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Artificial Intelligence in Expanding Business Horizon

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Abstract

The world is witnessing rapid advancement in technology in the overall international scenario. As such the economy is also undergoing global digitization which significantly affect the business organizations and the labour pool. The sturdy impetus gained by business organizations is resulting in innovative business prototypes and activating revolutions in the business processes. The utilization of Artificial Intelligence systems and robotics contains enormous prospects with it. However, there are dangers of deviations and even desertion of several occupations associated with AI. The speedy stride of artificial intelligence (AI) and computerization is impelling policymakers to restructure their business concepts. It is further encouraging the amalgamation of AI in the business procedures but the magnitudes of this implementation are yet to be studied and needs consideration. In this work an attempt has been made to analyze the key features of AI and its potential benefits. Moreover, it also classifies causes of possible jeopardies and debates a proposal for the quantification and management of AI-related functional threats. This research work embraces the assessment of the norms related to Artificial Intelligence usage and its effect on the businesses and expansion of its horizon. It also underlines the opportunities which AI offers to business organizations and its employees and the

major challenges faced during its application in the organizational system.

Key words: *AI, Artificial Intelligence, computer.*

Introduction

Artificial Intelligence or AI is a subdivision of computer science that accentuates the conception of intelligent machines that work and react like humans. It can be referred to as the replication of human intelligence in machines. The label may also be related to any machine that displays characters related with a human mind such as learning and problem-solving. Artificial intelligence is a multifaceted entity. AI functions by conjoining huge quantities of information with speedy, frequentative, processing and intelligent algorithms, permitting the software to absorb automatically from designs or structures in the data. In the rapidly transforming ambiguous and intricate business atmosphere the advanced digital technologies are restructuring the backdrop of the economy, organizations' physiognomies and the means to interrelate with the organizations. The advancements in Artificial Intelligence can be seen in all aspects from SIRI to self-driven cars. Though science fictions habitually depict AI in the form of robots with traits similar to human beings, AI incorporates everything from Google's search engines to IBM's Watson to self-directed weaponry. There are four kinds of artificial intelligence: „reactive machines“, „limited memory“, „theory of mind“ and „self-awareness“. AI possesses massive capability to intensify human intelligence and to completely modify the way in which product and services are produced and accessed, data collection and even in communication. In the evolving world, AI assists in lowering of costs, dispense creative business strategies, faster decision making, better presentation etc. AI possess high level of computer knowledge and a reasonable methodology and thus can encompass humans' thoughts to tackle complications. However, a human mind can comparatively suggest a complete and impulsive tactics to tackle ambiguity and questionability in the decision making process of an organization.

The advantages of artificial intelligence overshadow its menaces, specifically in business applications. At present AI functions are being applied by organizations and are projected to persist to develop. The main benefits of artificial intelligence in expanding the business horizon can be summed up as: lessening in error made by humans, 24*7 availability, repetition of tasks, regular applicability, digital assistance, faster decisions etc. The risks linked with AI are wide-ranging. Those dangers are primarily reliant on the degree of AI that is being taken into consideration. An elementary artificial intelligence program, or computerization, has a very dissimilar risk as compared to a program which is self-aware. The other limitations of AI include

high cost of creation, leads to making humans lazier and even generates unemployment, lack of creativity and innovativeness, absence of emotional quotient.

Therefore, it has been noted that several benefits and shortcomings are associated with AI as well. It is the duty and responsibility of the human beings to utilize the constructive part in order to create a better world for humans. However, if the technological advancements and AI goes into the hands on wrong minds it can prove to be very devastating and damaging for human race. Several organizations all over the globe are witnessing interruptions by new innovative technologies that lead to a change in business model. AI can be effectively utilized for the evolution and growth of business organizations.

Literature Review

Chowdhury and Sadek (2012) examined many positive and negative factors related to Artificial Intelligence (AI). AI are applied to replicate human intelligence for finding a solution to any problem and also assists in decision making in an organization. AI offers the benefits of stability, consistency and cost-efficiency whilst also tackling ambiguity and rapidity in problem solving and reaching at any conclusive decision. In the companies where human intelligence is dependent on a specific individual or group of employees, AI applications helps y providing stability that inhibits the intelligence from getting vanished when the specific employee or team members leave in between or get retired or are no more associated with the organization. The consortium of knowledge compressed in an AI structure is available as long as the application of the issues and decision set-ups continue to be unaffected. Appropriate AI applications can significantly decrease the amount of time used by staff members in decision making and thus helps in reduction of operational cost. On the basis of calculative time in view of complexities in algorithm and the capacity of the processing device, the AI tools can expedite quick decision making by formulating automatic systems. Nonetheless, like all other mechanisms AI too have certain limitations associated with it. Research and corrective measures are being adopted to overcome the limitations and gain its full advantage to accomplish developments in various fields.

