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ARTIFICIAL INTELLIGENCE FOR SMART BUSINESS MANAGEMENT

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Abstract

Artificial intelligence (AI) keeps on ruling the business and non-business situations in the midst of different reactions because of the dread that AI innovation will jeopardize the job of individuals in a future administration and business activities. This article looks to recognize changed methodologies through which AI changes business. This article incorporates an investigation of the effect of AI on business from cost decrease in business activities, cybersecurity, showcasing, development, and improved administration basic leadership. Computer-based intelligence has various positive effects on generally speaking business tasks, and the executives and business interest in AI will improve solidness and market initiative.

Keywords: Artificial Intelligence, Business Intelligence, Machine Learning, Strategic Intelligence, Information management Science, Automation.

1. INTRODUCTION

Artificial intelligence (AI) refers to the application of computer and information technology to develop machines that can mimic the cognitive abilities of human beings. Machines with AI have the ability to learn and solve problems, and will play a significant role in research and production facilities. Artificial intelligence is still in the development stages in which machines are equipped with learning and reasoning capabilities, which are unique to human beings (Trippi & Turban, 1992). Providing machines with the ability to learn is achieved through the use of algorithms that can discover the pattern and create insights from data that they are given. The algorithms give the machines the ability to make decisions and predictions in the future using learned patterns and insights. Artificial intelligence in machines is a process that requires a lot of programming for every action and possibility to ensure that they are efficient. Artificial intelligence, therefore, is a set of machine learning to perform tasks that require human reasoning and intelligence. The human intelligence that artificial intelligence can have includes visual perception and the recognition of speech (Brynjolfsson & Mcafee, 2017).

Today's business world technology applications continue to improve efficiency in decision making and overall business operations. Business management and operations are in an era of data, which shapes day-to-day processes in business operations. Artificial intelligence aims at leveraging the existence of expansive data to promote business intelligence decision making using sophisticated algorithms that are used to create insight into future business processes, consumer behavior, and market trends; and promote informed decision making, which gives businesses a competitive edge over other competitors.

2. BUSINESS INTELLIGENCE EVOLUTION

Business intelligence data refers to information that is gathered to provide insight into business decision making. Business intelligence has evolved from a reactive orientation to a proactive orientation, which makes it viable to apply artificial intelligence into business data analytics to provide better future insights into business decision making. The high proliferation and use of new data sources such as smart-phones, tablets, and the internet of things devices have significantly revolutionized how businesses access data and the type of data that is available. Previously, the static reports from business intelligence systems were limited, but the introduction of machine learning has significantly improved the use of data with a proactive approach. The revolution of business intelligence systems from a reactive approach to business systems to a more proactive approach allows date alerts and also real-time insights, which allows business organizations to make better use of data (Liebowitz, 2001).

3. THE AGE OF ARTIFICIAL INTELLIGENCE APPLICATION

Today, artificial intelligence is taking over business intelligence applications due to the easy access to technology by both small-scale and the large-scale enterprises. Artificial intelligence continues to transform industries by enabling the automation of production processes. Artificial intelligence applications are being used in financial services because of their ability to provide highly accurate computations and reports automatically. Artificial intelligence has significantly improved modern business decision making. Previously, leaders relied on inconsistent and incomplete data from business intelligence systems that were still in their rudimentary stages. Artificial intelligence software can chip in big data and break it down into possible actionable insights that can be used to help executives make better informed decisions. Through AI simulations available today, business organizations can create buyer personas that helps business organizations effectively market their products to potential buyers; by predicting the behavior of customers (Trippi & Turban, 1992).

Business organizations desperately need AI-powered business intelligence systems to transform business and market data into actionable real-time narratives and reports. Today, dashboards are not enough due to the multiple data application and sources, which are overwhelming the business intelligence systems. To avoid a big data overload, AI should be used to process the ever-growing data into manageable business insights in real time, which will help businesses make strategic decisions. The shortage of professionals with data analytics skills makes the adoption of AI by organizations even more challenging. Artificial intelligence systems will continue to provide tech-savvy business organizations with a competitive edge moving forward (Michalski, Carbonell, & Mitchell, 2013).

