Kalam's Vision
MULTIDISCIPLINARY AND MULTILINGUAL INTERNATIONAL JOURNAL
(Biannual Peer Reviewed Refereed Research Journal)
Volume: 01, Issue: 1, Year: 2025 (July- December)

SPOTLIGHT ON THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE & BUSINESSES

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ABSTRACT

Artificial intelligence (AI) has emerged as one of the most transformative technologies of the modern era with its ability to mimic human intelligence and perform complex tasks. It is a branch of computer science that has the ability of a computer or computer-controlled robot to perform tasks that are commonly associated with the intellectual characteristic of humans, such as the ability to reason and hence with the help of it we can develop intelligent machines that can behave like human, think like human and make decisions as per the logic program in memory. Businesses are turning to AI to a greater degree to improve their operations, save time and decrease costs. With continued advancements, AI is quickly becoming a precious resource for companies across industries. According to the Forbes Advisor survey, businesses are using AI across a wide range of areas. The most popular applications include customer service and cyber security and fraud management.

Artificial Intelligence (AI) is reshaping the business world and offers various benefits like provides data-driven insights, streamlines operations and reduces cost etc., however, it poses too many challenges like high setup costs and data privacy concerns. AI has the probability to improve efficacy and productivity; it also raises important ethical and societal concerns. As we continue to develop and integrate AI into our society, it is crucial that we consider these issues and work towards solutions that balance the benefits and drawbacks of this powerful technology.

KEYWORDS-: **Automation, Data Analysis, Customer Experience, Efficiency**

INTRODUCTION

AI refers to the similarity of human intelligence in machines that are programmed to think like humans and copy their steps and solve the problem like human being. AI is a method in which we program the machine to work like a human example driving cars, waiters in restaurant, playing chess, proving theorems, playing

music etc. Artificial intelligence is the ability of a computer or computer-controlled robot to perform tasks that are commonly associated with the intellectual processes characteristic of humans, such as the ability to reason. Although there is no AIs yet that match full human flexibility over wider domains or in tasks requiring much everyday knowledge, hence only some AIs perform specific tasks.

Some Common Examples of AI-:

- **Chat GPT:** This AI tool uses large language models to generate text in response to questions or comments posed to it.
- **Google Translate:** This uses deep learning algorithms to translate text from one language to another.
- **Netflix:** This tool uses machine learning algorithms to create personalized recommendation engines for users based on their previous viewing history.
- **Tesla:** This AI tools uses computer vision to power self-driving features on their cars.

Types of AI

1. Reactive machines

Reactive machines are the most basic type of artificial intelligence that don't possess any knowledge of previous events but instead only "react" to what is before them in a given moment. As a result, they can only perform certain advanced tasks within a very narrow scope such as playing chess.

2. Limited memory machines

Machines with limited memory possess a limited understanding of past events and can interact more with the world around them than reactive machines. For example, self-driving cars use a form of limited memory to make turns, observe approaching vehicles, and adjust their speed.

3. Theory of mind machines

Machines that possess a "theory of mind" represent an early form of artificial general intelligence. In addition to being able to create representations of the world, machines of this type would also have an understanding of other entities that exist within the world. As of this moment, this reality has still not materialized.

4. Self-aware machines

Machines with self-awareness are the theoretically most advanced type of AI and would possess an understanding of the world. This is what most people mean when they talk about achieving AGI and currently this is a far-off reality.

AI & Business

Businesses are employing artificial intelligence (AI) in a variety of ways to improve efficiencies, save time and decrease costs. With continued advancements, AI is quickly becoming a precious resource for companies across industries. To better understand how businesses use AI tools,

- Over half of business owners use artificial intelligence for cyber security and fraud management.
- One in four business owners are concerned about AI affecting website traffic.
- Almost all (97%) business owners believe Chat GPT will help their business. One in three businesses plan to use Chat GPT to write website content, while 44% plan to use Chat GPT to write content in other languages.
- Nearly half (46%) of business owners use AI to craft internal communications.
- Over 40% are concerned about an over-dependence on technology due to AI use.
- Nearly two-thirds (64%) of business owners believe AI will improve customer relationships.

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Benefits of Using AI in Business

1. Automates Repetitive Tasks-: AI is excellent for automating repetitive tasks, such as data collection and entry, data preparation.

