiliary in nature and it has been gathered from the solid sources like Banks yearly reports. To guarantee the legitimacy of the dataset, measurable apparatuses, for example, Matched Example T-Test, Relationship and Relapse investigation were utilized.

➤ Research Hypothesis

H₀: There is no Measurable connection between the artificial intelligence used in banks and Premium Pay of Chosen bank.

H₁:There is a Measurable connection between the simulated intelligence used in banks and Premium Pay of Chosen bank.

➤ Matched Example T-Test

Invalid Speculation (H₀): The Interest Pay Distinction is equivalent to 0

Elective Speculation (H1): The Interest Pay Contrast isn't equivalent to 0

Table 1: Aftereffects of Matched Example T-Trial of Interest Pay during Pre and Post – Demonetization

| Statistics for paired samples | | | | | |
|-------------------------------|---------------------|----------|----|----------------|-----------------|
| | | Mean | N | Std. deviation | Std. Error Mean |
| Pair 1 | Pre-Demonetization | 48419.46 | 10 | 51407.337 | 14365.856 |
| | Post-Demonetization | 61442.71 | 10 | 65683.311 | 17939.829 |

That's what the above table shows, mean worth of Interest pay of Pre-Demonetization is 48419.46 and Interest pay of post-Demonetization is 61412.71. It clearly shows that the interest pays regard increases from Pre-Demonetization to Post-Demonetization.

➤ Matched Example Connections

Table 2: Samples in Pairs Correlations

| | | N | Correlation | Sig. |
|--------|--|-----|-------------|------|
| Pair 1 | Pre-demonetization & Post demonetization | 100 | 0.974 | .000 |

From the above table, the Matched example relationship esteem r is seen as 0.974 which indicates that, there is areas of strength for a relationship towards interest pay contrast between Pre-Demonetization and Post-Demonetization. The p -regard obtained from the table is 0.000 which is lower than the basic level of 0.05, ($\alpha=0.05 > p=0.000$) rejects the H_0 , which shows there is a really immense unmistakable between the Interest pay of Pre-Defamation and Post-Slander.

➤ Sample Tests in Pairs

Table 3: Matching Sample Test

| Pair 1 | | Mean | Std. deviation | Std. error mean | 95% confidence interval of the difference | | T | d | Sig. (2-tailed) |
|--|-----------|------|----------------|-----------------|---|-------|----|---|-----------------|
| Pre demonetization & port demonetization | | | | | Lower | Upper | | | |
| P | Pre demo | - | | | | | | | |
| a | netiz | 14 | 21 | 51 | - | - | - | 1 | 0. |
| i | ation | 99 | 59 | 96. | 25 | 27 | 2. | 7 | 2 |
| r | - | 5.2 | 9.1 | 57 | 44 | 62. | 6 | | 0 |
| 1 | Post | 52 | 97 | 1 | 7.7 | 80 | 5 | | |
| | demonetiz | | | | 56 | 8 | 7 | | |

The Matched Example Test Mean Worth is -14995.252 in the table above, showing that there is a typical divergence between the Interest Pay of Pre-Demonetization and Post-Demonetization. The table's p -worth of 0.020, which is not exactly the critical worth of 0.05, shows that there is a measurably massive distinction between the Net compensation of PR Demonetization and Post-Demonetization ($=0.05 > p=0.020$), dismissing the speculation that there is no change.

ANALYSIS AND RESULTS

➤ Analysis of correlation

Invalid Speculation (H0): There is no measurable connection between interest pay and computer-based intelligence Score

Elective Theory (H1): There is a measurable connection between interest pay and simulated intelligence Score

Table 4: Analysis of the relationship between the selected banks' interest income and AI**Correlations**

| | | AI Score | Interest income |
|-----------------|---------------------|--------------------|--------------------|
| AI Score | Pearson correlation | 1 | .730 ^{**} |
| | Sig. (2-tailed) | | .011 |
| Interest income | N | 100 | 100 |
| | Pearson correlation | .730 ^{**} | 1 |
| | Sig. (2-tailed) | .011 | |
| | N | 100 | 100 |

The 0.01 level of significance for correlation (2-tailed)

From the above table, the Pearson connection esteem 'r' is seen as 0.730 which implies that there is a moderate connection between μ_1 and μ_2 . The factors are seen as determinedly associated (0.730), which suggests that addition in one variable (μ_1) will in everyday development in another variable (μ_2). The p-esteem got from the table is 0.011 which is lower than the critical worth of 0.05, ($\alpha=0.05>p=0.011$) rejects the H_0 , which shows there is a genuinely huge connection between's μ_1 and μ_2 .