4. HOW AI WILL TRANSFORM BUSINESSES

Rather than seeing AI business systems as replacements for human beings, they can be viewed as tools for supporting humans. AI can analyse a lot of data faster than a human brain and can be able to create the course of action through possible insights, which can be used to improve organizational decision-making processes. As opposed to other business intelligence software, the ability of AI to make decisions transpires all other traditional software used by businesses to analyze data (Brynjolfsson & Mcafee, 2017).

5. IMPROVED BUSINESS EFFICIENCY

Artificial intelligence is set to create more business efficiency through deep learning software applications that will provide business organizations with real-time insights on how the business is fairing. The adoption of AI in already existing technology will significantly improve business efficiency; for instance, the use of humanoid office robots for learning office tasks and operating more efficiently than human-based labor. The humanoid robots are fitted with real-time data analysis AI, which will make it easy to retrieve information. Further, the AI enabled humanoid robots can be connected to other business systems, which will increase the ability of management to monitor and coordinate the activities of different departments compared to the use of business intelligence dashboards. The use of deep learning and Tensor Flow, which are used to ease the hiring process by automating the process of reviewing job applicant information for those who apply through an organization's website by helping to easily identify appropriate candidates. The time saving deep learning AI application will help organizations easily locate and recruit human resources, which will help increase efficiency by reducing the overall downtime that can be caused by the absence of skilled manpower (Trippi & Turban, 1992).

Due to the growth of e-commerce, online customer communications management is very dear to every business organization that has created a website or ventured into online sales. The AI-driven chatbots are being used to manage social media communication and to engage online customers. Therefore, the chatbots can save time and also respond to customer queries faster compared to human-based customer service. Therefore, the chatbots are one of the recent AI tools that can be used to improve organizational efficiency and provide organizations with a competitive advantage in handling customers and promptly answering customer queries (Partanen et al., 2017).

Deep learning AI applications are making shopping more efficient and faster through personalized recommendations through the deep learning application, which can create a customer profile for all online buyers. In other cases, business organizations are using AI software applications such as deep learning to augment investment options, which improve an organization investment decisions as well as detect possible fraud. The application of AI powered software provides business organizations with virtual assistance in the management of many customers, which is critical to every business model today. The chatbots ensure that business organizations are always online in the markets, which helps keep customers updated with new product information (Liebowitz, 2001).

Information is very vital in today's organizational marketing, AI-enabled business intelligence systems can analyze market information and provide business insights on the best approaches to market goods and services, and also which products are doing well in the market. AI software can easily analyze information and data points on the Web within a short period and provide the required feedback, which can be implemented by the business to improve business processes (Partanen et al., 2017).

6. IMPROVED BUSINESS SECURITY

The high global interconnectedness has made it difficult for many organizations to safeguard themselves against cybercriminals who exploit the high number of possibilities and targets. Business organizations can leverage the used of new AI to manage and protect their information and online e-commerce customers from the growing threat from cybercriminals. The application of machine learning and AI on industries and business applications due to their computing power, data collection, storage, and

interpretation can be used to tame cybercriminals in a proactive approach in which security risks are identified, and approaches to mitigation can be put in place before any damage can be done to customer or the business data and systems. Machine learning techniques and continuous AI retraining can be used to proactively stay ahead of what the cybercriminals are thinking. Therefore, AI can be applied in a preventive and predictive way by business organizations to increase cybersecurity. Many business organizations have fully developed digital models, which run on systems that can easily be hacked by cyber criminals, which could be detrimental to the overall organizational operations and customer trust. When human beings are in charge of system security, there are many loopholes and gaps that are left because of the human nature of human security analysts. Machine learning and AI work without getting tired or being limited by time, which seals all the possible gaps that can be exploited by cybercriminals to commit cyber-crimes such as fraud and information theft. Therefore, the use of AI and machine learning can reduce the overall threat caused by the skills gap and reduce the number of malware that can lay dormant in business systems before they can be detected which can reduce the vulnerability of business systems (Rajbanshi et al., 2017).

7. UPDATING CUSTOMER RELATIONSHIP MANAGEMENT SOFTWARE

The amount of data that business organizations are processing has significantly increased, and the use of AI holds a significant role in optimizing the management of customer information and interactions. Previously, cloud computing improved customer management by enabling business organizations to access data and communication platforms without having to make the high capital investment in information technology infrastructure. Today, AI algorithms can be used by businesses to automate the customer interaction platforms through the use of chatbots and also AI can be used to analyze and make sense of the existing structured and unstructured information in the customer relationship management applications. Through the use of adaptive intelligence, which is powered by AI, CRM applications will be more efficient in managing customer information and providing customers with specific product information they require (Partanen et al., 2017).

