The International Journal of Business Management and Technology, Volume 6 Issue 6 November-December 2022
ISSN: 2581-3889

Research Article Open Access

Utilization of Artificial Intelligence in Dealing with the Creation of System that Can Learn to Emulate Human Tasks Using Their Prior Experience and Without Any Mutual Intervention

Roshan Baa[1], [2]Claber Minj
[1]*St. Xavier's College, Ranchi, India*
[2]*Xavier Institute of Social Service, Ranchi*

Abstract: AI can do a wide range of analytical activities, such as specifying relations among variables, that have been handled by technology for many years. The automation of these talents opens up new corporate and consumer applications in a wide range of industries. Intelligent agents, automated information synthesis, autonomous cars, computerized medical diagnosis, voice recognition for human-computer interface, and increased decision-making are just some of the notable new products, services, and capabilities made possible by AI.
With AI-based marketing tools, this optimization will be taken to the next level in the future. AI will have a significant influence on SEM, from PPC campaign planning to identifying the demographics most likely to convert. AI of the tomorrow will use machine learning to create and optimize sponsored ad campaigns in the future. Marketers could concentrate on the more difficult jobs while the machines took care of the little aspects thanks to automation. As in any other situation, the amount of human effort required to attract and maintain the audience would be minimal.Artificial Intelligence (AI) is making our lives simpler. When an app learns human behaviour, it may forecast what a user would desire and at what moment. This is done via machine learning. In this approach, applications may do a variety of tasks, such as buying groceries, viewing movies, playing music, and more. In an addition to this, the AI can be utilized among the area of establishing systems that can perform tasks without even a human command.

Keywords: AI, Robotics, automation, human intervention, problem-solving, technologies

I. INTRODUCTION

Performance monitoring aids, conflict and instruction simulations, and help for tactical choices are presently being supported by artificial intelligence. Data from modeled takeoffs and landings and simulated aircraft battles are processed using artificial intelligence in Aeroplan simulators. For the most part, AI assists companies to make better judgments by boosting the speed and precision with which strategic decisions are made. Artificial intelligence (AI) has the potential to revolutionize the way people conduct their jobs by increasing workplace productivity and quality of work. For example, freeing improves the human labour to do activities that need creativity and empathy frees up the AI workforce to perform such duties. In this study, a critical evaluation of the utilization of the AI among the segment of creating systems that can automatically learn to execute various labour tasks in an effective and efficient way.

1. Research questions

- What are the impacts of AI technologies in terms of creating automated systems that can perform human tasks without any interventions?
- What are the challenges in terms of discovering the automated technologies due to the implication of AI?
- How to solve the challenges that can be explored among various dimension of creating automatic systems for executing the human tasks?

2. Problem statement

Many real-world applications of artificial intelligence (AI) are now being used to increase income and save costs for companies in a variety of industries. In the transportation industry, the use of Machine learning computer vision is

expected to be most important. As the promise of AI is realised, a growing number of use cases are emerging. Moreover, it can be mentioned that this study has focused n assessing the significance of the AI utilization in the requirement of developing systems that can be beneficial for executing the human performances along with not requiring any types of human interventions (Kusunose et al. 2019). Hence, this study will be illustrating the various aspects of AI usage in the requirement of making of automated systems that can operate itself by learning human activities with more credibility.