Swarup (2012) studied about various aspects of Artificial Intelligence and described it as a segment of computer science that focuses on creating intelligence in machines. It deals with making smart computer programs and intellectual technologies. The prime focus of AI is to study the issues in the world of computers, technologies and its intelligence. The investigators indulge in huge calculations and computations to solve the problems. Ever since the invention of electronic device i.e. computers there has been tremendous advancements in the field of technology in terms of data storage, processing and retrieval and its usage in various fields like education, business etc. Eventually it led to the development of Artificial Intelligence which was initially based on algorithms. Such AI impersonated step-by-step methodology of solving problems as done by humans while solving puzzles or making logical inferences. However, such AI had certain limitations and so further advancements were done. Furthermore, the theories of probability and economics were applied in AI to deal with ambiguous or inadequate information. The advancements in the domain of AI has led to the advancement of several tools which are efficiently utilized in several problems emerging in computer science. Artificial intelligence has been a matter of positivity, but has also experienced hindrances and in present era it has become indispensable for the technology industry, offering solutions to some major problems in the field of computer science.

Brunette, Flemmer and Flemmer (2009) reviewed that there is no harmony or conformity in the domain of Artificial Intelligence and till date there has been derisory accomplishments in this area. AI has undergone many advancements over a period of 50 years since its inception. Initially two main methodologies were developed in customary: “Top-down” approach (it took into account the higher order functions and their implementation) and “Bottom-up” approach (it considered basic functions to create higher order functionalities). Later on, “theorem-based” programs were also developed and subsequently many other problem solving systems also emerged. In the past decades, efforts are being made to shape exemplified intelligences with the advancements in technologies related to computation and robotics. But the weird character of this arena has ensued in many efforts being almost entirely distinct. The evolution in computer language is very significant for the evolutions to be made in Artificial Intelligence.

Bazilinsky (2013) explored about the various aspects of Artificial Intelligence mainly in the field of entrepreneurship. AI has witnessed many advancements since its evolution. Noteworthy

accomplishments of AI can be seen in the area of machine learning, gaming, survey of environment etc. The research institutions generally do not reveal any short comings in this field and mark every stage as to be successful or helpful for further investigations. Artificial Intelligence mainly aims at creating intelligence in machines alike to the humans. AI applications are efficiently used in the areas such as: „internet surfing, getting music recommendations based on our interests, practicing chess tricks, transportation etc. The practical applications of AI in various fields aim at making day-to-day tasks easier for human beings. Additionally, AI has been incorporated by many brands to expand its business horizons. For instance, a US company „DARPA“ aimed at creating fully automated legged vehicles that could execute better on rough landscapes. Japanese company Honda made a robot named ASIMO which can run, walk and also create a musical group. Google is also working on making its search engines intelligent. Nevertheless, it is important and noteworthy that humans must takes due caution while creating and working with Artificial Intelligence so that they always remain in the control of humans.

Spector (2006) explored that various descriptions have been associated with Artificial Intelligence. It is an array of design issues that the human engineers are anticipated to resolve. Traditional inherited algorithms have not brought much developments but evolving calculation is fastly progressing which is powered in some portions by uprisings in our empathy of biological progression. The problem-solving technique of progressing algorithms has developed remarkably in the past times to the magnitude that human-competitive consequences have lately been attained in numerous zones of science and engineering. These incorporate advanced plans for antennas, computer algorithms, photonic crystals, search engines etc. The developments in computers is taking place at a fast pace within an established and settled research community. The incorporation of human designs and further progression is necessary for the accomplishment of long term objectives associated with AI. It is important that for the accomplishments of intelligent systems, intelligent mediators are required which continue to learn, grow and restructure themselves to the challenging settings. But present biology and technological developments both reinforce a more thorough offloading of strategy from the humans to the intelligent systems and to their ecosystems.

Nordlander (2001) explored about the striking and ever-increasing stimulus of Artificial Intelligence on the industry. Further, the various kinds of AI methodologies being utilized in

present and their capabilities were also taken into consideration. Currently, AI is not essentially used by all the business organizations but very soon because of its potential applicability it is going to enter varied domains. So it is needed that the possibility of its usage should be analyzed by all companies in order to expand the business horizon. The AI tools exclude several tedious or monotonous tasks. AI is also capable of detecting behavioural patterns which may go unnoticed by human intelligence. It also assists employees in the categorization of information efficiently. Many support systems like chatbots, robots, marketing agents etc. based on AI are present in the market and are commonly used by business organizations. In the current time, AI is efficaciously utilized as a mechanism for the refinement, derivation and analysis of huge pool of information. AI techniques are automated and the maintenance schedule can predict problems before they occur. Additionally, AI offers many services that saves human time and labor. In the present competitive world, it is important for the organizations to understand and agree to the efficiency of AI and incorporate it in their strategies.

