To Study the Impact of Artificial Intelligence as Predictive Model in Banking Sector: Novel Approach

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Abstract **- Artificial Intelligence (AI) has, during the past few years, made many signs of progress which have enabled the creation of professional financing applications, which would, perhaps, disrupt the finance industry. Thus, it is assumed that the AI could not only replace human capital in full or in part but also enhance its performance beyond human benchmarks. For companies around the world, there are a variety of programs.**

A systemic content analysis methodology was used to evaluate related literature publications in this study. A selection of papers, including posts, has been collected. This research focuses on broad publications peer-reviewed, including Scopus and SSRN, which are listed in quality and impact rankings. This selection of the highest-ranking papers not only guaranteed the quality of papers that were most reviewed and validated but also provided the most up-to-date research state during their publication periods. Some keywords are used to scan for artificial intelligence papers, such as artificial intelligence and financial articles such as corporate finance, artificial intelligence, digital finance, financial and artificial intelligence, etc. Banking sector is all set to amplify its strategy implementation by leveraging latest digital technologies so that its customers may experience swift and secure processing of transactions. This study examined the evolution, adoption, implementation, and future opportunities of leveraging.

Artificial Intelligence (AI) for successful strategy implementation in India's banking sector. In pursuance of this study, authors reviewed extensive literature, explored secondary data about the research work done on „Artificial Intelligence in Banking Sector" to find out the current status of research as well as practical application of AI in various aspects of banking strategies e.g. surveillance, fraud detection, ensuring compliances, credit assessment, customer service, handling monotonous voluminous tasks etc. in general and focusses on recent developments in context of India's banking sector, urging banking leadership to shift their focus proactively towards leveraging AI with an objective to bring in delight for customers.

Index Terms **- Banking sector, Accounting, and finance, sustainable invest strategies, artificial intelligence, deep learning, convolution neural network model, regression analysis, KF- model i.e., knowledge flow model representation, etc.**

INTRODUCTION

AI has been found to be used by organizations around the world for the detection of anomalies. It is used to establish optimal investment strategies. The other use of AI in securities is algorithmic trading, programs that integrate information regarding changing market dynamics and price levels by using proprietary algorithms to making automated trading very rapidly. This research work proposal is describing the application of latest innovative technology artificial intelligence AI works as predictive model for giving positive approach for finance and sustainable finance strategies. Along with investment strategies. As impact of AI model represent the novel approach for finance execute the growth prospective analysis. The statistical SPSS. Analysis also represents the growth and development strategies, investment strategies and sustainable finance development and predicted model representation.

AI WITH FINANCE: OVERVIEW

In the field of finance, Artificial Intelligence is renovating the procedures for dealing with finance. Artificial Intellect is assisting the fiscal diligence to modernize and enhance progressions extending from credit decisions to a quantifiable transaction and commercial risk administration. Traditional banking has been transformed within the financial services over time due to great innovations and like the rest the way business functions, besides the nature of professions (Bagheri, 2014). The financial services diligence has an antiquity of expending computable

approaches and a set of rules to support assessment making. These are the basis of AI coordination, and the trade is consequently well-informed for AI implementation, placing it at the lead of employing and promoting since AI knowledge (Chan, Nayler, Raman, & Baker, 2019).

AI can figure on hominoid intellect by identifying outlines and variances in bulky aggregates of figures, which is significant in solicitations such as anomaly recognition (instance; false dealings). AI may perhaps as well gauge and program monotonous odd jobs in a further anticipated technique together with multifaceted computations, for illustration risk identifications associated with commercial transactions (Bahrammirzaee, 2010).

Artificial Intelligence has captured the modern diffusion trends of perceived markets. The idea of artificial intelligence is presently being practically used in diverse sectors. The industry of financial organizations is dealing with artificial intelligence in real advanced ways. The great invention of artificial intelligence is leading the industry of finance with a fabulous tempest. In most of the daily aspects of the financial industry, AI is being applied to acquire the advantages of time consumptions, cutting off cost and furthermore bringing in added in values with faster assistance (Eletter, Yaseen, & Elrefae, 2010).