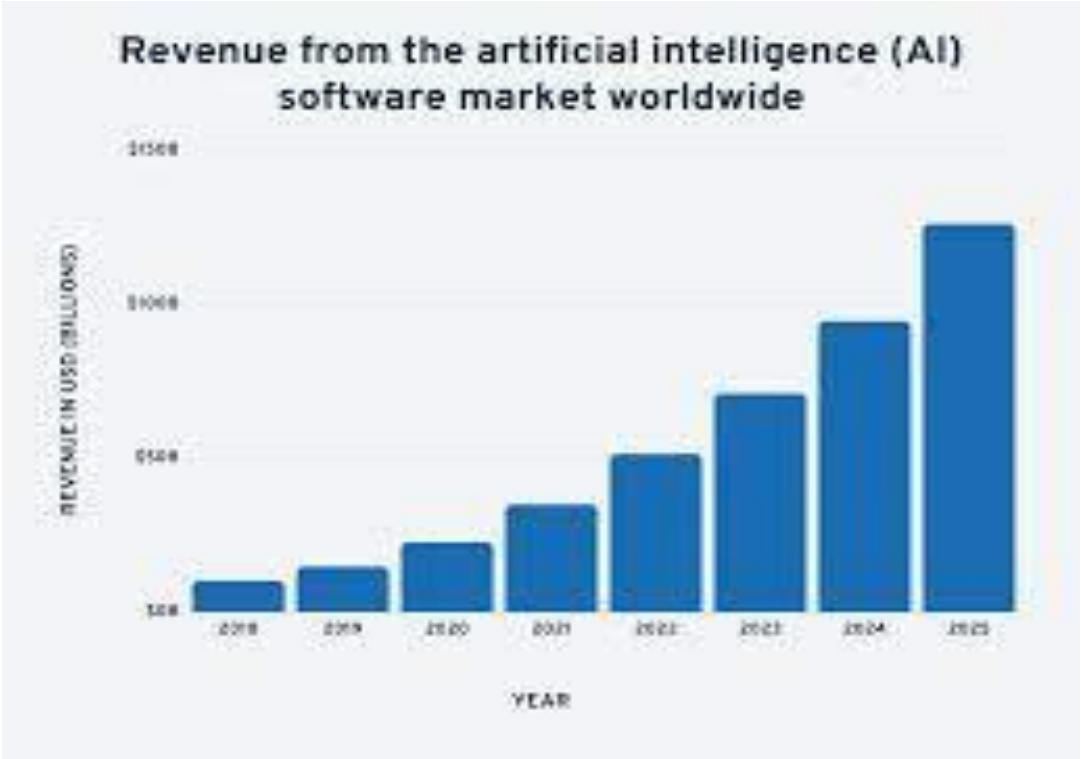

Figure 1: Growth of AI usage
(Source: Kusunose et al. 2019)

3. Aim and Objectives

The aim of the study is to getting a better understanding about the usage of artificial intelligence in the requirement of generating systems that can learn human tasks automatically without any human command. The following objects are noted for the research:

- To evaluate the implications of AI among system generation that can learn the human tasks without any mutual interventions
- To analyze the challenges among these areas of creating the automated systems
- To proposing appropriate solution in terms of resolving the major hindrances in terms of generating suitable and automated systems that can learn human activities in specific areas

II. REVIEW OF LITERATURE

Concept of AI Usage in making automated systems

Certain things, facts, and circumstances exist; these entities have qualities including connections to each other and, and these properties may be classified. For software to have knowledge, it must grasp all of this. Planning requires a computer system's ability to see the future and devise an action plan that will lead to it. Rather from being a panacea, AI is a practical collection of capabilities that can be used to increase revenue and reduce costs (Hannan et al. 2021).

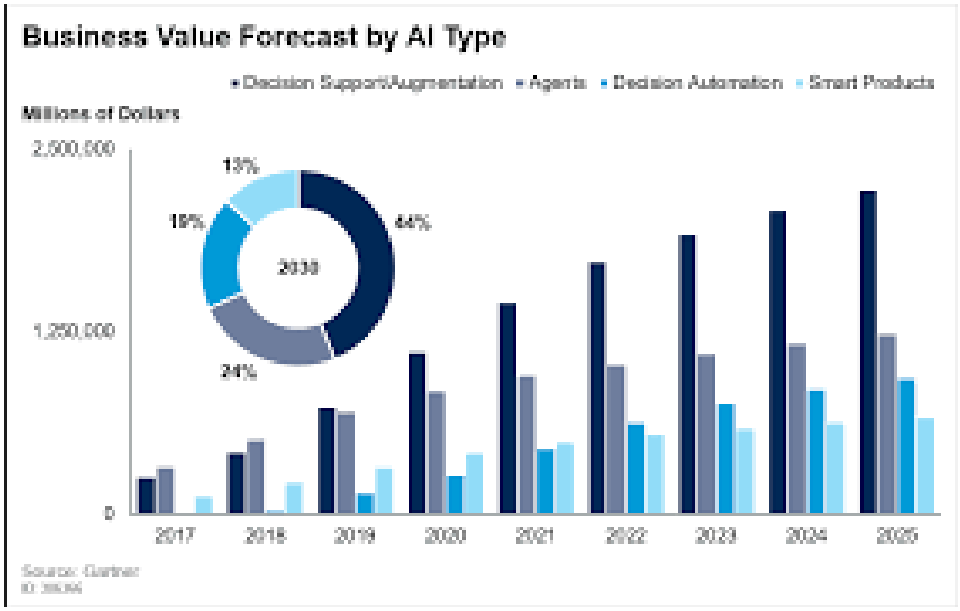

Figure 2: AI implication

(Source: Janková and Dostál, 2019)

There are various business processes that may benefit from AI's ability to detect ideas and relationships in the data better than rule-based systems, include a wider range of data sets into studies, and allow for human-to-machine dialogue. The majority of vocations include at minimum 30% of component operations that can be automated by using established AI technology. Artificial Intelligence (AI) is being used in a broad range of industries and business operations (Janková and Dostál, 2019).

