Role of Artificial Intelligence (AI) and Business Decision Making

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Abstract:-

Artificial intelligence is an important tool to improve companies' decision-making processes. It increases efficiency, encourages innovation, and reduces risk. It can analyze massive amounts of data at lightning speed to provide insights from complex data. Artificial intelligence also performs routine tasks, allowing human resources to focus on critical thinking. It allows organizations to anticipate market changes and opportunities by predicting future trends and possible outcomes. However, the use of artificial intelligence also brings with it problems such as algorithmic bias and ethical issues. Leveraging the power of artificial intelligence is critical for making strategic decisions that will shape the future of companies in the sector.

Keywords:- Artificial Intelligence, Business decision-making, Innovation, Data Analytics

INTRODUCTION

Artificial intelligence (AI) and robots are changing the way business is done. Artificial intelligence is the design and creation of information created by humans and machines. It uses learning, thinking, and self-correction to make decisions and save time and money. The AI machine collects data, predicts trends, and analyzes data. They integrate cloud technology, networking equipment, robotics, computers, and digital content, as well as business processes and daily operations. Artificial intelligence computers are used to increase efficiency, reduce costs, accelerate changes, and increase efficiency. Companies that use artificial intelligence software have an advantage over companies that do not. There are two types of machine learning: deep learning and machine learning. Machine learning uses human-like learning and gathers insights from information and data. This helps solve problems better. Deep learning uses neural networks to learn. People give examples of AI to learn how to solve problems. Deep learning is used to solve complex problems in complex systems. Artificial intelligence comes with problems. It relies on sensitive data, which raises concerns about data privacy and security. Companies need to use artificial intelligence responsibly and transparently. Automation can change the way work is done, so companies need to consider reassignment or promotion. Businesses should be aware of these issues when using artificial intelligence technology.

OBJECTIVES:-

1. Discover optimization goals, increase productivity, reduce risk, and provide information from insights to knowledge planning strategies to reduce business regret.

2. Explore the benefits and drawbacks/challenges of AI in business decisions.

3. Examine the information skills of the public.

4. Learn how AI can help identify opportunities, identify business trends, and manage resources when making business decisions.

LITERATURE REVIEW

Erica Sweeney in her article **'Hey, Siri:' Inside Apple's Speech AI and the technology behind it** explains the influence of Artificial intelligence (AI).

Apple Voice in AI and the technology behind it. Siri is Apple's virtual voice powered by artificial intelligence, machine learning, and technology. Language skills. Using the "Siri" or "Hey Siri" command, you can launch Siri and ask her to perform various tasks, such as sending a message to a friend, opening an app, taking a photo, or playing your favorite game song. Apple's voice assistant was launched in 2011, described at the time as "a revolution in Artificial Intelligence technology". The technology has improved since then, but many say Google and OpenAI's AI has surpassed Siri. But Apple has invested billions of dollars in the field of intelligence. The company announced in October 2023 that it was developing new intelligence and a "smarter Siri" using new technology.

What is Siri and how does it work?

Siri is Apple's voice-activated virtual assistant and is part of iOS, iPadOS, watchOS, and other Apple operating systems. He uses cognitive skills, vocal questions, and beautiful words to answer questions, study, and make suggestions.

Casey Watters and Michael K. Lemanski describe the development and use of artificial intelligence in their article "Public Skepticism Towards ChatGPT." ChatGPT is a new language developed by OpenAI that has attracted wide attention in many areas since its release. This literature review provides an overview of early ChatGPT literature across a variety of disciplines, exploring its applications, limitations, and ethical considerations. This review includes Scopus-indexed articles published between November 2022 and April 2023, which includes 156 articles related to ChatGPT. Findings indicate that negative emotions are present in discipline, although certain behaviors need to be taken into account. Reviews have highlighted ChatGPT's impact in a variety of settings, including healthcare, raising operational concerns, and ethical considerations. Although ChatGPT shows promise in improving communication, more research is needed to address its potential and limitations. This literature review provides insights into early research on ChatGPT to inform future research and practical applications of chatbot technology and the development and use of artificial intelligence.