2. **Provides Data-Driven Insights**-: Artificial intelligence can analyze company data and extract valuable insights to inform business decisions. Apart from data-driven decisions, insights from AI data analysis can help organizations anticipate what might happen in the future (predictive analytics) and prepare in advance.

3. Streamlines Operations and Reduces Costs-: As we know, AI automation can automate repetitive tasks, eliminating the need to hire employees to do manual tasks. As a result, organizations decrease their labor costs. AI also makes business operations more efficient by completing tasks faster and reducing wasted time and resources.

4. Enables Personalized Recommendations-: AI-powered product recommendation systems in e-commerce can suggest items to customers based on their:

- Previous purchases
- Browsing habits
- Personal preferences

5. Drives Product Development-: AI can quickly go through customer behaviour data to identify emerging trends and predict shifts in customer preferences. These insights enable businesses to innovate products that meet current and future demands. They can give organizations a competitive advantage by helping them stay ahead of their rivals.

6. Detects and Prevents Fraud -: AI-powered fraud detection tools can recognize normal payment processes and detect unusual ones that may indicate fraud. Because of artificial intelligence, fraud prevention systems can learn and adapt. When cybercriminals change their tactics, the AI-driven solutions automatically retrain themselves to flag emerging fraud patterns. As a result, companies can stay ahead of new malicious techniques.

7. Improves Resume Screening and Candidate Selection-: Using powerful algorithms, it can swiftly scan multiple resumes at once and rank them based on how well they meet job requirements. The ranking could be based on relevant experience, achievements, education or skills. This makes it easy to spot and hire the right candidate.

8. Enhances Demand Forecasting-: AI-driven applications are faster and more accurate in predicting how much of product customers will want in the future. Precise forecasts ensure businesses maintain just enough inventories to meet customer demand.

9. Accelerates Research and Development-: One of the biggest benefits of artificial intelligence in business is that it speeds up research and development. Instead of taking months or years to create and test the first physical version of a product, also known as a prototype, AI can help businesses quickly develop and experiment with virtual ones. Organizations can use AI-powered simulations to examine how the virtual prototypes perform in different real-life conditions. They can then fix any arising design issues before starting physical production.

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10. Boosts Product Quality-: Powerful capabilities make AI inspection more precise at catching flaws that human inspectors might miss. The technology can scan products in real time during manufacturing to spot defects, even the smallest ones. Businesses, in return, can reduce the number of faulty items leaving the factory.

LITERATURE REVIEW

To understand the concept of AI, it is necessary to first understand the notions of "artificial" and "intelligence" separately. "Intelligence" can be described as involving mental activities, such as learning, reasoning, and understanding (Lichtenthaler, 2019). "*Artificial*", on the other hand, refers to something that is made by humans, rather than occurring naturally (Mikalef & Gupta, 2021). By combining these two together, Artificial Intelligence can be understood as making machines capable of simulating intelligence (Wamba-Taguimdje et al., 2020).The aim of AI is to try to reproduce human cognition by emulating how humans learn and process information. Cognitive technology is a term often used when referring to this capability. Cognitive technologies resemble the action of the human mind (Bytniewski et al., 2020),as it provides the computer to think and act like a human. While Artificial Intelligence (AI) is not something new, it has gained much attention in recent years (Ransbotham et al., 2018). AI has been argued to be a force of disruption for businesses worldwide and in a wide range of sectors (Davenport & Ronanki, 2018). Organizations implementing AI applications are expected to attain gains in terms of added business value, such as increased revenue, cost reduction, and improved business efficiency (AlSheibani et al., 2020). A recent study by MIT Sloan Management Review found that more than 80% of organizations see AI as a strategic opportunity, and almost 85% see AI as a way to achieve competitive advantage (Ransbotham et al., 2017). In the search for competitive advantage, many organizations are thus investing in AI technologies. However, despite the growing interest in AI, many companies struggle to realize value from AI (Fountaine et al., 2019). The expected benefits of AI may be absent even though companies invest time, effort, and resources into the adoption process (Makarius et al., 2020).

METHODOLOGY

The whole paper is based on descriptive arguments, statistical data, comparative study and analytical logic developed through the understandings from various research papers, reports, books, journals, newspapers and online data bases.

SWOT ANALYSIS OF AI-:

Strength-:

- AI-powered chatbots handle customer queries 24/7, resolving issues without human intervention.
- AI automates repetitive tasks, reducing the need for manual labor. This lowers long-term labor costs and boosts productivity, as AI systems can operate continuously.
- AI excels in analyzing large data sets quickly and accurately.
- This enables timely, data-driven decisions that can improve business performance.