AI, on the other hand, will have many more uses and a far bigger influence in certain industries than in others. If a lot of time is spent gathering or interpreting data, or doing predictable physical activity, AI's influence will be greatest. In areas where data composition and processing of materials are restricted, or when the bulk of people's time is spent administering others or doing uncertain physical activity, the use of AI will be limited. Artificial Intelligence (AI) will have less of an impact on medium-term jobs like management and education. The terms artificial intelligence (AI) and automation are often used interchangeably, despite the fact that they are fundamentally distinct. Programming that implements from before the rules is known as automation (Apell and Eriksson, 2021). Machine intelligence (MI) is a kind of computer programme that attempts to mimic human thought processes.

A subset of AI known as machine learning (ML) begins with no prior information and learns as it goes. Automated systems can perform tasks without the need for human interaction. Equipment and techniques that allow factories and systems to function on their own are called automation technologies (Waheed et al. 2022). There are a variety of different types of machines in this category. There is little human interference. AI is a technology that aids specialists in analyzing events and determining a certain outcome. The term "automation" refers to the use of a machine that has been preprogrammed to perform a certain task. Artificial Intelligence (AI) is best suited for non-repetitive jobs. In contrast, automation is used to carry out a set of predetermined activities.

1. AI and automated systems that can perform human tasks

Every day, AI improves human lives by making them more efficient. Our daily lives are aided by a variety of AI-powered applications and services, such as email, ride-sharing, and connecting with friends. Human lives as learners and employees can be improved by AI-driven technology (Xu et al. 2019). In order to better replicate human behaviour, researchers and practitioners are constantly working on them. Artificial intelligence (AI) systems are now capable of learning, solving problems, and processing language. Using AI, machine learning allows systems to learn and develop without being explicitly designed. The goal of machine learning is to create computer algorithms that can learn on their own by interacting with data (Qureshi et al. 2021). Vendors have been scurrying to showcase how their goods and services integrate AI as the excitement surrounding AI has intensified. The term "artificial intelligence" is often used to describe a single component of artificial intelligence, such as learning algorithms. In order to write and train machine learning algorithms, AI needs a base of specialized hardware and software.

There isn't a single software program that is synonymous with artificial intelligence, although others, such as Python, R, and Java, are widely used. Large volumes of labelled training data are fed into Artificial intelligence systems, which then

look for patterns and relationships to create expectations about new states. This is how AI systems function in general, and this is how they work. Chatbots and image-recognition tools can learn to mimic human conversation by analyzing millions of photos and text samples. Despite their similarity, machine learning are two separate and distinct disciplines of study. Artificial Intelligence, or AI, is a branch of robotics that focuses on creating systems that can make choices and learn on their own.