➤ **Analysis of Simple Linear Regression****Simple Linear Regression Analysis Model Summary****Table 5: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. error of the estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .730 | .399 | .356 | 53194.214 |

- Predictors: AI Score (Constant).
- Dependent Variable: Revenue from Interest.
- The first table shows that the R-Worth is 0.730, demonstrating areas of strength for a between the factors 1 and 2. The all-out degree of progress in the dependant variable (2) by the independent variable (1) is

additionally shown by the R² Worth (0.399=39.9%), which is medium.

ANOVA**Table 6 :The artificial intelligence usage score and interest income of the chosen banks were analysed using an ANOVA.****ANOVA**

| Model | Sum of squares | df | Mean square | F | Sig. |
|------------|-----------------|----|-----------------|-------|------|
| Regression | 26170402054.524 | 1 | 26170402054.524 | 9.225 | .011 |
| Residual | 38680536476.917 | 16 | 2820615520.210 | | |
| Total | 62830736509.440 | 17 | | | |

- Dependent Variable: Revenue from Interest

Predictors: (Continuous), Score for Artificial Intelligence

From the ANOVA table, the huge worth is 0.011, which is not exactly the critical worth of 0.05 ($\alpha=0.05>p=0.011$). It demonstrates proposed relapse model genuinely fundamentally predicts the result variable.

T-Test**Table 7: Artificial Intelligence Use Score and Interest Income of the Selected Banks' Coefficient Results:**

| Model | Unstandardized Coefficients | | Standardized Coefficients | 1 | |
|-------|-----------------------------|------------|---------------------------|---|--|
| | B | Std. Error | Beta | | |

| | | | | | |
|------------|-------------|--|------|--------|------|
| (Constant) | -172683.862 | | | -2.152 | .052 |
| AI Score | 2887.119 | | .730 | 3.039 | .011 |

Dependent Variable: Revenue from Interest

From the above table, T-test critical worth is 0.011 which is under 0.05. ($\alpha=0.05>p=0.027$). It shows proposed relapse model measurably and essentially predicts the result variable. The B Coefficient = 2887.119, it uncovers that 1 Unit expansion in $\mu 1$ which prompts 2888.984 augmentation in $\mu 2$.

CONCLUSION & IMPLICATION RESULTS

Man-made intellectual prowess offers many benefits that would be useful for the financial region. Man-made thinking is changing business cycles and client standing up to organizations in the financial region in India. It is in like manner being used to meet regulatory consistence, recognize deception, and assess individual financial sufficiency. The utilization of computer-based intelligence might potentially make more useful business processes, offer modified organizations, and help greater goals like money related joining. The standard banking has created and more banks are taking on new advancements like simulated intelligence, Cloud, block chain to cleave down their functioning expenses and further foster capability. Improvement and headway in the artificial intelligence business, will expand proficiency at a diminished cost. There is no doubt that new push towards digitalization is rapidly influencing the standard financial models. Regardless, it has in like manner introduced the associations to expanding computerized assurance risks and shortcomings. A high-level impact is unquestionably happening across all segments of industry especially banking, especially later demonetization. Electronic thinking in Indian financial business yet applied in two or three regions has gained energy on account of wide government drive towards digitalization and with expanding number of web and high level cell clients who are searching for reliable financial assistance.

FUTURE SCOPE

This study had zeroed in on breaking down the effect of artificial intelligence in the banking area, further it very well may be dissected, whether it likewise affected banking area of various locales across the globe and worldwide market. This study enjoyed just centered around benefits, impediments and open doors related with utilization of artificial intelligence in banking area.

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