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Application of Artificial Intelligence in HRM

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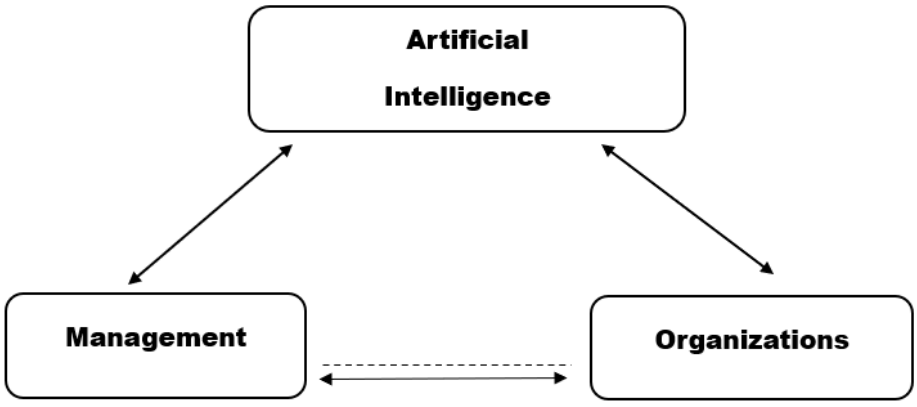
Abstract:
Accurate data collection and analysis are crucial in today's competitive industries for the growth and day-to-day operations of businesses. Artificial intelligence facilitates faster and more efficient work completion in the industry. Artificial intelligence is making its way into a number of departments, including marketing, finance, human resources, and production. The objective of the paper is to find out the effectiveness of AI in business decision regarding recruitment, selection and training practices.

INTRODUCTION

One of the most important and impactful factors in an industry is technology. Employees in the production sector have been replaced by robots since the 19th century. In the 1970s, the third industrial revolution got underway when personal computers and the internet became commonplace in the workplace, replacing human labor with machine labor. These days, digital technologies like artificial intelligence (AI) and machine learning (ML) are being used in the workplace on a daily basis and will change the way businesses operate. "An ideal intelligent" machine is described as "an intelligent machine that is flexible, perceives its environment, and acts in a way that maximizes its chances of success at a given goal." Artificial intelligence, as opposed to natural intelligence, is intelligence displayed by a machine.

Accurate data collection and analysis are crucial in today's competitive industries for the growth and day-to-day operations of businesses. Artificial intelligence facilitates faster and more efficient work completion in the industry. Artificial intelligence is making its way into a number of departments, including marketing, finance, human resources, and production. An enterprise can use artificial intelligence (AI) systems to inform current performance and daily operations. The need for demanding managers to understand the value of artificial intelligence in the workplace has grown as commercial pressure has increased. The nature of the research article is descriptive.

Figure: 1



Source: - (Duchessi, O'Keefe, & O'Leary, 1993)

The interaction between management and the artificial intelligence organization is depicted in a framework in "Figure:1". Artificial intelligence and digital technology have an impact on decision-making ownership and responsibility, cost reduction and enhanced service, personnel shifts and downsizing, organizational structure, and workforce management, according to research author Duchessi, O'Keefe, and O'Leary (1993).

HISTORY OF AI

For academics, artificial intelligence is neither a novel term nor a novel technological advancement. Greek and Egyptian mythology even have tales of mechanical men. The historical turning points in AI that illustrate the path from the AI generation to current advancements are listed below.

In recent years, artificial intelligence (AI) has drawn more attention. The Internet has enabled innovation that has pushed artificial intelligence (AI) closer to our daily lives. These developments push artificial intelligence (AI) to the forefront of many current discussions, coupled with curiosity in the technology's possible socio-economic and ethical effects. AI is seeing a sharp rise in industry investment, and governments are attempting to ascertain the potential implications of this technology for their constituents.

Maturation of Artificial Intelligence (1943-1952)

- **Year 1943:** The first work which is now recognized as AI was done by Warren McCulloch and Walter Pits in 1943. They proposed a model of **artificial neurons**.
- **Year 1949:** Donald Hebb demonstrated an updating rule for modifying the connection strength between neurons. His rule is now called **Hebbian learning**.
- **Year 1950:** The Alan Turing who was an English mathematician and pioneered Machine learning in 1950. Alan Turing published **"Computing Machinery and Intelligence"** in which he proposed a test. The test can check the machine's ability to exhibit intelligent behavior equivalent to human intelligence, called a **Turing test**.

The birth of Artificial Intelligence (1952-1956)

- **Year 1955:** An Allen Newell and Herbert A. Simon created the "first artificial intelligence program" Which was named **"Logic Theorist"**. This program proved 38 of 52 Mathematics theorems and found new and more elegant proofs for some theorems.
- **Year 1956:** The word "Artificial Intelligence" was first adopted by American Computer scientist John McCarthy at the Dartmouth Conference. For the first time, AI was coined as an academic field.

At that time high-level computer languages such as FORTRAN, LISP, or COBOL were invented. And the enthusiasm for AI was very high at that time.

The golden years-Early enthusiasm (1956-1974)

- **Year 1966:** The researchers emphasized developing algorithms which can solve mathematical problems. Joseph Weizenbaum created the first chatbot in 1966, which was named ELIZA.
- **Year 1972:** The first intelligent humanoid robot was built in Japan which was named WABOT-1.