It is also reported that the famous leading foremost International based corporate financial sectors are relying on Artificial intelligence that has implemented within the opportunity of considered technological progressions by the outcome the Artificial Intelligence with superior functional assistance to the customers, enlightening performance and generating greater proceeds of income sources (To & Lee, 2010).

ARTIFICIAL INTELLEGENCE AI

Artificial Intelligence (AI) consists of the use of computers and algorithms to augment and simulate human intelligence. AI enables adaptive pattern recognition using large volumes of data and modern statistical methods to give the 'best guess' answer to any narrowly defined and definitive problem set. Essentially, it is an optimization machine. The analysis is based on the data provided to a computer program, rather than the innate intelligence of the machine.

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

DEEP LEARNING

Deep learning is an AI function that mimics the workings of the human brain in processing data for use in detecting objects, recognizing speech, translating languages, and making decisions. Deep learning AI is able to learn without human supervision, drawing from data that is both unstructured and unlabeled.

CONVOLUTIONAL NETWORK

Convolution in Convolutional Neural Networks. The convolutional neural network, or CNN for short, is a specialized type of neural network model designed for working with two-dimensional image data, although they can be used with one-dimensional and three-dimensional data.

AI and Credit Decisions. Artificial Intelligence provides a faster, more accurate assessment of a potential borrower, at less cost, and accounts for a wider variety of factors, which leads to a better-informed, data-backed decision.

Artificial intelligence in finance is transforming the way we interact with money. AI is helping the financial industry to streamline and optimize processes ranging from credit decisions to quantitative trading and financial risk management.

Business strategies are concerned with swift decision making, business promotion, industry growth, profitability, productivity, cost reduction, capital formation, investments, market share, efficiency, effectiveness, customer satisfaction, their retention, achieving & managing customer delight, optimum utilization of resources, enriched products & services so that they may remain competitive. In the present Industry 4.0 era, all of these areas of business get seriously influenced by technological innovations or absence thereof. This paper is an attempt to establish connect between successful strategy implementation and latest digital technologies in these business areas with specific reference to India's Banking sector. Since banks are pivotal for economic development of nation's economy and India is moving ahead with a target to achieve $ 5 trillion economy by the year 2024,

so a paradigm shift is bound to take place in its banking sector, refining their strategy implementation by leveraging latest digital technologies, serving wider goals of balanced development of the entire nation. The most common example of application of digital technology being virtual assistants enabled by banks on their websites. In this study author explores more such applications of technology, its evolution, implementation and future opportunities with specific. Digital Technology is a crucial element of Information Technology (IT) strategy of every banking organization operating in present agile Industry 4.0 era as every bank needs visibility into its people, customers, processes, tools, utilization trends thereof and strategic goals i.e. ensuring optimum utilization of IT resource – consequent saving of money, while at the same time offering world class services to its customers, hence initially banking IT strategies adopted automation of data collection, analysis thereof and intelligent reporting with an objective of achieving aforesaid goals. And now its time to deploy digital technology like AI having insightful ability of interconnecting large number of processing elements, resolving problems by processing information similar to natural human brain and to successfully implement intended strategies. India's banking system can get developed and integrated with the international market by leveraging such technologies. Researchers take up this study with an objective to examine the state of affairs of AI in India's Banking sector and research conducted thereon in order to facilitate banking leadership in successful execution of their strategies. Consequently, researchers framed few specific objectives and outlined the scope of this study.

The scope of this study contextually is focused on evolution, implementation and future opportunities associated with proactive utilization of AI in India's banking sector, thus necessitating current status of the research in this area to be explored, along with practical applications achieved till now and forthcoming opportunities via proactive utilization of AI. Based on this study, Researcher presents several areas of India's banking sector where AI has made its way and much more which can be achieved further in this business area.