RESEARCH METHODOLOGY

This is a research project combining primary and secondary. Primary data was collected through surveys using quota sampling to select a sample of respondents. Meanwhile, secondary data was obtained by analyzing numerous research articles on the Internet.

PRIMARY DATA:

- Questionnaire

SECONDARY DATA:

- Internet
- Research Paper

DATA COLLECTION

The primary data collection process was carried out through surveys. This method is widely considered the best way to collect important information. By using surveys, researchers can obtain important information directly from participants, thus providing clear and accurate information to support various studies.
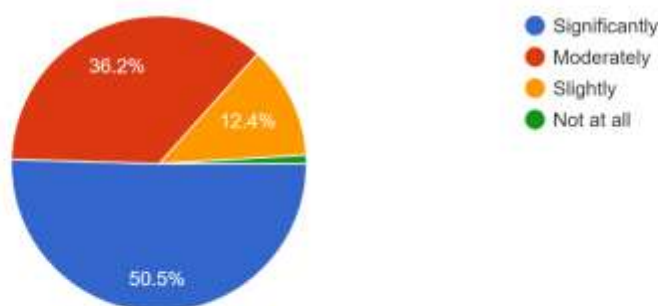
Questions used in Questionary

1. How has AI positively influenced decision-making processes in your management strategy?

2. What challenges have you encountered while integrating AI into decision-making in your organization?

3. To what extent do you believe AI will reshape management strategy in the next 5 years?

4. How would you rate the overall accuracy of AI-driven decisions compared to traditional methods in your organization?

5. How important are ethical considerations in AI-driven decision-making for your management strategy?

6. Have you implemented specific training programs for employees to enhance their understanding of AI and its role in decision-making?

7. What measures have you taken to address concerns about data security related to AI-driven decision-making?

8. How would you assess the cost-effectiveness of implementing AI in decision-making for your management strategy?

9. Is there a structured mechanism for collecting feedback on AI-driven decisions from relevant stakeholders?

10. How collaborative is the decision-making process between AI systems and human decision-makers in your organization?

11. Are you aware of artificial intelligence?

12. Do you think artificial intelligence is easy to use?

13. Does artificial intelligence help you to save time?

The survey was conducted to study the role of artificial intelligence(AI) in business decision-making.

Around 108 responses have responded to this Questionnaire.

1. How has AI positively influenced decision-making processes in your management strategy?
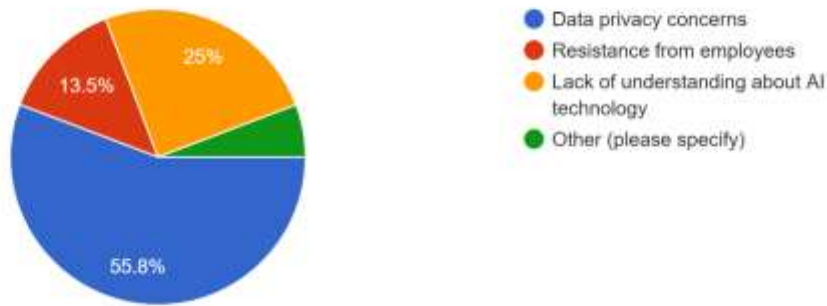105 responses

Around 50.5% of the respondents are significantly influenced by AI in decision-making, while 36.2% are moderately influenced, 12.4% are slightly influenced, and 1% are not influenced at all.