The first AI winter (1974-1980)

- The duration between years 1974 to 1980 was the first AI winter duration. AI winter refers to the time period where computer scientist dealt with a severe shortage of funding from government for AI researches.

- During AI winters, an interest of publicity on artificial intelligence was decreased.

A boom of AI (1980-1987)

- **Year 1980:** After AI winter duration, AI came back with "Expert System". Expert systems were programmed that emulate the decision-making ability of a human expert.
- In the Year 1980, the first national conference of the American Association of Artificial Intelligence **was held at Stanford University**.

The second AI winter (1987-1993)

- The duration between the years 1987 to 1993 was the second AI Winter duration.
- Again Investors and the government stopped funding for AI research due to high costs but not efficient results. The expert system such as XCON was very cost effective.

The emergence of intelligent agents (1993-2011)

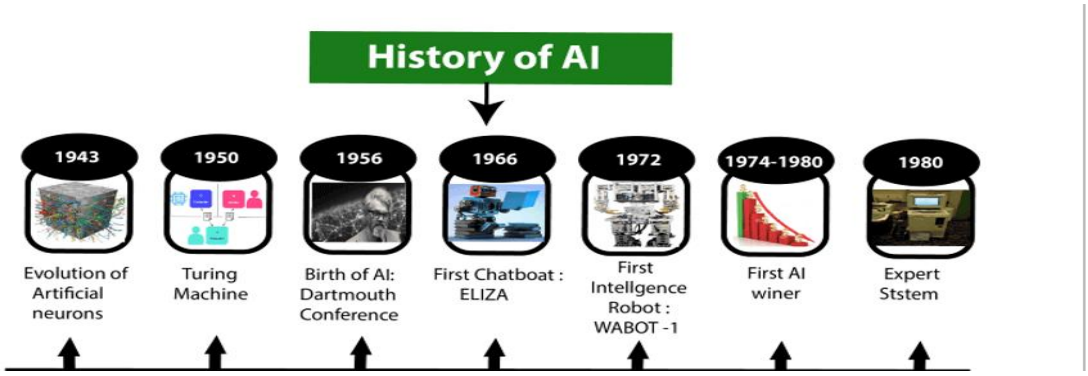
- **Year 1997:** In the year 1997, IBM Deep Blue beat world chess champion, Gary Kasparov, and became the first computer to beat a world chess champion.
- **Year 2002:** for the first time, AI entered the home in the form of Roomba, a vacuum cleaner.

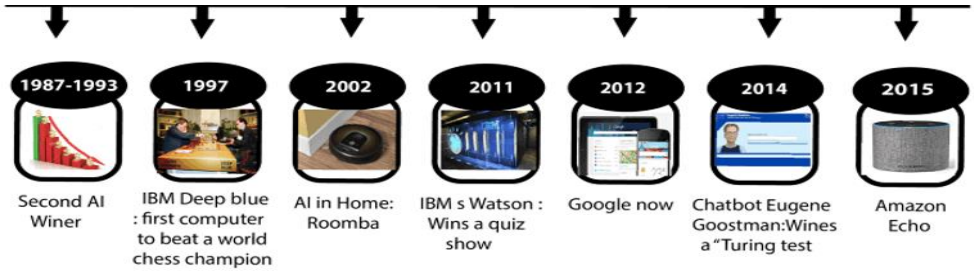
Deep learning, big data, and artificial general intelligence (2011-present)

- **Year 2011:** 2011 saw IBM's Watson triumph on the quiz show Jeopardy, when it had to answer both difficult and riddle-based questions. Watson demonstrated its ability to comprehend normal language and quickly find answers to challenging problems.
- **Year 2012:** Google has launched an Android app feature "Google Now", which was able to provide information to the user as a prediction.
- **Year 2014:** In the year 2014, Chatbot "Eugene Goostman" won a competition in the infamous "Turing test."
- **Year 2018:** IBM's "Project Debater" performed remarkably well while debating intricate subjects with two expert debators.

  An AI program called "Duplex" was exhibited by Google. It was a virtual assistant that took a call for an appointment at a hair salon, and the woman on the other end was unaware that she was speaking with a machine.
- **Year 2006:** AI was not introduced to the business sphere until 2006. AI has also being used by companies like Netflix, Facebook, and Twitter.

  These days, AI has advanced to an astounding degree. These days, big data, data science, and deep learning are all quite popular. These days, businesses like Amazon, IBM, Facebook, Google, and Facebook are utilizing AI to develop incredible gadgets. Artificial intelligence has a bright future ahead of it and will be highly intelligent.





ROLE OF AI IN BUSINESS GROWTH

As organizations increase their use of artificial intelligence technologies within their operations, they're reaping tangible benefits that are expected to deliver significant financial value. Eighty-seven percent of organizations believe AI and machine learning will help them grow revenue, boost operational efficiency, and improve customer experiences.