INVOLVEMENT OF ARTITFICIAL INTELLEGENCE IN FINANCE SERIVCES

Step 1: Understand the difference between AI and ML.
Step 2: Define your business needs.
Step 3: Prioritize the main driver(s) of value.
Step 4: Evaluate your internal capabilities.
Step 5: Consider consulting a domain specialist.
Step 6: Prepare your data.

In the finance industry, AI can be used to examine cash accounts, credit accounts, and investment accounts to look at a person's overall financial health, keeping up with real-time changes and then creating customized advice based on new incoming data.

RESEARCH OBJECTIVE

Rich literature is available about evolution, application and adoption of latest AI innovations as a strategic key success factor in developed countries. However, in India, it has still a long way to go before technology gets integrated with day-to-day activities like banking. Hence this study is undertaken with specific focus on refining and empowering strategy implementation in India's Banking sector by leveraging AI. Specific objectives of this study are:

1. To identify the research work conducted about concept & application of AI in banking sector.
2. To examine the state of affairs of AI‟s application in India's banking sector.
3. To explore capabilities of AI to deliver differentiated results for successful strategy implementation in India's banking sector.
4. To draw the focus of banking leadership from a reactive to proactive adoption of AI for successful execution of their strategies, aligned to their vision.

REVIEW OF LITERATURE, ROL

This paper is presenting systematic literature review SLR of various authors on the application of artificial intelligence in banking sector along with specialization of accounting and finance module sector.

Literature Review:- For revamping the business model, Business Strategies and Technology were found to be integrated in last decade of 20th century itself (Chester, 1994) and value of investments on technology vis-a-vis its productivity as well as economic benefits were being evaluated (Brynjolfsson & Hitt, 2000). Ability of human brain to process

information and solving problems has encouraged scientists to put similar intelligence into machines (Shachmurove, 2002). Since banks have a very significant role in economic development of a nation, so their successful strategy implementation, leveraging state-of-the-art technologies, adds value not only to their own business but to the economy and growth of the entire nation, hence banks need to keep pace with increasing expectations of today‟s rapidly changing environment (Brauer, 2005), aligning its strategies to ensure continuity of business, addition of customers as well as retention of existing customers (Zineldin, 2006), accordingly banks are trying various strategies to innovate products/services to achieve this (Alam & Khokhar, 2006). A technology that can act like human, has ability to learn languages, accomplishes physical tasks, emulate human decision making (Russel & Norvig, 2003), enables machines to carry out activities that require human intelligence (Brachman, 2006) by combining various techniques of machine learning, pattern recognition, logics & probability theory in addition to biologically inspired models (Duch, Swaminathan, & Meller, 2007) known as computational intelligence. Customers‟ faith in technologies paved the way for mobile banking payments (Donner & Tellez, 2008) because system quality and information quality are a significant influencer on the customers‟ satisfaction and trust (Lee & Chung, 2009). AI has made its way in assessment of bank performance (Fethi & Pasiouras, 2010) and Information technology is being extensively used by banking sector across the globe (Vedapradha, Ravi, & Jebasingh, 2016) in its operations like accounting, auditing, and assurance domain, easing out some of its most challenging tasks and supporting decision making by collecting, analyzing and creating accurate financial information (Davenport, 2016). Banks are moving towards next level to create Expert Support System (ESS) and Decision Support System (DSS) to make managerial decision making more informed, consequently implementing strategies more effectively in critical areas like service quality (Castelli, Manzoni, & Popovic, 2016), credit risk appraisal, loan defaulters, profitable investments, interest rate inflation etc. (Ghodselahi & Amirmadhi, 2011) (Moro, Cortez, & Paulo, 2015) (Vedapradha, Ravi, & Jebasingh, 2016). Considering the need of dynamic systems which can understand patterns in the data of market conditions and can adjust financial strategies accordingly so that pragmatic and prompt service may be provided to the customer (Nuseibeh, 2017), research scholars have presented end-to-end Robotic Framework with detailed hardware and algorithmic aspects which can be introduced to a wide range of industries, including banking, to optimize their processes (Chakroborty, 2017). Main factors encouraging AI into banking sector are its ability of low-cost production, open-source system & accessibility of the same; hence within next 3 years AI is expected to become the primary way banks interact with their customers – without depending on bank branches and physical cheque books (Sinha, 2017). India‟s banking sector is investing in Robotics and AI to serve its modern tech savvy customer in an efficient manner (Ayachit, 2017). Banking products have moved far ahead from the conventional banking of India (KUMAR, 2018). Application of innovative technologies by banks in implementation of their strategies to achieve efficiency is praiseworthy (Lagarde, 2018) and is expected to create their globally unified practices, policies, and framework with the help of AI (Erdélyi & Goldsmith, 2018). Strong positive relationship (R- coefficient = 0.859) has been observed between AI and proper record keeping (Longinus, 2018) and AI has strong potentials of transforming all banking operations (Ghurair, 2018) refining investment strategies, managing customers‟ data, carrying out risk assessment, curbing money laundering issues and adding value by reducing costs of money transfer while increasing accuracy levels (Sophia, 2018), thus increasing profitability, improving the quality of decisions made at different operational levels of management (VEDAPRADHA & HARIHARAN, 2018), sparing human resources for innovating & executing intended strategies aligned with organizations vision & betterment of economy as a whole (Kurode, 2018). At present human employees of banks are performing many unproductive tasks of repetitive nature whereas availability of human manpower for owning creative and decision-making roles is limited (Kurode, 2018). The para above provides insight about technical, practical, and strategic aspects of AI and its contribution towards business strategy to help banks for taking call to adopt or not to adopt AI. Considerable work has already been done by the scholars and much more is getting added to the knowledge repository with each passing day. One study has found that the adoption of AI in banking