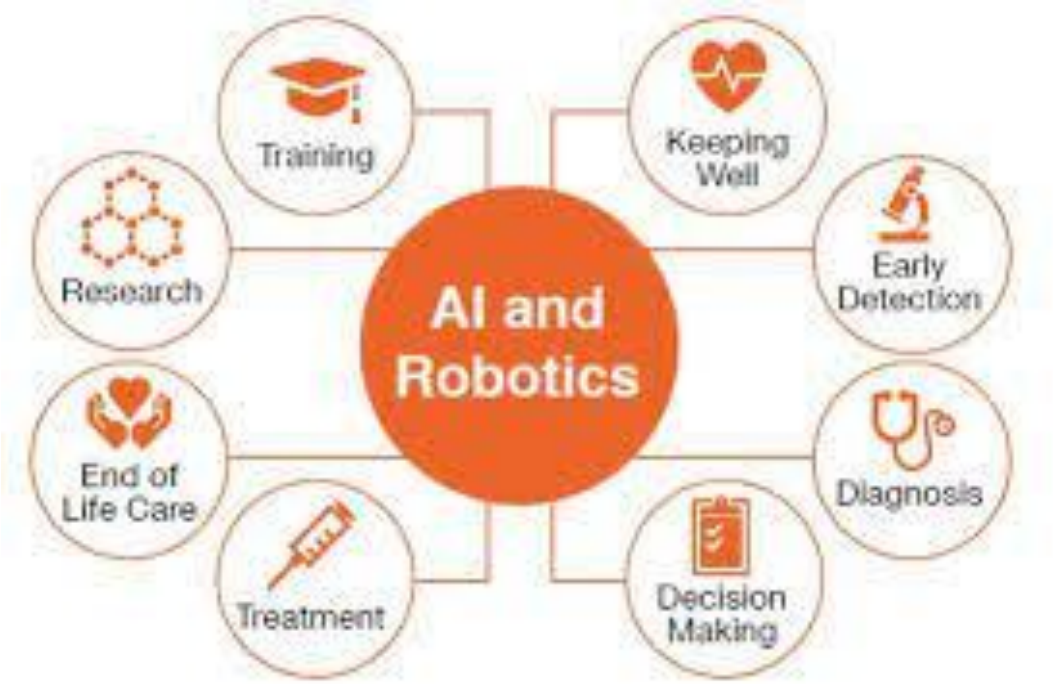

Figure 3: AI and robotics
(Source: Rodney et al. 2019)

The word "bot," an acronym for "robot," may have been used to denote software programmes that autonomously accomplish tasks, which further complicates matters. It's not uncommon for these to include artificial intelligence (Rodney et al. 2019). Robotics doesn't include software bots since they don't have a strong existence, and the phrase may be used to represent everything from internet searches to chatbots. Other than of the two uses machine learning algorithms to respond to human messages.

Although some AI-free industrial automation systems were built with the limits imposed of intelligent machines in mind, robotics producers may feel much more confident in testing the limits of what can be actually accomplished by wanting to marry the two distinct components as the advances are made in great strides each year (Sun et al. 2021). This confidence is bolstered by these instances of artificial intelligence in industries such as manufacturing and aerospace, healthcare and agri-food. Despite how far-fetched it may seem right now; the next great technological breakthrough is a real possibility in the future.

2. Gaps in literature

The volume of authentic and recent data that are interconnected with this research topic, is low. On this note, it can be mentioned that no past literature has not been focused on the factor where the AI technology are using in terms making systems that can run without any kind of human command. In an addition to this, it can be stated that utilizing the AI can comes with a range of challenges such as lack of unavailability of equipment, lower amount of knowledge and huge cost in implication. Though, no possible recommendations have been proposed among the past literature in terms of which has generated a range of limitations in terms of using the AI technologies in the area of need.

III. METHODOLOGY

1. Research paradigm

This study employed an exploratory method rather than an experimental approach since it was more concerned with answering the research questions than with observing the results of experiments. In knowledge management and research conduction, experimenting is the norm, and the research approach is only a scaffolding for the research. Whenever a large quantity of information is acquired, this strategy is the most appropriate (Pacis et al. 2018). When

adopting a mixed data collection technique, it is also necessary to develop a research plan that removes superfluous data and, as a result, minimizes the chance of drawing inaccurate conclusions.

It's important to remember that the kind of data required varies substantially depending on the research, so keep that in mind. The methodology must contain the data collection procedure so that the reader knows how to obtain, filter, and utilises the information that has been obtained in the field. However, the information was acquired in a hybrid manner.

Three information technology managers or technicians were interviewed in order to acquire primary qualitative data. There is a total of 5 open-ended question that have been prepared in order to continue with the interview.