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Weaknesses

- Implementing AI involves upfront expenses for hardware, software, and skilled labor. These costs can be a barrier, especially for small businesses.
- AI systems require access to large data sets, which may include sensitive information. Handling this data poorly can lead to privacy violations and legal issues, affecting customer trust and company reputation.
- AI systems are complex and require technical expertise for effective implementation and management. This complexity can discourage adoption, particularly for small businesses without specialized staff.

Opportunities

- Early adoption of AI gives businesses a competitive edge, potentially securing market leadership. This advantage often results in an increased customer base and higher revenues, reinforcing the company's position in the market.
- AI enables targeted customer experiences by analyzing individual behavior and preferences. This leads to higher customer satisfaction and loyalty, as products and services can be tailored to meet specific needs.
- AI can identify untapped markets and new product opportunities through data analysis. This enables businesses to expand more strategically, optimizing resources and maximizing profitability.

Threats

- AI demands specialized skills that are often scarce, making it challenging to find qualified staff. This gap can delay AI adoption and increase labor costs as companies compete for limited expertise.
- As AI gains prominence, regulations may tighten, adding compliance costs and complexity. Failure to comply can result in legal penalties and damage to reputation.
- The potential for automation through AI does carry concerns about the transition of the workforce. It's essential to acknowledge that while specific roles may be automated, AI also creates new jobs and sectors that didn't exist before. Companies can mitigate the negative impact by investing in employee retraining and upskilling programs, aiming for a more adaptable workforce. This approach not only helps the employees but can also benefit the company by creating a more skilled and versatile team.

CONCLUSION

The landscape of AI in business is a dynamic interplay of strengths, weaknesses, opportunities, and threats. On one hand, AI can significantly bolster cost-efficiency, elevate data analysis, and enhance customer service. On the other, businesses must grapple with substantial initial investments, data privacy concerns, and the inherent complexity of the technology. There are clear avenues for market leadership and targeted expansion, but these are not without challenges, including skill gaps and evolving regulatory landscapes. As businesses look to integrate AI into their operational fabric, a well-considered SWOT analysis is indispensable for making informed, strategic decisions. In sum, the adoption of AI is not merely a technological shift but a strategic imperative that requires thorough due diligence.

REFERENCES

- Alsheibani, S., Cheung, Y., Messom, C., & Alhosni, M. (2020). Winning AI strategy: six-steps to create value from artificial intelligence. Americas Conference on Information Systems, Online
- AlSheibani, S., Messom, C., & Cheung, Y. (2020). Re-thinking the competitive landscape of artificial intelligence. Proceedings of the 53rd Hawaii international conference on system sciences
- Alsheibani, S., Messom, D., Cheung, Y., & Alhosni, M. (2020). Reimagining the strategic management of artificial intelligence: Five recommendations for business leaders. Americas Conference on Information Systems, Online
- Bytniewski, A., Matouk, K., Chojnacka-Komorowska, A., Hernes, M., Zawadzki, A., & Kozina, A. (2020). The functionalities of cognitive technology in management control system. Asian Conference on Intelligent Information and Database Systems
- Collins, C., Dennehy, D., Conboy, K., & Mikalef, P. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. International Journal of Information Management, 60, 102383
- Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. Harvard Business Review, 96(1), 108–116
- Lichtenthaler, U. (2019). An intelligence-based view of firm performance: profiting from artificial intelligence. Journal of Innovation Management, 7(1), 7–20
- Mikalef, P , & Gupta, M. (2021). Artificial Intelligence Capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. Information & Management, Online.
- Papagiannidis, E., Mikalef, P., & Krogstie, J. (2021). 2021). Structuring AI resources to build an AI capability: A conceptual framework. European Conference on Information Systems, Marrakesh, Morocco
- Wamba-Taguimdje, S. L., Wamba, S. F., Kamdjoug, J. R. K., & Wanko, C. E. T. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. Business Process Management Journal, 26(7), 1893–1924.
- Ransbotham, S., Gerbert, P., Reeves, M., Kiron, D., & Spira, M. (2018). Artificial intelligence in business gets real. MIT Sloan Management Review
- Anon. (2020). AI is essential to India's future of work, study finds. M2 Presswire