sector may add approx. $1trillion to India‟s economy by 2035 (Lakshminarayana & Deepthi, 2019). Reserve Bank of India has proactively promoted application of technology for implementing regulations and creating policy frameworks in India‟s banking sector under leadership of Dr. Raghuram Rajan and Urjit Patel (Aazhvaar, 2019). But Strategy formulation is much easier than its successful implementation. Same is the case with country like India, having huge population with high percentage of rural or non tech savvy population, impeding pace of implementing services powered by technology (Kurode, 2018).

I. ARTIFIFICAL AS PREDICTIVE MODEL FOR FINANCE: BANKING SECTOR

1. Identify the problem.
2. Prepare the data.
3. Choose the algorithms.
4. Train the algorithms.
5. Choose a particular programming language.
6. Run on a selected platform.

These are basic software representation of artificial intelligence AI used as predictive model for finance in sustainable invest strategies and finance planning:

II. BANKING SECTOR: AI IMPLICATION TOOL.

1. Google Cloud Machine Learning Engine.
2. Engati.
3. Azure Machine Learning Studio.
4. Tensor Flow.
5. Cortana.
6. IBM Watson.
7. Infosys Nia.
8. Play-ment. It is a data labeling platform that can generate training data at a large scale for robotic models.

III. KF – MODEL: KNOWLEDGE FLOW MODEL:

Knowledge modeling is a process of creating a computer interpretable model of knowledge or standard specifications about a kind of process and/or about a kind of facility or product.

Knowledge representation is the core of artificial intelligence research. Knowledge representation methods include predicate logic, semantic network, computer programming language, database, mathematical model, graphics language, natural language, etc. The model is composed of input, processing, and output.