Nilsson (1983) explored that Artificial Intelligence, as a budding computer speciality, is instigating to discover its forte among the various topics that are significant to intellectual and insightful behavior. The field of AI have the factually exclusive advantage of exclusive advantage of enquiring and replying to the most thoughtful technical and engineering enquiries that human beings have established for themselves. These are the various queries regarding those procedures and traits such as: intellect, reasoning, observation, language, knowledge etc. that discrete the human beings from the rest part of the universe. AI has made an outstanding commencement towards the understanding of these features. With the advancement in any field related to science and technology, gradually its inter-relation with the world becomes more fascinating and complicated. Some effective AI applications have even more efficacious effects on the AI science. It also helps in recognizing the weaker spots and further improvement in that area. However, it is challenging to evaluate the degree of the impacts of AI with the other streams - a few of which could even terminate the existence of life on this earth. The most notable achievement would be that AI would emancipate us from the unwanted hustle and deliver us some most comprehensive depiction human beings ever had about themselves. Though having tremendous benefits in various fields of life, AI is posing some treacherous challenges which has become an important matter of study in the field of computer science.

Winograd (2006) studied that about the Artificial Intelligence (AI) and Human-Computer Interaction (HCI) groups and suggested that both the groups had contradictory opinions over the interaction that should occur between human beings and computers. Instead of basing AI capabilities on a logical illustrations of the system and the knowledge of the agent, there exists an interaction between overall adaptive processes and world experience, which results in intelligent behavior time and again as the result of wide ranging instances and training. Several critics of AI have highlighted the inextricability of human beliefs and human corporeal personification. The ability to think like a human is not just the result of effective brain architecture or gene arrangement, instead of a multifaceted progressive interface between the entire organism and its surroundings, containing other individuals. Researches show that the fundamental difference is not between HCI and AI, but between rational and design approaches. The growing effect of the design tactics was found to be a reaction to an over-appreciation of the rational tactics that generated as a result of developments in science and technology which attempted to enhance the image of computer all over. It was a desirable remedial but like all remedies it doesn't refute its contrary.

Dirican (2015) investigated about the effects of Robotics and Artificial Intelligence on business and economics. Precisely, the recent effects and the anticipated disorderly variations of the artificial intelligence and robotics on the economics and business which are at the former phases of the "Space Economy" in the coming times is going to be as: the costs of manufacture, communication, promotion and workforce. Along with the finance and capital costs by computing „real-time“ / „on-line“ the impacts of the value suggestion and the deals to customers on the balance sheet and the income statement and maximum sales and delivery time by robotics in the distribution networks, the organizations would be capable of managing the profits and associated risks more effectively. The organizations and the government bodies should be prepared and acceptable to apply the innovative processes. The transition from the traditional methods to technology based business settings has significant impacts on the organizations' business. AI would also lead to greater number of employments of engineers, mechanics or science graduates in order to handle the fresh problems resulting from new trends in the business. However, innovative and technical growth would result in generating unemployment for the low-

skilled people. Space economy is going to be certainly the phenomena of the new era and will tremendously influence the businesses and economics all over.

Stalidis, Karapistolisa and Vafeiadisa (2015) explored about Artificial Intelligence and its role in the management with consideration to tourist destination management system. In tourist destination management systems, making well-informed and intelligent decisions is a tough task since it involves the consideration of many factors. Appropriate and up-to-date information is very much required for this. The information systems, management technologies and intelligence approaches help in making effective decision support systems. The advanced data assessment, neural networks and knowledge demonstration technologies are organized collectively for an intelligent information system for the tourist destination promotions. The testing suggested that the intelligent processes are capable to support the users who were not specialists in assessing and solving distinctive destination promotion difficulties. The innovative systems deliver automatic arrangement of unidentified cases without accomplishment of new data examination but by simplifying the information resultant by previously scrutinized instances.

Conclusion

The growth in the arena of Artificial Intelligence suggests that it would rapidly gain popularity in the approaching times and it would be incorporated in almost all segments. It would be required by all the business organizations to make AI a part of their policies. AI is anticipated to decrease the business costs remarkably. The business organizations that have already adopted AI have gained competitive advantage in the world. The major benefit of AI is that it has reduced human involvement in dull and boring tasks. Moreover, the robots generated by artificial intelligence take significantly less amount of time in execution as compared to human workforce. Data Analysis is a pre-requisite for all the business organizations for providing best customer services. AI applications are of utmost use in analyzing the data. Further, AI tools help the business horizon in diversifying, identifying deceits and create a sturdy connection with the customers. AI can also contribute in enhancing the valuation and interview talents of the employees. The process of recruitment can be streamlined by forming an extensive collection of screened resumes. AI is also proficient of bringing automation to intellectual processes.

AI has effected almost all the industries. The adoption of AI is hugely dependent on the objectives and aspirations of the business firms. However, human interaction would get minimized with the incorporation of AI in the organizations. A broader perspective suggests that it is only the AI algorithm that would be used by the organizations, in actuality AI would also be handled by human workforce only. Henceforth, AI would be utilized for substituting tedious tasks with the developed technologies, humans will however be the controlling unit. AI would also result in the introduction of newer responsibilities that would require less hard work and better productivity. The effective integration of AI in the work structure would help in making tasks easier for human workforce, enabling them in doing many tasks at the same time. Therefore, it can be concluded that AI is a growing and transforming sector of technology. Much needs to be studied in this field. It has enormous advantages in the corporate world. But proper care in its development and implementation is required so that its advantages can be applied in expanding the business horizon.

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