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Artificial Intelligence and its impact on different business functions

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Abstract

Artificial Intelligence (AI) has emerged as a major disruption in every field of life. People have experienced AI as an alien thing in the first go but gradually they are getting a taste of the genius nous. The pace with which it is growing is grabbing attention in the business world. In this paper I have discussed the advancement of AI in the last 48 years in a tabular format, then moving towards the impact of AI in different businesses, and its impact on different business functions like Marketing, Sales, Operations, HR, Finance, etc. This work explores how AI has impacted our business and its functional areas for better business standards

Keywords

Artificial Intelligence, Business Function, Marketing, Innovation

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Artificial Intelligence (AI) has emerged as a major disruption in every field of life. People have experienced AI as an alien thing in the first go but gradually they are getting a taste of the genius nous. The pace with which it is growing is grabbing attention in the business world. In this paper I have discussed the advancement of AI in the last 48 years in a tabular format, then moving towards the impact of AI in different businesses, and its impact on different business functions like Marketing, Sales, Operations, HR, Finance, etc. This work explores how AI has impacted our business and its functional areas for better business standards.

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1. Introduction

Scientists and researchers have come up with innovations in the field of technology and Artificial Intelligence popularly known as AI, is one of those breakthrough. Artificial Intelligence is not a new term to be known, it has revamped the business, society, and economy by altering the experience and relationships between humans and machines (Enholm et al., 2021). Disruption in conventional technologies has always been a foot forward toward development by accepting innovations. AI has innovated itself to such an extent that every sector and function of business is happily accepting it. To achieve this competitive advantage, companies are investing in AI technologies. Even though the interest is growing but the struggle is real for the companies to adapt to it (Fountaine et al., 2019). Some of the AI benefits at the business level are quick analysis of big data, product design, meticulous insights, and better visualization. Organizations that are implementing AI applications are expected to earn profit in terms of optimized service level, cost structure and reduction, easy manpower handling, business expansion, enhanced profits, and business expansion.

Russell and Norvig (2016) have summarized the various definitions of AI systems into four categories along two dimensions: reasoning−behavior dimension and human performance-−rationality dimension. These are (1) systems that think like humans, (2) systems that act like humans, (3) systems that think rationally, and (4) systems that act rationally.

In view to encourage further progress in research on business applications of AI, which often require an integrative perspective, AI practitioners and researchers will benefit from extensive knowledge about what has been investigated and what has been appealed in different business domains (i.e., from manufacturing to services) and in different disciplinary fields, such as marketing, psychology, tourism, management, sociology and so on. Such broad knowledge will provide researchers with a foundation to prioritize research on AI and offer a research agenda to address future trends and challenges (Loureiro et al., 2021).

2. Artificial Intelligence's impact on business

Artificial Intelligence has taken no time to become the mainstream hero in every field of business. From Financial fields, Education, Automobiles, Gaming, IT, and Marketing almost every sector is revolutionized with AI. The applications of AI range from guiding us through maps by voice search to analyzing business trends with data, from providing customer service with virtual assistance to finding a

compliance failure at the company by going through millions of documents, by making self-studies anywhere for students with the virtual class to query solutions with Chabot's for customers, etc. Chat GPT is another AI model that is trending and is popular among researchers for analyzing huge datasets and generating hypotheses (Mishra & Awasthi, 2023). Artificial Intelligence progresses self-learning systems by using tools like data mining, pattern recognition, and natural language processing. Artificial Intelligence is highly scalable in terms of its key business advantages over human intelligence, resulting in remarkable cost savings.

Different Businesses require rising technologies like Artificial Intelligence, machine learning, cloud computing, big data, data science, robotics, blockchain, natural language processing, etc. which helps any business to revamp itself. Today almost every organization has one or other employees for these technologies. The disruption in computer technology is one of the many factors for the advancement of AI. It increases the transparency through code sharing and with a large number of open source software. At present, the enormous uses of these technologies in every field including healthcare, automobiles, finance, gaming, environmental monitoring, agriculture, sports, energy management, security, etc. are changing the way, human beings, live, work, and amuse themselves (Soni et al., 2020). The usage of AI in decision-making has been an important application in history Systems can be broadly said to either support/assist or replace human decision-making (Duan et al., 2019).

3. Merits and de-merits of AI in business

Even though the power of Artificial Intelligence can be seen in various sectors of business. Artificial Intelligence has many potential merits and demerits, which we have tried to showcase through a tabular format.

Merits of AI in Business	De-merits of AI in Business
• Boost Productivity and Efficiency	• Emotion less
• Less time consumption	• AI-generated matters require a human touch
• Improved customer experience	• Inefficient in creative ideas
• Cost reduction	• Fails to capture a certain voice or tone
• Better decision making	• Job displacement
• Accepted in personal as well as professional life	• Data Privacy and security
• Beneficial in tedious analysis and calculation	• Dependency on Technology

4. AI's impact on different business functions

AI has emerged as a disruption in technology for transforming the business to the next level. This transformation has emerged in every function of business. The usage of AI is pervasive and is used in different business lines from analyzing marketing trends to forecasting the financial markets, every function has got AI's back for betterment. How AI is impacting the different functions of business are given below.