RESEARCH METHODOLOGY

In this study, authors attempted to study the secondary data available in published literature e.g., research papers, books, websites, newspapers etc. Secondary data is one which is collected by other scholars and has already passed through statistical processes. Literature review is essential for every research work, as it assesses and analyzes the relevant literature for identifying the areas which need strengthening in the field of study. Accordingly, extensive literature review was carried out from the renowned published literature available on the most extensive abstract and citation database e.g., J Gate, ProQuest, Ebsco, internet website, newspaper etc. about the area of interest in this study so that the research objectives may be explored adequately. Researcher performed holistic qualitative analysis on this data to establish the availability of adequate literature about evolution of AI and current state of affairs of its application. In this process, researcher thoroughly analyzed various research papers, crosschecked & corroborated the facts, utilizing qualitative contents across databases to carry out this in-depth detailed study in real-life context. After reviewing the same, evolution of AI and its existing implementation practices have been identified with specific reference to the banking sector, current state of affairs in India's context has been examined and its capabilities have been explored. Researchers discussed the same and made own observations on the relevant aspects for drawing banking leadership's approach from reactive to proactively leveraging AI for achieving successful implementation of their strategies while staying focused on their organization's vision. Researcher applied "5 Why" method to peel away through the layers of AI to identify the qualitative differentiated results it can bring in strategy implementation in India's banking sector. The most relevant and appropriate articles & papers are cited in this paper.

AI ARE PRESENTED HERE-IN-BELOW

1. Developing, driving, and supporting execution of strategies based on data analysis and research.
2. Improving Profitability by reducing Strategy cycles, reducing costs on redundant tasks, increasing productivity, efficiency customers‟

loyalty and optimizing service delivery by becoming operationally lean.

3. Catering to applicable Regulations by transforming and re-engineering banking operations.
4. Supporting accurate Decision making by presenting analyzed data along with recommended results, thus assisting banking leadership.
5. Enhancing core banking solutions by operating at a much robust pace and being agile in response to market conditions, enabling banks with a better go-to market approach among different asset classes, managing customer's portfolios by assessing their profile through algorithmic sorting based on research about financial institutions, loans, investments and then augmenting this data with customers‟ behavior to approach each customer in personalized manner.
6. Surveillance in sensitive areas by developing customized secure environment as per applicable regulatory requirements, scanning transactional & non-transactional logs to identify suspicious activities, abnormalities in patterns, warning signs of fraud attempts, collecting evidence, analyzing data for necessary conviction and responding to that in time, thus outperforming the criminals (Ray, 2017).
7. Physical & Logical Access Management for Locker rooms & designated areas can be secured based on face recognition, mandatory authentication, authorization process, generating unique service token and inbuilt anonymous continuous monitoring mechanism when user is performing the banking transactions.
8. Operational efficiency & customer delight can be achieved in labor intensive repetitive tedious, monotonous, voluminous, time consuming tasks by ensuring rationalization, standardization and swiftness in 100 percent error-free personalized & extremely intuitive service delivery, reducing banks‟ turnaround time significantly.
9. Human bias and emotional interference can be reduced by intelligent machines to avoid distortion in decision making process, reducing time for business processes implementation, answering customers‟ queries without any frustration and self-interest of earning commission, thus boosting productivity.
10. Credit assessment and decision can be effectively managed through Personal Assistant powered by Neural Network using classification models, analyzing market conditions with reference to the lifestyle, appetite for risk, financial goals, individual portfolios, systematic pattern recognition in past behavior of customers and time series forecasting adhering to banking credit standards, thus developing successful financial strategies from banks‟ perspective which simultaneously result in fruitful investments from customers‟ perspective.
11. Error free and up-to-date record keeping, elimination of human error, handling some of the most challenging aspects of accounting, auditing and assurance domain can be managed by AI.
12. AI powered Virtual Customer Assistant & Chat Bot engages customers in speech / text in human language, learns from their activities/interactions, understands their behavior and provides suggestions/takes action, accordingly, handling all the tasks from customer on-boarding to various customer services.

They operate not only within banking domain environment but outside it on wider social media and messaging platforms also, the platform which are meant for news, e-commerce and even entertainment and thus influencing customers‟ behavior towards banking products by conversing intelligently. Based on the set algorithms, these bots are designed intelligent enough to seamlessly handover customer dealing to a human executive at any stage when such a need arises.

