

# APPLYING USING ARTIFICIAL INTELLIGENCE IN HR PERFORMANCE: UAE PERSPECTIVE

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## Abstract

As organizations in the United Arab Emirates (UAE) strive to enhance their efficiency and competitiveness, the adoption of artificial intelligence (AI) in Human Resources (HR) management has gained significant attention. This paper explores the application of AI in HR performance within the unique context of the UAE, aiming to understand the challenges, opportunities, and implications for organizational success. The study reviews existing literature on AI in HR and synthesizes insights specific to the UAE's business landscape. The research methodology involves a combination of qualitative and quantitative approaches, including interviews with HR professionals, surveys, and case studies of organizations that have implemented AI in HR practices. Key findings highlight the transformative potential of AI in HR performance management, including talent acquisition, employee engagement, and workforce optimization. The analysis also considers the cultural and regulatory factors that shape AI adoption in the UAE, shedding light on the ethical considerations and potential challenges associated with the deployment of AI in HR. Ultimately, this study aims to inform HR leaders, policymakers, and business executives in the UAE about the opportunities and challenges associated with integrating AI into HR practices, fostering a strategic and informed approach to technology adoption for enhanced organizational performance and employee well-being.

**Keywords:** Artificial Intelligence (AI), HR, UAE, Performance, AI Adoption.

## INTRODUCTION

The ability of 21st-century firms to innovate in the face of a highly dynamic market where competitive positions are continually shifting is the current problem (Mohamed et al., 2006) Innovation, product or service quality, and consumer expectations have prompted organizations to integrate IT into their management approach in the context of globalization and internationalization of markets (Willarding et al., 2016) Organizations must innovate in order to maintain a competitive advantage in today's market (Nuzul et al., 2020) Organizations have long wanted to delegate more duties to machines in order to save money and increase productivity. Assembly lines were the first to replace human labor in mechanical and repetitive processes formerly referred to as "manual labor" (Almarabeh & Mohammad, 2013) The digital revolution has already had an impact on the world, changing it into a modern world characterized by data dominance in all corporate activities (Castaeda et al., 2007). Data is no longer stored solely in data centers. Any object or environment may now measure and produce data thanks to sensors of all kinds. The industrial and digital (information) revolutions have had a significant financial impact on practically every element of our society, including living, business, and employment (BlancoGonzalez et al., 2020). (Performance management is a normative approach to recognizing performance, clarifying tasks, and assisting in their completion) (Al Obaidli & Iqbal, 2011) It can be used by individuals, teams, and departments to direct and guide themselves toward the pursuit and fulfillment of company goals (Aburezeq

& Ishtaiwa, 2013) This can lead to an increased level of decentralization, with each organizational actor taking on more responsibility for improving business performance, resulting in 'a culture of continuous performance improvement' In addition to identifying 'high potentials,' it can also be helpful in succession planning and management development. (Podger 2017) Additionally, it can help identify training and skill gaps that must be addressed as part of HR planning (Goshu and Kitaw 2017) Analog and digital machines have always been used to help workplace designers calculate work outputs and to automate tasks, a goal now being pursued through artificial intelligence (AI) tools and applications. (Lan, Chengjun, and Wei 2019; Oppong, Chan, and Dansoh 2017). What kinds of “intelligence” are technologies expected to develop? How is personal data obtained by machines used and how are inferences about types of intelligence made from it? Information on the activities of workers and job applicants has always been collected, and their physical movements and feelings, as well as their use of social media, are monitored. (Amirkhanyan et al. 2018; Demirkesen and Ozorhon 2017). Today, big data is used to train algorithms that predict talents and skills, monitor performance, set goals, and assess outcomes; they can also connect workers and customers, judge moods and emotions, or provide modular training on the shop floor. (Iqbal et al. 2019; Lăzăroiu et al. 2020).