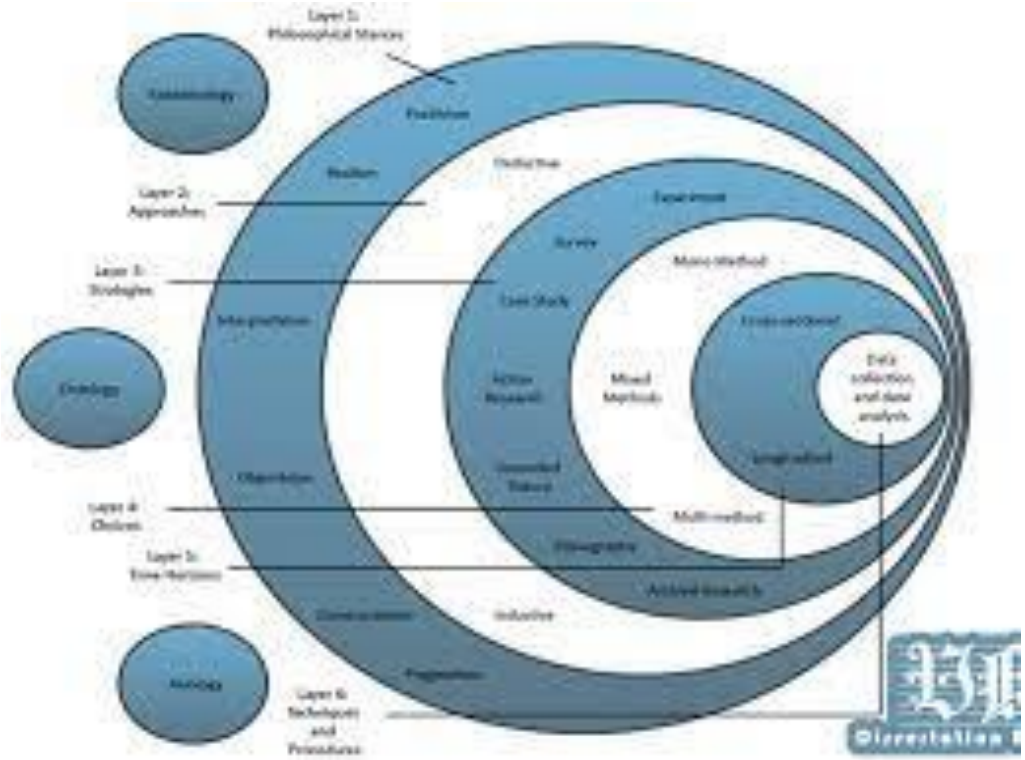

Figure 4: Research onion

(Source: Chun et al. 2020)

The technique of purposive sampling was also utilized to get supplementary data from the annual reports of the selected companies in order to obtain their internal figures. Because it enables the researcher to regulate the filtering and distribution of the data, deliberate sampling is typically a smart option (Chun et al. 2020). In this particular situation, it has been determined that a sampling strategy will be both convenient and beneficial, and this has been chosen. Using a comparison of a list of possible applications, this sampling approach may aid in narrowing the list down to the best ideal candidate for the position being advertised. Three distinct managers have been asked to participate in in-depth interviews for this research project.

The outcomes of the interviews were determined by qualitative analysis of the transcripts, which was conducted on the main data. It was necessary to conduct a thematic study was based on secondary data acquired from the earlier studies, organisational reports and reliable websites in necessary to come at this conclusion (Rodney et al. 2019). On the basis of the association between the two findings, several general conclusions have been taken from the research. The responses of respondents were obtained in accordance with the international general statutory guidelines for the handling of data. Before any of the executives' perspectives could be used in this research, they were required to provide their consent. Anyone who did not want to participate in the research study was not required to do so, and no one was pushed into doing so.

2. Limitation

Due to the pandemic situation of COVID-19, it was difficult for the researchers to maintain the highly effective work efficiency during the period of data collection. On the other hand, lack of budget and financial support was also there which has generated a numerous number of major hinderances in terms of completing the final project within the promised time along with maintaining the quality of project.

IV. ANALYSIS AND DISCUSSION

In the area of analyzing the data that has been obtained from both primary and secondary resources, the mixed methodology will be utilized which is beneficial for obtaining a suitable and eligible result about the research topic with more credibility and effectiveness. Below the results and findings of both primary and secondary qualitative research has been presented in a detailed manner (Poschmann et al. 2021).

Primary qualitative methodology

For analyzing the interview results, conduction of qualitative methodology will be placing a huge and positive impact in the area. Below the interview analysis has been illustrated with a credible way-

Q 1. How can AI help in creating robotics that can perform the human tasks without any command?

Manager 1	Manager 2	Manager 3
I think that AI place a huge role in the area of maintaining the overall process of data analysis and storing the data for extracting an eligible result related to the topic.	AI can help in increasing the level of innovation along with developing the overall process of automation which is beneficial for proceeding with the work.	According to my perspective, AI is essential in the area of putting the command on the computerized devices which can be helpful in terms of developing the robotics.

Table 1: Question 1

Q 2. What are the benefits of using AI in building automation techs?