Rapid increase in digitization and the corresponding trend of leveraging Artificial Intelligence Technologies (AIT) has been reshaping the business landscape. The amalgamation of Information Technologies and Human Resource Mnagement (HRM) has brought forth improved efficiency, impacted service delivery, provided standardization, empowered managers, and transformed HR functions(Parry and Tyson,2011; Bondarouk and Brewster,2016). AI and related technologies , be it Machine Learning (ML), Robotic processAutomation(RPA), or Natural Language Processing(NLP), have influenced and revolutionized the very foundation of business models (Heric,2018). The transformation of HR technologies has also revolutionized HRM practices by introducing functionalities of e-recruitment, e-training, or e-competence management (Stone et al,2015).

Here are 12 advantages the technology brings to organizations across various industry sectors.

1. Better decisions:

AI is being used by organizations more and more to get insights from their data, or, to use modern business speak, to make "data-driven decisions." When they do that, they discover that they actually make better, more accurate decisions as opposed to those based on gut feelings or intuition polluted by preferences and biases.

Kavita Ganesan, strategist, adviser, and creator of Opinosis Analytics, gave an example of a corporation that employed AI to assist them sift through 42,000 employees' survey replies. Instead of giving employees check-the-box alternatives to rank, the system analyzed narrative replies and gave summarized data, allowing firm executives to effectively understand what employees wanted most.

2. Efficiency and productivity gains:

Efficiency and productivity gains are two other big benefits that organizations get from using AI, said Adnan Masood, chief AI architect at UST, a digital transformation solutions company.

Masood said AI lets organizations handle tasks at a volume and velocity that's simply not possible for humans to match -- whether they're using AI for search or to analyze data for insights, create software code or execute specific business processes.

AI not only works at a scale beyond human capacity, Masood noted, but it removes time-consuming manual tasks from workers -- a productivity gain that lets workers perform higher-level tasks that only humans can do. He pointed to the use of AI in software development as a case in point, highlighting the fact that AI can create test data to check code, freeing up developers to focus on more engaging work.

3. Improved speed of business:

As fast as business moves in this digital age, AI helps it move even faster, said Seth Earley, author of The

AI-Powered Enterprise and CEO of Earley Information Science. "It's all about speeding up the clock of the enterprise," he said. AI essentially enables shorter cycles and cuts the time it takes to move from one stage to the next -- such as from design to commercialization -- and that shortened timeline, in turn, delivers better and more immediate ROI.

4. Delivering More Intelligent Services:

Your intelligent products may lead you into the service territory. Or perhaps your business is already a service-based company. In any case, there are many exciting ways companies are beginning to incorporate AI into their services.

Servitisation businesses have access to a wealth of valuable customer data and without data, AI is nothing. In this way, today's servitisation businesses are AI-powered businesses. For example, it's AI that powers Netflix's recommendation engine, suggesting similar content that customers might enjoy based on what they've watched before and what other similar customers have also watched.

5. Avoiding Mistakes:

Artificial intelligence in the business is not prone to making errors as a result of human emotions or opinions. However, AI may make unjust judgments if the dataset does not accurately represent the entire population or diversity of scenarios. Amazon, for example, recently decommissioned a gender-biased AI recruiting tool that chose primarily male candidates from a pool of CVs supplied over several years. The issue was that men wrote the majority of the CVs in the dataset.

6. Enhance customer experience:

Artificial Intelligence for business allows companies to deliver more personalized, proactive, and seamless customer experiences. Chatbots engage customers in natural conversations using NLP. Recommendation engines serve up personalized content and product suggestions. Voice-enabled virtual assistants handle customer requests flexibly via voice interfaces.

7. Innovate and differentiate:

AI capabilities allow companies to create unique value propositions and differentiate themselves in hypercompetitive markets. From self-driving cars to AI-composed music, AI pushes the boundaries of what's possible.

Startups leveraging AI can disrupt industries with innovative products and services. Incumbents can also revitalize their offerings and ward off disruption using AI. The technology serves as a robust foundation for innovation.

8. Reduce costs:

This is the best example of business transformation through AI. AI optimization of business processes results in significant cost reduction. Automating tasks with AI eliminates human labor costs. Bots and virtual agents work tirelessly without salaries, benefits, vacations, or sleep!

AI also minimizes wastage, errors, and penalties that rack up costs. Predictive analytics enables proactive maintenance and optimized logistics. AI fraud detection prevents losses. Overall operational efficiency enabled by AI directly translates to cost savings.

9. Foster collaboration:

AI conversational agents can facilitate seamless collaboration between coworkers, customers, and partners. AI virtual assistants act as always-available tools for information sharing and decision support during meetings and projects.

They enable on-demand access to organization-wide knowledge and real-time data. Intelligent chatbots streamline communication and collaboration, cutting meeting times and email clutter.