2. What challenges have you encountered while integrating AI into decision-making in your organization?
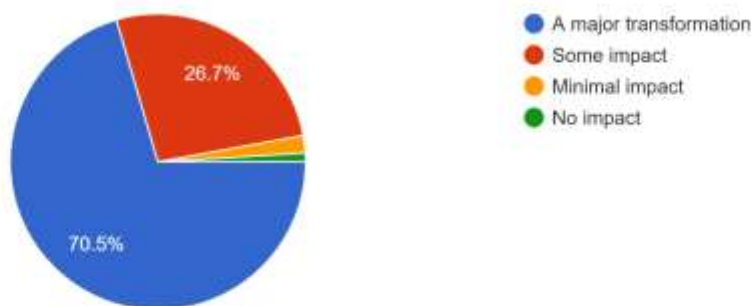104 responses

55.8% of the respondents reported data privacy concerns, 25% of them experienced resistance from employees, 13.5% faced a lack of understanding about AI technology, and 5.8% had other specific reasons.

3.To what extent do you believe AI will reshape management strategy in the next 5 years?
105 responses

According to a survey, 70.5% of the respondents believe that AI has the potential to bring about significant changes in the next five years. 26.7% of the respondents believe that AI can have some impact, while only 1.9% of the respondents believe that AI will have minimal impact. The remaining 1% of the respondents believe that AI will have no impact in the next five years.

4. How would you rate the overall accuracy of AI-driven decisions compared to traditional methods in your organization?
105 responses
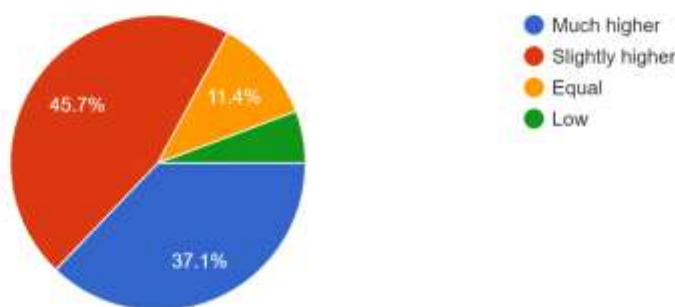
According to the survey, 45.7% of respondents consider the accuracy of AI to be slightly higher, while 37.1% of respondents believe that AI is much more accurate than traditional methods. 11.4% of the respondents rated the accuracy of AI to be equal to traditional methods. The remaining 5.7% of the respondents considered the accuracy of AI to be low.

5. How important are ethical considerations in AI-driven decision-making for your management strategy?

106 responses
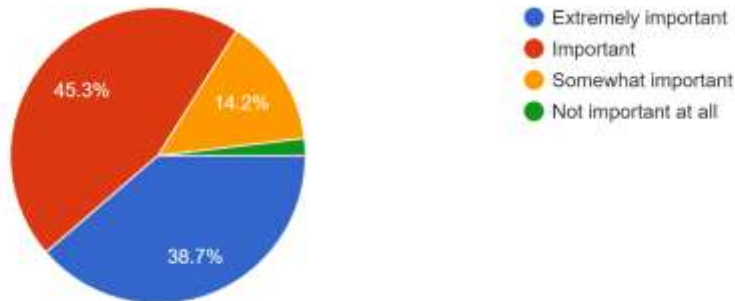
According to the survey, 45.3% of the respondents believe that decision-making driven by AI is important, while 38.7% of the respondents consider it to be extremely important. Additionally, 14.2% of the respondents think that AI-driven decision-making is somewhat important. Only 1.9% of the respondents believe that it is not important at all.