8. REDUCED COST OF LABOUR

Artificial Intelligence is the application of machines with human-like capabilities in which machines are made to function with the capability of human intelligence. The use of machines is beneficial to business organizations in that they reduce overall operational cost. Reducing operational cost is significant to every organization because it can be used to acquire a competitive advantage in the market. Apart from being used to improve product communication AI can be used in personalized recommendation systems that can be used to drive more customers to buy products, which improves brand loyalty. The smart chatbots can provide clients with the necessary product information even in the absence of online sales agents. Through the use of AI-driven personalized recommender an organization can save money from wasteful marketing activities. Market prediction insights that are derived from the use of AI ensure that market strategists base their decisions on facts and not on mere fantasies, which helps to optimize an organization's marketing activities. Unlike highly paid analysts, AI works from day one without making mistakes and taking breaks, which is cost friendly to an organization. Through machine learning, AI can discover market and operational inefficiencies, which are costly. Management can make market and production corrections to increase efficiency and reduce extra costs that are incurred due to inefficiencies (Hislop et al., 2017).

9. GLOBALIZATION

In globalization, the high interconnectedness of people in the world can be used as an advantage by business organizations by applying AI software such as machine learning can help businesses to understand markets. Globalization requires a common approach to communication, which has been made possible through the use of natural language processing AI and language generation AI, which will improve the ability of organizations to share product information and penetrate new markets. Therefore, AI will significantly contribute to the unification of the world through the creation of AI technology, which will assist with foreign language interpretation. By understanding other cultures, global business organizations such as Coca-Cola will be able to penetrate more markets with products that are tailored to the specific cultures. The high demand for the personalized experiences in the global market can only be achieved if business organizations promote the adoption of new AI technology to understand customer behavior and habits. Through the use of AI and machine learning, business organizations will be able to deliver the right content and products to customers (Liebowitz,2001).

10. AUTOMATION OF BUSINESS PROCESSES

Business systems automation is another important application of AI software since the industrial revolution and has significantly improved production. From automation in automobile manufacturing and assembly plants to automated hotel booking systems, which use AI software and AI driven advanced robots, which work in manufacturing industries. Most of the routine work and tasks in the production process have been automated to increase production efficiency and reduce the cost of production. The reduced cost of production due to automation plays a significant role in contributing to an organization's competitive advantage by enabling an organization to offer products at a low price compared to other competitors who are yet to automate their production processes. The primary advantage of automation is that an organization can increase its total output because unlike human capital the robots do not wear out or require breaks for refreshment (Hislop et al., 2017).

11. PROCESS ACCURACY

Machines are more efficient and accurate compared to human beings and have already been proved in car assembly plants where human labour has been substituted with robots. In this case, some aspect of car assembly requires a lot of human strength, which leaves employees worn out. When employees are tired, they are prone to make mistakes that can endanger the safety of the people who will use the product that is under assembly. Robots reduce the high cost of labor from short period shifts used by businesses to reduce the fatigue on workers. As a result of using robots in the assembly and other energy intense operations accidents are reduced as well as the possibility of making mistakes, which can endanger the public. In this case, AI application increases the efficiency and accuracy of the overall operations in industries that require a lot of energy and manpower. Business and production organizations should implement AI in a way that it improves the creativity of the employees by leveraging technology by easing fears and ensuring that employees benefit from AI applications. Artificial intelligence is based on learning systems modelled on neural patterns, which ensure various applications in industry and business management (Liebowitz, 2001).

12. CONCLUSION

AI has a positive impact on the overall business operations and also the creation of market leadership. The business organization that implements AI in their operations can achieve high operation optimization. The adoption of AI improves overall decision making within an organization by using AI insights to make informed decisions. In marketing, AI is used to ensure an organization marketing efforts are not wasted and product information can reach the potential customers. AI has increased automation of business processes and production processes, which reduce overall production costs and helps create high-quality products for mass consumption. The use of AI helps business organizations have a proactive approach towards cybersecurity, which improves the security of business and customer information.

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