10. Increased Profitability:

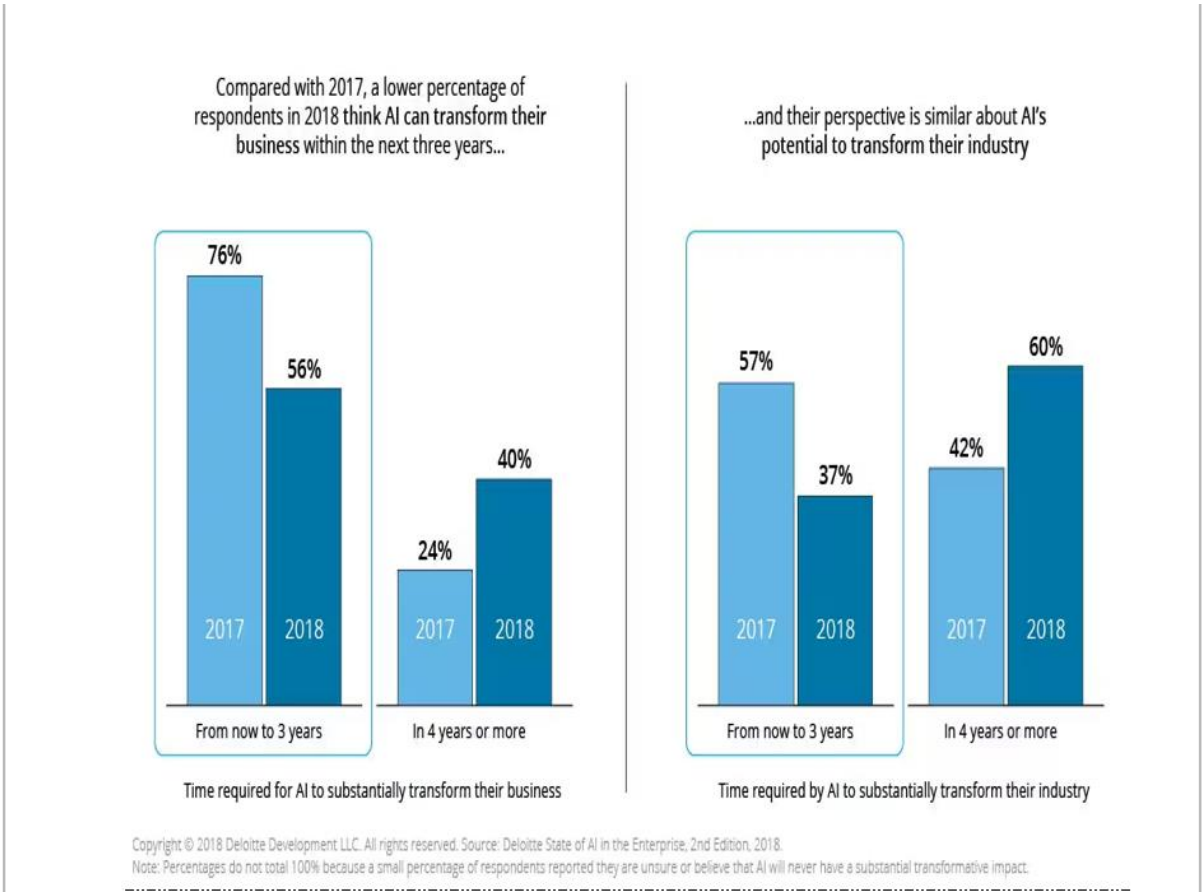
As they use AI in more areas of the enterprise -- from personalizing services to aiding in risk management to supporting innovation -- organizations will see improved productivity, reduced costs, higher efficiency and possibly new growth opportunities.

11. Industry Specific Improvement:

- Retailers can use AI to better target their marketing efforts, develop a more efficient supply chain and better calculate pricing for optimal returns. At retail companies, AI helps predict customer requirements and appropriate staffing levels.
- The pharmaceutical sector can use the technology to perform drug discovery data analysis and predictions that can't be done with conventional technologies.
- The financial industry can use AI to strengthen its fraud detection efforts.

12. Better Talent Management:

Companies are using AI to improve many aspects of talent management, from streamlining the hiring process to rooting out bias in corporate communications. Moreover, AI-enabled processes not only save companies in hiring costs, but also can affect workforce productivity by successfully sourcing, screening and identifying top-tier candidates. As natural language processing tools have improved, companies are also using chatbots to provide job candidates with a personalized experience and to mentor employees. Additionally, AI tools can gauge employee sentiment, identify and retain high performers, determine equitable pay, and deliver more personalized and engaging workplace experiences with less requirements on boring, repetitive tasks.



IBM, AI and the recruitment process

Candidate recruiting involves endless back and forth with hiring managers, manual tracking and spreadsheets, and the use of multiple tools across different systems during the hiring process. You can streamline the process—reducing the number of steps and tools—by using IBM watsonx Orchestrate to intelligently automate tasks, such as creating and posting job requirements faster. Orchestrate integrates with the top tools you use every day, including candidate sourcing and application tracking software.

Technology and data can help optimize the recruitment process by making key candidate information readily available during the hiring process and streamlining workflows. Commonly used tools include the following:

- **An applicant tracking system (ATS):** An ATS provides a wide range of capabilities for tracking candidate data and automating hands-on tasks, from posting job listings to filtering resumes to finding the most qualified applicants.
- **Comprehensive data analytics:** A data analytics system can show HR teams how many people applied for a job, how many people were interviewed and where the best candidates came from. Taking those insights and analyzing the process with each hire will help improve the overall recruitment process.