### **Artificial intelligence (AI)**

“In artificial intelligence (AI), intelligence is expressed in the form of a machine, not in the way that human and animal brains do, which need unconsciousness and emotion (de Almeida, Moreira, and Rodrigues 2019; Guzman and Lewis 2020). Often, the distinction between the former and latter categories can be discerned by the acronym used. Artificial General Intelligence (AGI) refers to 'strong' AI while attempts to emulate 'natural' intelligence are known as ABI (Artificial Biological Intelligence) (Horowitz 2018; Sodhro, Pirbhulal, and De Albuquerque 2019). Some AI textbooks define the field as the study of "intelligent agents," any device that can perceive and act on its environment in a way that maximizes its chances of success (Alimadadi et al. 2020; Burgess 2017). Generally, "artificial intelligence" refers to machines (or computers) that simulate cognitive functions, such as learning and problem solving, humans associate with the human mind (Dankwa-Mullan et al. 2019; Dhanabalan and Sathish 2018). Machines have become increasingly capable, and tasks once considered "intelligent" are often removed from the definition of AI, a phenomenon known as the AI effect (Malali & Gopalakrishnan, 2020; Raisch & Krakowski, 2021). “ “ There is a quote in Tesler's Theorem that says, "AI is whatever we haven't done yet" (Harrer et al. 2019; Lalmuanawma, Hussain, and Chhakchhuak 2020). As an example, optical character recognition is frequently excluded from classifying as AI, since it has become a standard method (Alagappan et al. 2018; Dwivedi et al. 2019). AI machines are capable of more than just understanding human speech and beating human opponents in strategic games (such as chess and go), as they can also handle imperfect information in games such as poker, self-driving cars, and intelligent routing across content delivery networks (Almesafri and Habes 2023; Dwivedi et al. 2019; Vaishya et al. 2020; Wahl et al. 2018). Since its inception in 1955, artificial intelligence has experienced several waves of optimism, followed by disappointment and funding losses “ (known as an "AI winter") (Houssami et al. 2019; Huang, Rust, and Maksimovic 2019), this was followed

by renewed funding, new approaches, and success (Loh 2018; O’Sullivan et al. 2019). “Artificial intelligence attracted worldwide attention once again in 2015 following AlphaGo’s success at beating a professional Go player (Jin et al. 2020; Pesapane et al. 2018). AI research has been split into subfields for most of its history with very little communication between them (Le et al. 2019; Mehr, Ash, and Fellow 2017). The differences between these sub-fields are influenced by technical factors (e.g. “robotics” or “machine learning”), the use of particular tools (“logic” or artificial neural networks), or deep philosophical differences (Deng et al. 2020; Zanzotto 2019). “ “ In addition to social factors (specific research institutions or researchers), various subfields have also been established on the basis of research (Rodríguez-Ruiz et al. 2019; Tran et al. 2019). Artificial intelligence research traditionally targets issues such as reasoning, knowledge representation, planning, learning, natural language processing, perception, and manipulating objects (Ke et al. 2020; Kumar et al. 2019). Long-term objectives of the field include general intelligence (Emanuel and Wachter 2019; Jordan 2019). In addition to statistical methods and computational intelligence, traditional symbolic AI techniques are also considered (Hogarty, Mackey, and Hewitt 2019; Lee et al. 2017). The field of artificial intelligence uses a wide variety of tools, including search techniques, mathematical optimization, artificial neural networks, and statistical, probabilistic, and economic models (Ahuja 2019; Fazal et al. 2018). Many disciplines are involved in AI, including computer science, engineering, mathematics, psychology, linguistics, philosophy, and many more. A machine can be made to simulate human intelligence based on the assumption that human intelligence can be described so precisely (Guo and Li 2018; de Sousa et al. 2019) “