Manager 1	*Manager 2*	*Manager 3*
I believe that AI is one of the important elements in the area of increasing the level of innovation and productivityof the process that involve automated system development.	In the area of building automated techs, AI is one of the main components that can help in monitoring, developing programs and automation	After adopting AI, I got automation in to the business operation therefore, an addition speed has been noticed. On this note, it can be mentioned that AI can help in saving time and cost along with improving the level of work efficiency at the same time.

Table 2: Question 2

Q 3. What are the challenges in using AI?

Manager 1	*Manager 2*	*Manager 3*
One of the main challenges that I have faced during the conduction of AI techs, was insufficient level of knowledge about the tech operation and installation process.	According to me, installation of the AI tech requires a heavy amount of monetary support that can hamper the core business.	Lack of knowledge among the employees can hamper the process of AI installation. I believe that it can generate a huge volume of major interruption in the area of automation development.

Table 3: Question 3

Q 4. How to avoid the issues that can be explored in AI utilization for creating automatic systems?

Manager 1	*Manager 2*	*Manager 3*
In order to secure AI system more, the company will adopt more advance technologies such as cloud computing system for maximum security,	In order to make employees up to date with new AI based automation technologies companies must focus on the software updating for gaining better result in the area.	Provision of proper training to the employee's various organizational infrastructure can be beneficial in terms of avoiding the bad consequences related to automation.

Table 4: Question 4

Q 5. How can AI techs can help in improving the productivity and work efficiency?

Manager 1	*Manager 2*	*Manager 3*
AI technology can easily handle multiple works at a same time. Therefore, it can automatically give the firm a additional speed in their business operation.	AI technology can give automation and can easily reduce the human error. This is the main reason nowadays, most of the companies are implementing AI based technologies.	AI are helping the firm to maximize the level of organizational productivity and innovation level through improving the work efficiency and performance level through automation.

Table 5: Question 5

Secondary qualitative methodology

For analyzing the secondary data, adoption of secondary qualitative methodology can place a huge role in terms of extracting the reliable and authentic findings that are interrelated with proposed research study. On this note, a thematic analysis will be utilized in terms of getting a detailed overview about the AI utilization in making systems that can perform the human asks without any types of interventions. The thematic analysis of the secondary data is mentioned as follows-

Theme 1- Significance of using the AI tech in building the automated robotics

Artificial intelligence applications, like automation, enable robots to carry out human-like activities in the absence of a human operator. Other prominent qualities that AI mimics include visual perception, voice recognition, decision making, and flexibility. A version of AutoML, or Automatic Pattern Recognition, is AutoAI, which stretches the automating of model construction to the automation of all stages in the life cycle of something such as a machine learning model. For practical applications of artificial intelligence, "AutoML" (automatic machine learning) entails the automated end-to-end procedure (Nawaz, 2018). Throughout the last several years, the benefits of learning algorithms have been used in the sector. The ML technologies have also changed through time as a result of their increased use.

Theme 2- Challenges in using the AI technologies

According to IDC's latest forecast, AI technology would cost 97.9 billion dollars by 2023. As more people come to understand the notion of AI and its significance in the present world of digitalization, AI continues to advance at a constant pace. A rapidly expanding world necessitates the use of Information Technology. It makes our lives simpler by creating systems that aid in the storage, retrieval, and processing of data. IT ensures that the gadgets and technology that can be used are secure, reliable, and cost-effective (Palanica et al. 2020).There is always room for improvement in IT. AI-enabled IT systems may be improved in a variety of ways. Identifying security risks and breaches, helping programmers create better code, ensuring quality, and optimizing servers are just few examples of how layered security systems may be beneficial. Unstructured data has enormous value for a company, but standard systems cannot evaluate it, so many firms don't get the insights they need.