Other emerging tools are powered by AI to provide new capabilities and deeper insights. The following are some key tools:

- **Machine learning (ML):** The best way to improve a company's recruitment process is to assess what is working and what's not. However, many HR departments lack the time and resources to run analytics and assess historic hiring data. Here, machine learning can be invaluable, providing insights on recruitment data across applications to empower better decision-making.
- **AI-based automation:** Automating the onboarding process has saved HR departments countless hours of manual work in recent years, making the process more efficient. AI can help make the onboarding process more personalized. Incoming team members are guided through onboarding with tools powered by natural language processing and adaptive AI.
- **Predictive AI:** AI is being used today to not only create ideal candidate profiles and assess future talent needs but also to provide deeper insights into employee performance and better guide equitable, industry-based decisions on compensation.

Benefits of an effective recruitment process

Whether the goal is to reduce the cost and time it takes to hire new employees or simply create a more diverse workplace, a well-designed recruitment process has many advantages, including the following:

- **Lowering hiring costs:** A successful talent acquisition strategy streamlines the hiring process, making it faster and more cost-effective. By targeting top talent in a proactive way, it increases the likelihood they will apply and the company will get the needed competencies to operate effectively.
- **Attracting top talent:** A 2021 survey by Robert Half found 62% of professionals lose interest in a job if they don't hear back from the employer within two weeks. Having an efficient recruitment process improves the candidate's experience and ensures you don't leave top talent feeling they're being strung along.
- **Increasing HR productivity:** Less time spent on the selection process gives the HR team more time to invest on training, employee development and company culture initiatives.
- **Ensuring skills match business goals:** Companies can improve the quality of the job description, increase the likelihood of selecting the right candidate and help ensure retention when they put in the

work to fully understand the skills they need and business goals the position must work toward. Analytics and AI are valuable tools here, showing companies the skills gaps they may have missed.

- **Meeting compliance and internal requirements:** A recruitment strategy ensures best practices are being followed and regulatory requirements are being met—from protecting applicant data to equal opportunity and DEI initiatives.
- **Addressing problems in the process faster:** When you have a comprehensive approach to recruitment based on collecting and analyzing data, it's easier to see successes and misses and eventually make better hiring decisions.

How HR departments are using AI

The application of machine learning (ML), natural language processing (NLP), and other AI technologies to human resources duties and decision-making is known as AI use in HR. It makes possible a data-driven strategy for hiring, promoting, and retaining people that aims to reduce bias and improve the experiences of both job searchers and workers. AI solutions may help HR directors with a variety of tasks, such as the following:

- Employee records management
- Recruitment and hiring processes
- Payroll processing
- Performance management and assessments
- Benefits administration
- Onboarding new employees
- HR support or service desks

Companies today have the potential to use artificial intelligence in HR functions and processes to inform decision-making, make interacting with HR easier for employees and free up time to make better hiring decisions and invest in employee satisfaction and retention.

These are some possible use cases-

- **Professional growth and learning:** How do employees envision themselves in five years? AI may be able to help with career mobility recommendations for individualized training programs. AI might customize training for employees based on their individual goals by evaluating individual employee data, including talents and preferences. AI may also be able to assist HR managers in finding underutilized talent or workers who are ready for advancement.
- **Candidate sourcing and recruiting:** The hiring process is sometimes criticized for being cumbersome. AI can quicken the pace by enabling managers to automatically screen and evaluate each candidate, as well as by notifying them when a candidate applies for a position that is open.
- **Short-term labor acquisition:** Artificial Intelligence in HR can assist businesses in promptly filling unfilled roles, especially temporary and short-term ones. AI technologies for HR can automate manual procurement operations by utilizing natural language processing (NLP) capabilities. This frees up HR staff' valuable time to plan strategic initiatives and attend to client demands. In order to locate possible contractors and set up interviews with hiring managers, for instance, managers can use AI technologies to gather needs from stakeholders and then work within a vendor management system (VMS) system to create a request with suppliers.

- **Onboarding:** Artificial intelligence (AI) can streamline and personalize the information collection process. AI-driven chatbots can streamline time-consuming procedures and improve the onboarding experience for new hires by answering queries, supplying information, and reminding new hires about important papers.
- **Automating HR services:** Meeting the needs of staff members is essential to raising productivity and engagement. However, staff members may become frustrated and waste time trying to navigate complicated business policies, HR, and IT support procedures. AI-driven HR chatbots can empower staff members by providing them with quick responses and self-service assistance.

Future of AI in Business

Throughout history, people have been skeptical of new technologies, with old ways often deemed best. There were concerns that the telephone would make people lazy and anti-social and that the television would negatively impact the radio (which faced similar criticism), replace reading and conversation, and destroy family life. The car, the elevator, the refrigerator – many things we take for granted today were rejected at first.

It's natural to be wary of the unknown, but businesses shouldn't let their distrust of AI stop them from exploring its potential. Experimenting with AI is the best way for leaders to face their fear while evaluating the technology's capabilities and limitations. And there are plenty of both.

Automated Processes

Perhaps one of the most obvious business benefits of AI is the automation of repetitive, time-consuming processes.

Many of the tasks performed by businesses are a drain on people's time. Take a typical HR department that finds itself answering the same, basic employee questions. By using a digital assistant, HR can concentrate on more business-critical tasks while employees can quickly find the information they need, boosting productivity. The same applies to sales and customer service. Rather than waiting to speak to a representative, AI lets customers access the information they need when they need it.