Learning from past data being an essential element of AI, such bots become more efficient with its increased use. Concerned bank officials can keep on enriching the data base/question bank, based on which these bots respond, in order to keep pace with latest information and wider coverage of subject matter. This combination of AI and precise human input by banks adds to customer delight by fulfilling requests, solving problems, and predicting customer requirements. 13. Interactive Voice Responses (IVRs) transformation may sync with customers shifting from webpage search (Google) to the voice search (Google Assistant), enabling human-like interaction, shortening the waiting queues, minimizing dependence on call centers, KPOs & BPOs, consequently reducing scope of human errors. 14.

Manpower freed by applying AI into day-to-day tasks – including payment related jobs handled by Chat Bots, can be utilized for more value added and human centric service functions, motivating employees to up-skill and re-skill themselves for shouldering higher responsibilities. Added advantages would be to scale up the capacity during peak / emergency scenarios offering qualitative services to the customers and bank employees will be able to enjoy a better work-life balance for themselves.

LEVERAGING ARTIFICIAL INTELLIGENCE IN INDIA'S BANKING SECTOR

Having traverse through the wide literature reviewed on this topic of interest, this study identified the potentials of AI for achieving successful implementation of strategies in India‟s banking sector because AI understands the workflow of the banking system and restructures the processes to automate the same. Practical application of AI in India‟s banking sector which are becoming part of day-to-day life and benefiting customers in the form of quasi banker chat bots are mentioned below: RBI: National Payment Corporation of India (NPCI) is working to bring down the cost of electronic transactions. Institute of Development and Research in Banking Technology (IDRBT) is studying opportunities and challenges in new technology areas.

SBI: Propelled a national hackathon and now using facial recognition technology based "Chapdex" developed by winning team of the contest; chatbot "SIA" is active on SBI website to interact with customers.

HDFC: Chatbot "EVA" (Electronic Virtual Assistance) built by Senseforth AI Research, has handled the following since March 2019: Addressed customer queries > over 2.7 million Interacted with unique users > 530,000 Held conversation > 1.2 million.

ICICI Bank: It is India‟s first bank to deploy software robotics & automation in over 200 business processes across various functions e.g., retail banking, treasury, HR etc. to perform repetitive, high volume tasks, reducing response time by approx. 60 per cent with accuracy being 100 per cent. Chat bot "iPal" is serving on its website.

AXIS Bank: AI & NLP enabled app to help consumers with financial and non-financial transactions, to answer FAQ and to assist customers‟ contextual interaction with the bank for loan and other products. Chat bot "Axis Aha!" is serving on its website. Yes Bank: Yes, Pay Bot, developed in partnership with Payjo – a leading AI banking platform, performs financial transaction in a personalized conversational manner on real time basis. Chat bot "Yes Robot" is serving on its website.

BENEFITS OF AI: BANKING SECTOR

1. 1.are derived from its inter-connected building blocks working in cohesion, as summarized below: 1. Machine Learning (ML) creates intelligent machines which analyze data, identify patterns and adjust its program / logic dynamically on its own to respond in accordance of data, without being explicitly programmed. Use Cases: Customer Service, Wealth Management, Risk Management, Fraud Detection
2. Deep Learning (DL) creates an artificial replica of human brain and works with non-linear approach of analyzing data, thus enabling better decision making closer to the precision of human brain. Use Cases: Fraud detection, identifying new business opportunities working within banking environment as well as on larger social media platforms.
3. Natural Language Processing (NLP) enables machines to understand and analyze sentiments of human based on their language (text & speech) and to respond accordingly. Use Cases: Feedback about an organization's product, services & offerings.
4. Speech Recognition, a sub-set of NLPs, enables machine to understand human spoken language based on Acoustic & Language modeling algorithms. Use Cases: Voice Banking, Authentication based on customers‟ unique voice patters.
5. Natural Language Generation (NLG) enables machines to generate natural language so that machine may interact with human in their natural language. Use Cases: Machines can communicate

to human customers in human language in an intelligent and understandable manner

6. Visual Recognition employs DL to view, understand and identify visual images, match it with larger data sets and returns a matching value for the same. Use Cases: Image recognition, Deposit of cheques, payment of bills based of its images
7. Optical Character Recognition enables conversion of handwritten, typed, and printed text into machine encoded text so that machines may understand the same. Use Cases: Conversion of physical documents into mechanical fields in computer systems.