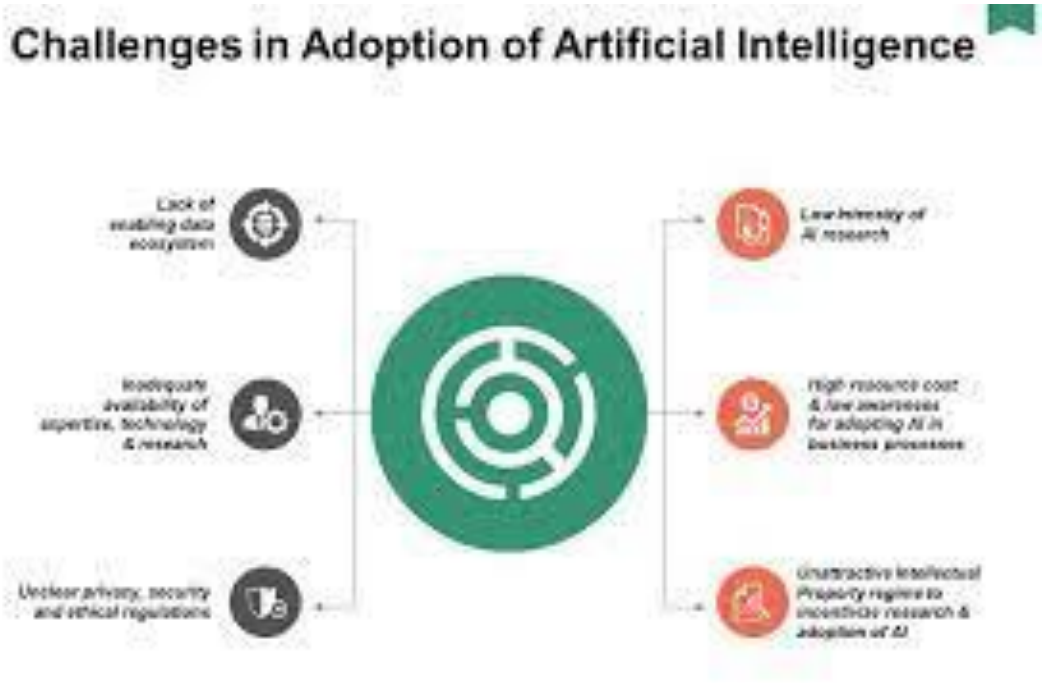

Figure 5: Challenges in utilizing AI

(Source: Palanica et al. 2020)

Processing and analyzing them is difficult since they cannot be stored in an RDBMS (Database Management System). Audio and video files, photos, documents, and site material are examples of unstructured data.Employers will be able to make better and more rational choices if unstructured data can be decomposed, analyzed, and stored in an extremely easy analytical format utilizing AI and Machine Learning (Tran et al. 2019).

3. FINDINGS AND CONTRIBUTION

Developers of AI technology are in high demand as a result of the increased demand for artificial Intelligence. According to studies, the need for AI skills is expected to expand by 74% year between 2016 and 2019. Professionals in artificial intelligence (AI) with the training and expertise to deploy AI to its full potential are still scarce.The goal of machine learning is to swiftly and efficiently analyses enormous volumes of data. The more information an AI system processes, the better it becomes (Gupta et al. 2020).Deep learning, on the other hand, complicates the AI system's learning process. Because critical thinking is facilitated by neural networks, the intricacy of this problem is understandable. As a result, deep-learning AI systems can try to anticipate concepts rather than just study the ones that are already in place. The possibilities and ramifications for future enterprises of this knowledge are enormous. Deep learning is very useful for internet businesses that collect a lot of data. Artificial intelligence systems using deep learning algorithms become better and quicker at analyzing data as it comes in more often. Machine learning, on the other hand, can only study a limited number of data points at a time (Yang and Evans, 2019). The present competitive market means that corporations can no longer afford to spend millions on advertisements, but the main reason for this is because it is no longer essential. Marketing and advertising have never been more affordable thanks to artificial intelligence. With the fast rise of digital marketing AI technologies, the need for more conventional strategies is diminishing.

V. Conclusion

The user's content and experience would be tailored to a greater extent by this automation. Because of this, information online as well as offline would be more valuable to consumers and more effective at promoting products and services to them. Workplaces and work itself will undergo radical changes as a result of these new technologies. There will be more and more duties that robotics will be successful in accomplishing, as well as those tasks that are outside the capabilities of people. As a consequence, some professions will disappear, while others will expand and yet others will undergo radical transformations. Workforce shifts and dislocations are inevitable even though it can bestated that there would be enough employment for everyone (barring severe situations). Workers will have to learn new skills and get used to working with machines that are more competent than ever before. They may just have to switch from jobs that are in decline to ones that are increasing or even new. Using the most recent McKinsey Global Institute findings, this executive briefing discusses the potential and potential pitfalls of automation and Artificial intelligence in the workplace and identifies several key concerns that governments, businesses, and people will need to address.

References

[1.] Apell, P., & Eriksson, H. (2021). Artificial intelligence (AI) healthcare technology innovations: the current state and challenges from a life science industry perspective. *Technology Analysis & Strategic Management*, 1-15.