AI can reduce administrative time and optimize many other aspects of business operations by automating the human element.

Some businesses are already using AI to onboard new hires. AI helps by automating the delivery and receipt of the necessary paperwork, company policies, and login information – eliminating delays and creating a positive experience that helps set the tone for an employee's tenure. Digital assistants can also guide new employees through their induction – proactively suggesting the next steps and recommending learning materials and background reading to get them quickly up to speed in their new role.

Faster, Better-Informed Decisions

AI's ability to automate, augment and support business decision-making is also worthy of attention. The theory is that leaders can make quicker decisions involving complex data unclouded by cognitive biases, improving business operations and enhancing the customer experience.

For example, AI specialists Peak use "customer transaction data – taken from thousands upon thousands of purchases – to learn what products certain segments of customers are buying together. This model is then used to recommend complementary products on the website." Amazon and Netflix use a similar approach to provide personalized recommendations.

The beauty of AI is that it analyzes vast quantities of data and spots patterns that might not be obvious to the human eye or brain. IT author Thomas Erl cites the example of a company that, through AI, identifies a weakness in its business operations. It found that after customers return products, they are less likely to buy again or will buy less from the company – highlighting the returns process as a vital area for improvement and competitive advantage. Similarly, a company might use AI to analyze job applicants and the candidate journey to identify trends, such as when people typically drop out and make improvements. Of course, it's then up to leaders to decide what steps to take.

Supporting Content Creation

A more contentious but no less exciting application of AI is content creation. Can AI produce the nuanced copy of a skilled writer? Not yet, but it can streamline the creative process.

Jasper, for instance, is a marketing-focused version of Chat GPT that can generate various types of customer-facing content, from blogs, social media posts, and web copy to sales emails and advertising copy.

However, in Tiger Recruitment's experience, AI-generated content has limitations and struggles to emulate a company's voice and tone. AI will never know your company and industry as well as your marketing team and text can sound stilted, but it can help with research and ideas. Say you're tasked with writing social media posts on a keyword or topic – AI can suggest ideas and even produce a first draft. It requires human input to insert prompts and carefully review any content produced. But it can create efficiencies, allowing marketers to focus on other tasks.

Complementary Not Replacement

It's easy to get carried away with the possibilities of AI – this article barely scratches the surface. But it's important to be aware of its limitations, many of which are because it's an emerging technology and lacks human qualities such as empathy, critical thinking, and creativity. It can't magically drive efficiencies or deliver insights – it needs access to quality data, and at this stage in its evolution, human oversight is required.

There are data privacy and integrity issues too. As Devon Lovell, People Partner and HR Consultant at Fitzgerald HR points out in a podcast on AI in HR, what you put into ChatGPT is no longer yours – even if you delete it, it's still there, which raises important questions about confidentiality.

The accuracy and authenticity of AI is another concern, with Lovell adding, "It's not a human being and there can be biases in Chat – based on who uses it. You could get a biased opinion on something without even realizing it."

When it comes to AI, there are still issues to be ironed out, but as the debate intensifies and the technology advances, business leaders will need to consider if and how AI has a place in their organization. As with most innovations, the challenge will be to weigh up the risks of adopting the technology against the risk of rejecting it and falling behind.

Overall the future of AI in business is bright. AI has the potential to revolutionize the way business operate and create significant value.

Here are some additional points to consider:

- The ethical implications of AI use in business will need to be carefully considered. Business will need to ensure that their AI systems are fair, unbiased and transparent.

- The development and deployment of AI will require significant investment in infrastructure and talent.
- Regulations around AI use may emerge in the future, which could impact how businesses and develop and deploy AI systems.

Challenges of using AI in business

It seems like there are new AI technologies available every day, and many companies are embracing them at the same rapid pace. Though the goal of these technologies is to increase corporate efficiency, it doesn't imply that they don't also present unique set of difficulties,

Particularly when it comes to initial implementation.

There are many challenges leaders are encountering when trying to integrate artificial intelligence into their operations, ranging from a simple lack of understanding of the technology to winning over customers and earning their trust.

- **Reskilling:**

Automation and artificial intelligence (AI) have the potential to replace human labor in some jobs and change the responsibilities of certain workers. Face this challenge head-on by developing a strategy for reskilling personnel and reorganizing job roles in a way that shows consideration for the workers going through these changes.7

- **Bumpy rollouts:**

Companies need to be ready to adapt AI models and keep streamlining operations. Employee experiences from initial rollouts may not be what was intended, necessitating adjustments. It is important for businesses to be able to adapt and modify when necessary.

- **Lack of inhouse expertise:**

One big obstacle to using AI is a lack of internal knowledge. Some ways to get around it are to start small with trial projects, hire AI expertise, work with professionals, invest in training, and use approachable AI technologies. For AI to be used effectively, internal expertise must be developed.

- **Uncertainty about where to implement it:**

One of the hardest tasks is determining when and where to apply artificial intelligence (AI). If done incorrectly, this can pose a significant risk. Even if it could be tempting to propose, "Let's add that chatbot for website inquiries," or, alternatively, "Let's flood our blog with AI-generated articles," artificial intelligence shouldn't be used in any circumstance where it would negatively impact the overall experience of customers. Artificial intelligence (AI) need to be used almost exclusively to assist workers with tasks that call for close supervision rather than ever taking over a job.