OVERVIEW OF BANKING SECTOR AND APPLICATION OF ARTIFICIAL INTELLIGENCE IN ITS STRATEGY IMPLEMENTATION

The recent major events like demonetization and government sponsored initiatives of developing digital India have not only encouraged India's economy to become cashless, but also brought in a massive amount of data in banks, demanding quick, accurate and consistent updation & maintenance of records. Banking sector had long back made computers an integral part of its operations and since 1990"s, automation became key pillar to modern banking e.g. money withdrawal, transfer of funds, ordering cheque books etc. (Moin & Ahmed, 2012) and now due to huge changes in economy, increased work volume, major shifts in consumer preferences, customer objectives, growing population of youngsters, new competitors, regulatory requirements and corresponding need to have robust access management & secured banking environment for transactions, banking sector has started leveraging AI to digitize the tedious manual tasks, shaping future of economy, reducing strategy cycle, implementing its strategies successfully, thus transforming traditional branch banking into mobile / online banking, pioneered by private sector banks of India (Sabharwal, 2014). This initiative is adequately supported by technological improvements in computing, its storage, mobile devices and widespread usage of social media. 'Digital India' focuses on transforming India into a digitally empowered and knowledge economy. The recent developments in Cashless Commerce in India shows that there is an urgent need of Digital Payments in India (Sharma & Agarwal, 2018).

This transition is known as Industry 4.0 i.e. the fourth revolution in industries. This is an ideal stage in the present day's significant transformation era, businesses are relying heavily on interconnectivity, automation, machine learning and real time data processing for conjunction of physical production / services with digital technologies. This transition is known as Industry 4.0 i.e. the fourth revolution in industries. This is an ideal stage for integrating digital technologies e.g. AI with banking operations also, which offers huge potentials of harvesting profits for Banks and provides reduced reaction time (up to milliseconds) for its customers. As a result, both the parties i.e. customer as well as Banks will increasingly be interested in leveraging AI for enabling fruitful, swift and flawless operations. When technology is managed correctly, it fosters a change of state, progress, and improved standard of service delivery.

This concept called AI emerged in technology landscape when a model of artificial neurons was proposed by Warren McCulloch and Walter Pitts in 1943, followed by first neural network computer built in 1951 by Marvin Minsky and Dean Edmonds. The term "Artificial Intelligence" was coined in 1955 by Prof. John McCarthy of Sandford University, one of the "Founding Fathers" of AI, defining it as "the science and engineering of making intelligent machines". In 1960, US Department of Defense started training their computers to act like human logical powers (Russell & Norvig, 2003). AI is a discipline of digital technologies which embeds human intelligence into machines by designing and applying algorithms enabling machines to learn, adapt & develop solutions on their own from interpretation of data over a period of time so that tasks like strategizing, problem solving, reasoning, learning, speech / visual recognition, natural language processing etc. may be managed mechanically (Bellman, 1978). AI is defined as enabling machines to perform such acts which shall require intelligence if performed by human (Kurzweil, 1990), using computation that can perceive, reason & act (Winston, 1992). AI made a significant leap in technological advancement from robotics towards machine learning and predictive analysis. R1 -- The first successful commercial expert system started operating in 1980s

at Digital Equipment Corporation (Russel & Norvig, 2003) and its commercial applications started flooding markets since 2005, introducing products like Siri, Cortana, Alexa, Watson etc. developed respectively by Apple, Microsoft, Amazon & IBM (Russell & Norvig, 2003). Using Computer languages like Prolog, C/C++, Java & Python, AI enables computers, robots, and software to think intelligently similar to human (SINDU, 2019). In a survey conducted by Infosys on 1600 business executives in decision making roles, 75% executives regarded AI as fundamental to the success of organization's strategy. Organizations who have already employed AI, they expect approx. 39 per cent increase in revenue by year 2020. Forbes magazine claimed that application of AI can reduce the operational cost of organizations up to 22 per cent. So, it is but obvious that banking sector has also started integrating AI with its strategy implementation to gain competitive edge in terms of swift, error free, effective, and efficient customer services while at the same time reducing branch visits to a great extent.