1. Marketing and Customer Engagement:

Research on technology and digital has been considerably fast-paced in consideration of marketing. AI plays a significant role in the Marketing of any business. Moreover, only in recent years has research been more inclined toward the intersection of Artificial Intelligence (AI) and marketing, with recent calls for research encouraging further exploration of AI-related topics and their roles in marketing (Kumar et al., 2019). From a strategic point of view, AI is being adopted by top companies like Google, Microsoft, Spotify, Amazon, IBM Watson, etc. to enhance its performance.

Similarly, Chabot plays a major role in providing customer service, problem solutions, and sales activity support. Every business website has a Chabot for immediate query solutions. The success of AI in marketing can be seen nowadays in the academic field. The AI supported classes give a clear and broad understanding to students about the subject almost anywhere (Gill, 1995).

2. Sales:

Artificial Intelligence in sales optimizes the sales process and simplifies it. The process is done by software tools that use certain algorithms to increase sales and save time. The B2B field is not immune to the changes brought by AI. Traditional marketers are facing difficulties because of rapid changes in customer choices, complex sales processes, and influencers' purchasing decisions (Chen et al., 2022). AI analyses the market trends of the past and future and suggests decisions for increasing sales. With AI adoption work efficiency has improved resulting in better decision making. The time consumption has decreased with the automation of AI. So AI has benefitted a lot in the sales process for upgradation in business.

Manufacturing organizations are more probably to use AI technologies for productions where smart machines are socially incorporated within the manufacturing process, effectively functioning as

co-workers to perform tasks or to solve significant problems (Y. K. Dwivedi, Hughes, Ismagilova, Aarts, Coombs, Crick, Duan, Dwivedi, Edwards, Eirug, Galanos, Ilavarasan, Janssen, Jones, Kar, Kizgin, Kronemann, Lal, Lucini, Medaglia, Meunier-FitzHugh, et al., 2021).

3. Operation:

The use of AI in operations often termed as AIOps is helping to bring the digital revolution in operations. It brings new dimensions by learning data, making intelligent decisions, and automating complex tasks.

Inventory Management is one of the major functional areas in business that is affected by the subset of AI i.e. Machine Learning. Machine Learning is one of the booming subsets of AI that uses image recognition, detects defects, and categorizes and labels the product which used to be done manually.

Demand forecasting with the help of AI improves production planning, allocation of resources, and supply chain operation. AI also uses algorithms to do real-time quality checks in production. It also benefits risk management by fraud detection, cybercrime, or other compliance at places.

4. Human Resources:

After COVID-19, Human resources had a technological advancement. The demand for remote and hybrid work cultures has increased. The AI helps in the hiring process by virtual recruitment, finding suitable candidates, analyzing the skill set, and matching the best role. Automation of time-consuming tasks helps HR managers focus on valuable skills (Pillai & Sivathanu, 2020). From the company's point of view, AI provides great effectiveness, efficiency, and cost reduction in streamlining the recruitment process. The communication barrier between the employees has now been eliminated by AI (Palos-Sánchez et al., 2022). Automation has speeded things, reduced resource expenditure, and provided an accurate set of data. The digitalization of CVs, conducting and analyses of video interviews for recruitment, and track applicants and employees through their careers (Altemeyer, 2019).

5. Accounting and Finance:

The booming of the FinTech market has a significant potential of AI to make Implementing AI in Accounting and Finance will increase the efficiency of processes (Cao, 2020). The huge data sheets, complex calculations, data analysis, forecasting, economic analysis, etc. are now can be easily tackled with intelligent applications with AI. The AI system with its supreme accuracy can give results and reduce efforts. AI reduces the efforts of financial analysis of data to provide insights into the company. In Fraud Detection, AI algorithms detect abnormality in transactions, prevent fraud, and measure security.

6. Customer Support:

There is no two way that a business is run by its customers only. Customer service as well as support is required in every sector and function of business be it Education, Healthcare, Service provider, online retail, food business, etc. for the elevation in business. If the customer is satisfied with your service then most likely it will become a loyal customer. AI plays one of the key roles in providing prompt and efficient service.

7. Information Technology (IT):

Information technology has come a long way now and the world is adapting the new tools and applications like AI. Machine Learning, Deep Learning, Automation, robotics, and biometrics are common terms associated with IT. In our day-to-day lives, IT and AI together can be seen in our personal or at our workplaces like the use of speech recognition with Google assistance, the use of Alexa, biometrics for security purposes, the automation of machines and robots for product manufacturing, etc. The togetherness of IT and AI has generated a balance between work and home for professionals as well as students (Mishra & Sharma, 2022). AI has helped in the means of life we are living.

5. Conclusions

This paper aims to showcase the impact of AI on our lives. How businesses and their functions are positively accepting its impact. From Marketing to sales to operations to Accounting and Finance, AI into the business environment for more productivity, easy life, cost control, and efficiency. The adoption of AI will be reaching greater heights as the range of applications, technology, and automation are pacing. By the estimated studies it is said that by 2030, 70 percent of businesses are likely to have adopted some form of AI technology within their business processes or factory setting. AI indeed has a bright future but as everything has its pros and cons, AI too has its own.

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