- **The absence of updated, capable infastructure:**

One of the challenges that organizations are now encountering when using AI is the absence of modern infrastructure with the processing power to handle large volumes of data quickly. Because most businesses still struggle with outdated tools, systems, and apps, integrating AI can be difficult. To help create a reasonable cost component and guarantee a more seamless transition to AI deployment, choose the appropriate AI vendor or provider who possesses the necessary AI experience, competence, and certifications. This covers factors like appropriate processors, storage, or the training required to learn how to use these new tools and troubleshoot problems.

- **Data privacy and security concerns:**

Among the primary challenges that businesses utilizing AI must overcome are concerns about data security and privacy. AI models typically require large data sets in order to learn and generate high-quality

output. The problem is that there are a lot of hazards associated with this management of sensitive information. Companies need to be extremely cautious to adhere to data protection regulations and safeguard sensitive information from possible breaches. Organizations will need to keep up with the latest advancements in data protection and artificial intelligence (AI) in order to stay current with changes. The risks presented by artificial intelligence (AI) technologies and the potential for their harmful application will likely be long-term obstacles.

- **The inability to create personalized solutions:**

One of the issues enterprises presently have with implementing AI, in my opinion, is their inability to offer customized solutions by default. Even while AI is a helpful tool for a variety of tasks, businesses cannot completely automate many processes using AI-powered solutions on their own. You must actively engage in the process to make sure that the product meets your goals because AI technologies, while capable of solving problems, lack the human element. Companies can train AI systems to aid them with this problem in some small way. However, in the end, humans and AI must collaborate to identify solutions that best meet their needs or preferences.

- **Gaining customer acceptance:**

gaining the approval of the client. Despite all of the advantages AI may offer, such as increased productivity and tailored experiences, some clients are still wary. They distrust AI to make choices, are concerned about the protection of personal data, or fear losing their jobs. To combat this, companies must emphasize data security, be open about how they employ AI, and demonstrate how technology can enhance human skill rather than take its place. It's imperative that companies include their customers in the AI process. Trust must be earned over time, which is why it's crucial to communicate often and educate people about the benefits of artificial intelligence. Showing that AI is a tool to improve, not degrade, the customer experience is ultimately the goal.

Literature Review

Artificial intelligence (AI) is being used more and more in the workplace to enhance job execution and performance, and numerous studies have been conducted to determine its efficiency.

- **Upadhyay and Khandelwal (2018)** mentions that AI acts as unbiased and resumes are screened fairly in a way that it provides equal chance to all applicants. AI acts without bias and evaluates resumes fairly, giving each candidate an equal opportunity (Upadhyay and Khandelwal, 2018). Words reflect biases even when they are used in job descriptions. For instance, pronouns like "support" and "understanding" are biased against candidates who are women. According to a review of 49 studies on gender bias, recruiters tend to bias against female candidates during the hiring process (Hmoud & Várallyai, 2019).
- **S Basu, (2022)** Systems and applications based on artificial intelligence (AI) are quickly encroaching upon all aspects of an organization's operations. Even if artificial intelligence (AI) systems improve organizational performance and grab decision-makers' attention, they nonetheless put human resources workers at risk of losing their jobs.
- **Tiwari, (2020)** came to the conclusion that appropriate research and implementation of AI programs need to be done. Organizations must make sure that HR staff members have adequate service awareness and expertise transfer in order to prevent job losses and misunderstanding.
- **Dijkkamp (2019)** These qualitative studies investigate how hiring and selection practices change when businesses implement artificial intelligence and the role of the HR specialist. The study's

conclusions contribute to this by mapping it for the unique degrees of recruiting and decision-making process and by expanding this perspective with the impact of AI implementation on the HR expert. The findings indicate a reduction in the sourcing and screening responsibilities, which consequently leads to a decrease in the cost incurred in utilizing an HR specialist during this stage.

- **George & Thomas(2019)** This study focuses on qualitative research and aims to explain how artificial intelligence (AI) has been incorporated into HR's unique skills and how it affects HR, personnel, and businesses. The study came to the conclusion that AI has helped HR undergo a major revolution, which has gradually permeated all of HR's functions.
- **Kapoor (2010)** Researchers have looked into the function of business intelligence and how HRM uses it. A researcher examined the business intelligence and data analytics features integrated into human resource management modules by looking into the top business intelligence vendor, as detailed in this study article.
- **(Jain, 2018)** Artificial intelligence's place in human resource management was noted in the research paper. The majority of businesses are implementing contemporary technology in their HR departments, including hiring, performance reviews, and cloud-based HR systems, according to the researcher's citation.
- **(Dirican, 2015)** The use of robotics and artificial intelligence in business may have a negative impact on an organization's overall functions, including production, performance management, sales, strategic planning, customer relationship management, banking systems, coaching, training, taxes, and so on, according to a researcher's research paper titled "The Impact of Robotics, Artificial Intelligence on Business and Economics."
- **(Buzko and others, 2016)** Artificial Intelligence Technologies in Human Resource Development is the title of the study. The authors of a study on the challenges posed by AI in the field of human resources pointed out that AI is unable to determine the ROI of training expenditures. The authors of the research article observed that artificial intelligence technologies help humans analyze data more quickly.
- **(R and D, 2018)** The title of the research paper is "A Conceptual Study on Recruitment through Artificial Intelligence." The function of artificial intelligence (AI) in recruitment has been described by the academics, who stress the importance of AI in the hiring process. Artificial intelligence assists with staff relations, interview scheduling, candidate screening, and auto-generated messaging.