CONCLUSION WORK

The use of machines and algorithms to improve and emulation of human intelligence is Artificial Intelligence (AI). AI enables the identification of adaptive trends across large data volumes and modern statistical methods to address a narrowly defined and permanent problem set. It is basically an optimizer. The analysis showed that Artificial Intelligence has made numerous advances in the last few years, which have enabled applications for professionals in finance to be produced which could or would, potentially, disrupted the finance sector.

Therefore, it is believed that AI could not only replace human resources fully or partially but also improve performance beyond human standards. In companies around the world, there are a number of its applications. AI was found to be used for the identification of phenomena. It is used to build effective investment strategies. The other application of AI in finance is algorithmic trading, systems the syntax study of text processing, news and semantics is further significant use of AI. AI is used for the intelligent reading and interpretation of data, including papers, articles, social media, and material.

This is extremely significant if the AI system reads in a matter of seconds when it requires several hours to do so and still cannot provide ALL details that might influence the specific performance of the product. The development of investment services in the future is important. The approach of data mining facilitates the study of market data, the forecast behavior and price level. It can also provide for the forecasts and model performance of legislative and structural development. In the market feeling analysis, AI's use steams out of previous applications, text mining and is often considered as its sub-set. Recent times have seen the extensive development of social networking platforms and the processing of numerous data. The increasing array of "big data" that results from individual internet experiences and various social networking creates fascinating new ways of behavior research. For example, a quantitative analysis of the content of social media has shown that the outcome of several elections in the forthcoming elections is more predictable. Additionally, several additional studies related to the number of online inquiries to a certain subject with a new business.

Further efficient AI deployment could be given by financial indicators such as credit risk calculation, credit rating and efficiency, bond rating, etc. Some reports suggest that the use of artificial neural networks increases the funding of businesses as the risk appraisal of ANN and forecasts of bankruptcy are more reliable. Founded by former Google CIO Douglas Merrill, Zest Finance is an advanced machine learning system that enables a better and more efficient borrower-lender relationship. Although not all companies are ready, in asset management, banking, insurance and other areas artificial intelligence is a growing business priority in the financial services industry. This sector generally recognizes the strategic nature of AI and players are already investing heavily and channeling significant resources to the space to stay up to or be able to compete.

This work has presented a multi-stakeholder perspective to help entrepreneurs navigate the complexities of adopting AI and supervising priorities when using it. Although AI can be used in several respects, the market has to explore what it actually entails. Business leaders will challenge, evaluate their goals, and determine the importance of their AI projects outside technologies to differentiate between fact and exaggeration. AI use is growing exponentially, with strong benefits and even

unforeseeable hurdles. It impels leaders to create a better understanding of technology and to establish a clear and accountable direction in which AI can be incorporated effectively into their business models and wider strategic goals. In consideration of the financial consequences, businesses can provide a sufficient understanding of AI and other technologies used in the industry by the senior management and the board to provide effective control.

This is particularly important because the board members need to track significant issues that affect the long-term value of a company. Throughout compliance with the Corporate Governance Code, the Board is' required to determine the nature and scale of the major risks that it intends to take throughout order to achieve its strategic objectives.' Companies around the globe should maintain sound risk management and internal control systems to ensure a sufficiently current risk framework is established, monitored, and communicated appropriately. AI decision making, execution, and use shall be conducted within a framework of risk management that identifies business changes. It will include four main activities: risk recognition, risk assessment, risk mitigation, and risk control–whether the system is focused on the ISO, the funding organizations ' committee and another standard. Early intervention, preparedness for accidents, crisis response strategies and preparation should support this strategy.

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