6. Have you implemented specific training programs for employees to enhance their understanding of AI and its role in decision-making?
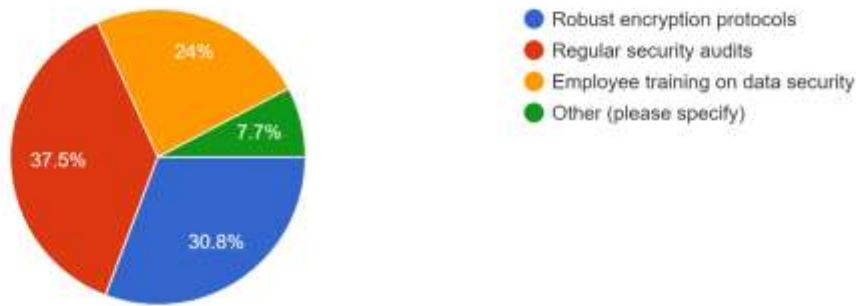
103 responses
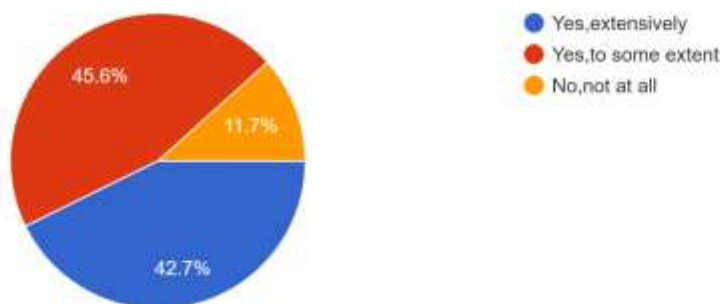
The survey found that 45.6% of respondents implemented employee training to some extent, 42.7% implemented it extensively, and 11.7% did not implement any training programs for their employees.

7. What measures have you taken to address concerns about data security related to AI-driven decision-making?
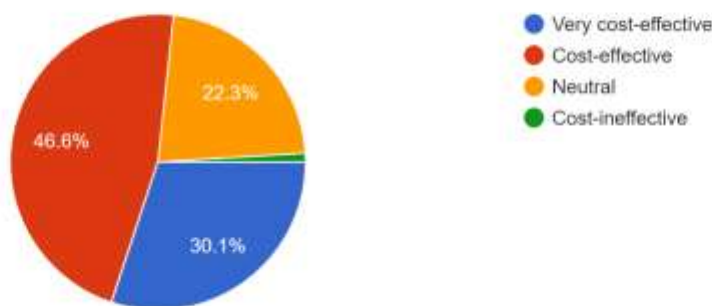
104 responses

A survey found that 37.5% of respondents prioritize regular security audits, 30.8% prioritize robust encryption protocols, 24% prioritize employee training on data security, and 7.7% prioritize other specific reasons.

8. How would you assess the cost-effectiveness of implementing AI in decision-making for your management strategy?
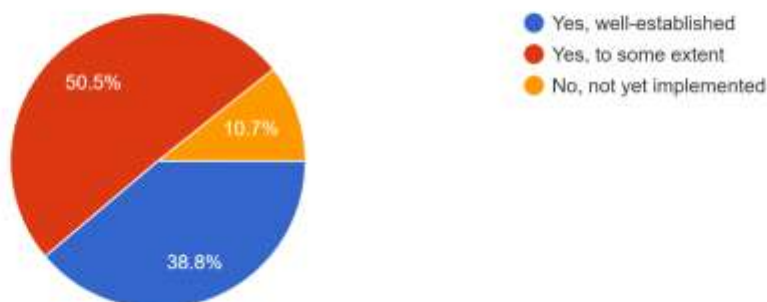
103 responses

46.6% of the respondents rated it as cost-effective, 30.1% rated it as very cost-effective, 22.3% had neutral views, and the remaining 1% rated it as not cost-effective.

9. Is there a structured mechanism for collecting feedback on AI-driven decisions from relevant stakeholders?

103 responses

Around 50.5% of the respondents think that the mechanism is somewhat structured, 38.8% of the respondents think it is well-established or well-structured, and the remaining 10.7% think that the structured mechanism has not yet been implemented.

10. How collaborative is the decision-making process between AI systems and human decision-makers in your organization?
104 responses