Objectives of the study

AI is revolutionizing HR departments by introducing data-driven insights and automating processes.
The objectives are:

- To study the role of artificial intelligence in human resource management.
- To study the benefits of artificial intelligence in human resource management.
- To study the challenges of artificial intelligence in human resource department.
- To identify the role of AI based software in hiring the best talent from industry.
- To evaluate the function of AI based software specifically towards the screening process which is the primary process of hiring and cost of using such systems.

For this study purpose we have collected both primary and secondary data. With a sample size of 51 respondents selected through probability, non- probability and convenience sampling.

Conclusion:

AI implementation in HRM offers the HR division and staff a number of advantages. These benefits come with some legal and network safety risks, though. More employee data means greater security risks, and as devices proliferate, so do the opportunities for network security breaches. Organizations must make sure that employee data is secure before implementing AI across the board. In order to reduce network security risks, associations must also develop information-driven security to filter information itself rather than just organization.

The implementation of AI ideas in several potential HRM domains has been covered in the paper. It's possible that these places are not included in the usual schedule of events. However, it is attempting to enforce the significance of addressing the same—the dimensions assessed under which the improvement of human qualities through AI is demonstrated. The outcome demonstrated how these factors affect HRM's capacity for agility. The closed-loop technology impact of HR, known as the digitization of HR and ONA, allows for an iterative process of function. To facilitate their implementation and advancement, the aforementioned elements require a first-rate organizational structure. Because it connected two components that are prevalent in the Industry 4.0 era today, this study paved a new path.

Since AI is still a relatively young and underutilized topic, especially in India, not many companies are utilizing it in HRM or developing AI-based HR software. Because most firms only employ AI to a limited extent in the HR process, it is difficult to assemble a full analysis. Although artificial intelligence (AI) has been the topic of much research, there aren't enough companies using AI in HR that it would be possible to analyze the full usefulness and implications of AI. To increase the study's relevance, there might have been additional interviews conducted. On the other hand, it is possible to contrast and compare the interviewees' responses.

The application of AI in hiring is still a relatively new area, as this study has shown. To gain a deeper understanding of the topic, further research on AI should be done in the future. Even though this study employed empirical data from multiple firms, an organization-specific study might be carried out as additional AI data becomes available. To obtain a more comprehensive understanding of the topic, the study may include organizations that do not already utilize AI but plan to do so in the future. Notwithstanding AI's possible advantages in HR, there are still issues and worries that need to be resolved. A primary worry pertains to the possibility of prejudice within AI systems. Should AI systems be instructed using

Additionally, a quantitative method might be used to look into the numerical effects of AI-based HR choices on turnover and business success. Employee viewpoints and experiences with AI-based HR practices could be researched to provide further perspectives on this topic, as there are trust difficulties with AI.

Recommendation

AI is automating processes and delivering data-driven insights to revolutionize human resource management, or HRM. The following are some areas in which AI in HRM can be a useful tool:

Hiring & Recruiting:

AI-powered resume screening: By sifting through a sizable CV pool, AI can identify eligible applicants and provide a shortlist based on experience, skills, and keywords. This guarantees that HR professionals concentrate on the most qualified prospects while saving them time.

Chatbots for first interviews: Chatbots are capable of conducting first interviews with applicants, responding to often requested queries, and setting up in-person meetings. Both the prospect experience and HR's time are enhanced by this.

Handling Performance:

AI is capable of predicting future performance by analyzing employee data. This facilitates HR's ability to recognize top performers and offer focused opportunities for training and development. AI is capable of producing customized performance reports for workers that emphasize their advantages and disadvantages. Conversations about feedback can be more fruitful as a result.

Workplace Engagement:

Sentiment analysis and pulse surveys: Artificial Intelligence may examine social media posts and employee surveys to find patterns in the attitudes of employees. This facilitates HR's ability to comprehend worker concerns and take initiative to raise engagement. Training and development recommendation engines: AI is able to suggest to staff members individualized training programs and growth chances according to their objectives and skill sets.

Additional HR Duties:

Onboarding & Offboarding:

AI chatbots can guide new hires through the onboarding process and answer their questions. Similarly, AI can automate tasks like collecting exit interview data during offboarding.

Payroll & Benefit administration:

AI can automate repetitive tasks such as payroll processing and benefits administration, freeing up HR staff to focus on more strategic initiatives.

Things To Take Into Account When Using AI in HRM:

Bias: Biases in the training data that AI algorithms use can be reinforced. Fairness and prejudice reduction are critical for AI-powered HR systems.

Transparency: Communicate openly with staff members about the application of AI to HRM. Address any worries they may have and describe the procedures for gathering and using data.

Human Oversight: AI shouldn't take the place of human interaction in HRM. AI should support HR professionals' decision-making, not take its place.

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