“This raises some philosophical questions about the mind and how it is ethical for artificial beings to possess intelligence similar to humans. Such philosophical questions have been explored throughout history in myths, fiction, and philosophies (Jobin, Ienca, and Vayena 2019; Savadjiev et al. 2019). AI is also considered a danger to humanity if it continues to advance unchecked (Morris, Schlenoff, and Srinivasan 2017; Parikh, Teeple, and Navathe 2019). There are those who believe that AI will create mass unemployment unlike past technological revolutions (Nemitz 2018; Sharma et al. 2017). A resurgence in AI has occurred in the twenty-first century thanks to advances in computing power, data volumes, and theoretical understanding. These technologies have become integral parts of the technology industry, helping to solve many challenging problems in computer science, software engineering, and operations research (Băjenescu 2019; Schneider et al. 2020). “

### **The Characteristics of the UAE government sector workers**

As the country began to develop rapidly, existing skills and education levels of the local population couldn’t keep up with the demands of the rapidly growing economy. This led to an increase in the need for imported labor (Olorogun et al., 2020). A total of 36.5 percent of the country’s workers are from India and 12.7 percent from Pakistan (Dowlah, 2020). The population of other Arab nations in the UAE is estimated at 12.7% (Waxin, and Bateman, 2016). It is not possible for expat employees to change employers without a letter of “no objection” from their prior employers, effectively restricting their mobility (Toledo, 2013). Because United Arab Emirates relies heavily on expatriates from around the world, HR

functions must provide efficient administrative processes, as well as effective diversity management, diversity management policies, and integration policies (Tahir & Oasis, 2020). Other parts of the labor market are dominated by Emirati nationals. In 2010, the native population accounted for only 11.6 percent and the labor force for 4.2 percent of the total population (Chaloff & Hervé, 2020). Although many private sector workers in UAE prefer government employment because of higher salaries, shorter working hours, and better fringe benefits, private sector workers benefit from a variety of rules that increase their pay and provide job security (Facchini et al., 2020). The two segments of the market are complementary in many cases because Emirati workers and expatriates are not substitutes (Soltani & Wilkinson, 2020). Emiratis are not socially acceptable for many jobs at the low-skill end (Fargues et al., 2019). Human resource managers must design and implement artificial intelligence on improving job performance among government sector workers that are effective for recruiting, developing, and integrating UAE nationals and women at their organizations (Warner & Moonesar, 2019).

### **Artificial intelligence and employee selection**

According to the study "Artificial Intelligence and Ambient Intelligence" by Matjaz Gams and Irene Yu-Hua Gu (2019), it is concluded that artificial intelligence and ambient intelligence are connected, in which he comments that the success of artificial intelligence is through communication and information technologies. Both depend on and influence human evolution.

On the artificial intelligence side it is known as the intelligence that is demonstrated by machines while in ambient intelligence it is known as invisible or missing machines. This is because it focuses on an environment where society can interact obtaining benefits. A great example is a smart home, it should be noted that artificial intelligence is also incorporated. Other examples such as smartphones that some have the Siri system or cars that can drive themselves, etc. It is evident that on a day-to-day basis we are surrounded by technology and thanks to that the environment is changing (Habes et al. 2021, 2023; Tahat et al. 2023). According to the study "What is the right profile for getting a job? A stated choice experiment of the recruitment" by Stefan Eriksson and Per Johansson (2016), the behavior of recruitment professionals was evaluated through their hiring processes. The study is made in Sweden. That is why an experiment is carried out on 426 employees, sending them a questionnaire, then asking them to describe a former employee of their company, one who has voluntarily retired from work. As a conclusion, there is high discrimination in the selection processes (religion, gender, race, nationality, etc.). And so that it can be eliminated or reduced, a conclusion was reached that with a 50% reduction in salary, it can become indifferent. In other words, an employee with the undesired characteristics of the employer can be hired, but only by reducing the salary in the job offer to 50%. According to the study "A study of the recruitment and selection process: SMC Global" by Neeraj Kumari (2012), the objective is to identify the effect on the recruitment processes and methods of the SMC Global organization. By using structured questionnaires sent to a number of 30 employees in the HR area. As final results, it can be concluded that the organization considers the use of job portals as important, it is a means by which it is feasible and effective. Hire employees. Another successful method is the job

references of the candidates, it serves to obtain greater knowledge of the employee in his work environment. According to the study "Implications of Artificial Intelligence on Quality of Life" by Hassan Essoussi (2019), the great technological advance that is occupying human life was investigated, being artificial intelligence through the creation of robots. These same machines have characteristics such as the ability to make decisions just like humans. However, it is written in this study that this technological advance has great disadvantages as it would destroy the human world.