- Highly collaborative
- Moderately collaborative
- Slightly collaborative
- No collaboration
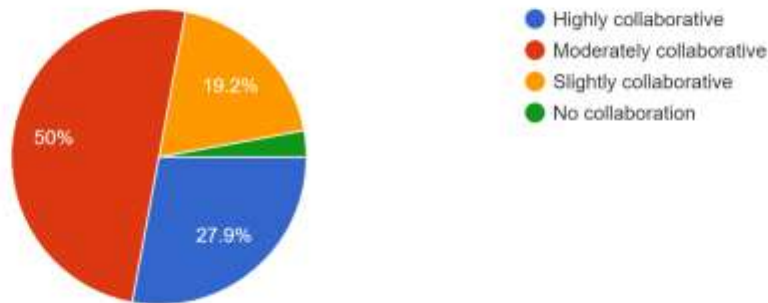
According to the survey results, approximately 50% of respondents believe that the decision-making process between AI systems and humans is moderately collaborative. 27.9% of the respondents think it is highly collaborative, while 19.2% of them believe it is slightly collaborative. Finally, only 2.9% of the respondents think that the decision-making process is not collaborative at all.
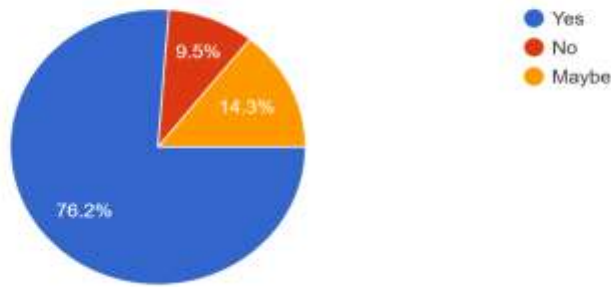

11.Are you aware of artificial intelligence?
104 responses

- Yes
- No
- Maybe
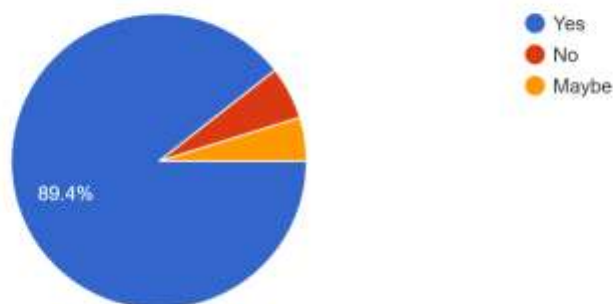
89.4% of respondents are aware of artificial intelligence, 5.8% of respondents are not aware of artificial intelligence, and, the rest of the 4.8% of respondents are maybe aware of artificial intelligence.

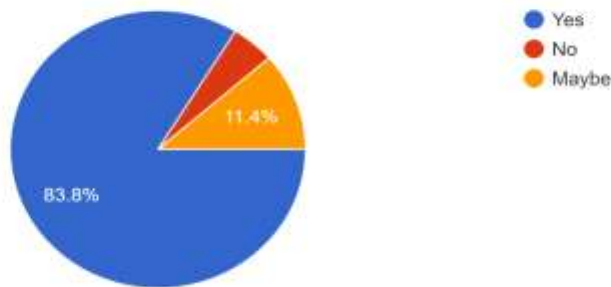12.Do you think artificial intelligence is easy to use?
105 responses

Approximately 76.2% of the survey respondents believe that using artificial intelligence is easy. 14.3% of respondents are unsure whether AI is easy to use or not, while the remaining 9.5% think that it is not easy to use AI.

13.Does artificial intelligence helps you to save time?
105 responses

According to a recent survey, 83.8% of the respondents believe that artificial intelligence helps to save time. 11.4% of the respondents think that AI may help to save time, while the remaining 4.8% of the respondents believe that AI does not help to save time.

CONCLUSION

The emergence of artificial intelligence has brought about significant changes in companies' decision-making processes. Thanks to AI's ability to analyze large amounts of data and create predictions and recommendations based on that data, businesses can make better, more informed decisions. Artificial intelligence can revolutionize corporate decision-making by providing fast and accurate insights into actions and options. It is important to ensure that AI is used responsibly and transparently to minimize unforeseen consequences and maintain customer trust. The future is undoubtedly the use of artificial intelligence in decision-making processes by institutions and consumers. Technology provides choice and an easy way to make business decisions. Artificial intelligence is an intelligent tool that uses data analysis and big data to help make decisions. Research shows that AI is not a replacement for humans, but rather a powerful tool to help make better decisions.

REFERENCE

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