[2.] Chun, P. J., Dang, J., Hamasaki, S., Yajima, R., Kameda, T., Wada, H., ... & Nagatani, K. (2020). Utilization of unmanned aerial vehicle, artificial intelligence, and remote measurement technology for bridge inspections. *Journal of Robotics and Mechatronics*, *32*(6), 1244-1258.

[3.] Gupta, R., Tanwar, S., Al-Turjman, F., Italiya, P., Nauman, A., & Kim, S. W. (2020). Smart contract privacy protection using AI in cyber-physical systems: tools, techniques and challenges. *IEEE access*, *8*, 24746-24772.

[4.] Hannan, M. A., Al-Shetwi, A. Q., Ker, P. J., Begum, R. A., Mansor, M., Rahman, S. A., ... & Muttaqi, K. M. (2021). Impact of renewable energy utilization and artificial intelligence in achieving sustainable development goals. *Energy Reports*, *7*, 5359-5373.

[5.] Janková, Z., & Dostál, P. (2019). Utilization of Artificial Intelligence for Sensitivity Analysis in the Stock Market. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *67*(5), 1269-1283.

[6.] Kusunose, K., Haga, A., Abe, T., & Sata, M. (2019). Utilization of artificial intelligence in echocardiography. *Circulation Journal*, CJ-19.

[7.] Nawaz, N. (2019). Artificial intelligence is transforming recruitment effectiveness in CMMI level companies. *International Journal of Advanced Trends in Computer Science and Engineering*, *8*(6).

[8.] Pacis, D. M. M., Subido Jr, E. D., & Bugtai, N. T. (2018, February). Trends in telemedicine utilizing artificial intelligence. In *AIP conference proceedings* (Vol. 1933, No. 1, p. 040009). AIP Publishing LLC.

[9.] Palanica, A., Docktor, M. J., Lieberman, M., & Fossat, Y. (2020). The need for artificial intelligence in digital therapeutics. *Digital Biomarkers*, *4*(1), 21-25.

[10.] Poschmann, H., Brüggemann, H., & Goldmann, D. (2021). Fostering end-of-life utilization by information-driven robotic disassembly. *Procedia CIRP*, *98*, 282-287.

[11.] Qureshi, A., Mathur, A., Alshiek, J., Shobeiri, S. A., & Wei, Q. (2021). Utilization of Artificial Intelligence for Diagnosis and Management of Urinary Incontinence in Women Residing in Areas with Low Resources: An Overview. *Open Journal of Obstetrics and Gynecology*, *11*(04), 403.

[12.] Rodney, H., Valaskova, K., & Durana, P. (2019). The artificial intelligence recruitment process: How technological advancements have reshaped job application and selection practices. *Psychosociological Issues in Human Resource Management*, *7*(1), 42-47.

[13.] Rodney, H., Valaskova, K., & Durana, P. (2019). The artificial intelligence recruitment process: How technological advancements have reshaped job application and selection practices. *Psychosociological Issues in Human Resource Management*, *7*(1), 42-47.

[14.] Sun, Z., Anbarasan, M., & Praveen Kumar, D. J. C. I. (2021). Design of online intelligent English teaching platform based on artificial intelligence techniques. *Computational Intelligence*, *37*(3), 1166-1180.

[15.] Tran, B. X., McIntyre, R. S., Latkin, C. A., Phan, H. T., Vu, G. T., Nguyen, H. L. T., ... & Ho, R. (2019). The current research landscape on the artificial intelligence application in the management of depressive disorders: a bibliometric analysis. *International journal of environmental research and public health*, *16*(12), 2150.

[16.] Waheed, M. A., Shareef, M., Akbar, S., Arooj, S., Slieman, M., Shaik, A. R., & Mohammed, H. A. (2022). Utilization of Artificial Intelligence in Meeting the Challenges of COVID-19 Pandemic: A Quick Literature Review. *Sch J App Med Sci*, *1*, 144-149.

[17.] Xu, F., Uszkoreit, H., Du, Y., Fan, W., Zhao, D., & Zhu, J. (2019, October). Explainable AI: A brief survey on history, research areas, approaches and challenges. In *CCF international conference on natural language processing and Chinese computing* (pp. 563-574). Springer, Cham.

[18.] Yang, S., & Evans, C. (2019, November). Opportunities and challenges in using AI chatbots in higher education. In *Proceedings of the 2019 3rd International Conference on Education and E-Learning* (pp. 79-83).