However, technology will continue to advance and it is undeniable that artificial intelligence prevails, therefore, there are 4 observations that must be taken into account:

- a) Greater importance in legal regulations that regulate protection against any damage that may be caused by the use of artificial intelligence, there must always be someone responsible.
- b) The state must supervise the creations of these technological advances.
- c) Authorities of various countries must protect the stability of human beings, not let them reach extinction when robots take control and destroy human life.
- d) Developers and scientists must work on the parameters and vision of artificial intelligence, in order to be updated on this event.

According to the study "An assessment of the Challenges facing recruitment, selection and retention process in small industries in Mwanza Region" by Dr. Janes Samuel (2018), it sought to find out if there are good practices in the Mwanza region in the areas of recruitment and selection. Therefore, interviews were conducted with 149 people who work in RR. HH, only in small companies. Thanks to the results it was possible to obtain that there is a great disadvantage in small companies. There is no effectiveness in the selection processes, seriously affecting the human resources area. One of her recommendations is that the government itself take control and support the improvement of small businesses with the necessary resources so that there is greater efficiency in the area. In the study "Recruitment and Selection Process" by G. Karthiga, R. Karthi and P. Balaishwarya (2015). In this study, 100 surveys were conducted to determine if age with skills and hiring method are related. In conclusion, it turns out that the three branches are positively related. This leads to understand that at the time of recruiting and selecting a candidate, the requirements for a job position are being analyzed by age, skills and it will depend on the method of hiring, whether it is a temporary or permanent job. According to the study "Transformation of HR Practices: Recruitment and Selection" by Linta Susan Daniel (2017), there are great changes in the selection processes, the great advance being the use of the internet. It is considered that through the internet or social networks the selection process will be more effective and easier to carry out by being able to cover a greater number of competent candidates and there will be greater opportunities for small companies since large investments will not be needed. In the study "Cost/Benefit Analysis- a tool to improve recruitment, selection and employment in organizations" by Nicoleta Valentina Florea (2013), the importance of human resources in organizations and the low cost they seek when implementing processes are emphasized. Recruitment and selection. But, if a company wants



to have good practices in the area, it will have to evaluate the cost. The study is carried out in Romania, Dambovită, presenting the costs of the organizations on their recruitment and selection activities. Being these as low performance when hiring an unsuitable candidate for a position. It is concluded that in the city of Dambovită, the organizations do not use or do cost and benefit analysis, the respondents do not give importance to benchmarking, which could generate an interesting analysis given the strengths and weaknesses that the organizations have, it would help to make crucial decisions that benefit in the long run. In the study "Employee recruitment and selection procedures of NGOs in Bangladesh: A study on BRAC" by Rakib Ahmed (2013), answers about career lines were sought professionally in non-governmental organizations, mainly, BRAC is investigated, but the final responses will provide assistance to various Asian companies. Questionnaires are made to 30 employees and in the same way interviews are carried out with questions related to recruitment and selection. As a final result, it is obtained that large NGOs have knowledge and implement good practices in HR. While small and medium-sized NGOs do not contain good practices. On the other hand, BRAC does have a good human resources process, including the importance and priority it generates in the career lines for all its employees. In this study "Will artificial intelligence take over human resources recruitment and selection" by Bilal Hmoud and Varallyai Laszlo (2019), the position of human resources in organizations was presented, emphasizing aspects of recruitment and selection, generating knowledge about artificial intelligence within human resources. In considering whether there is a probability that this technology provides solutions to problems that occur in HR. It can be concluded that artificial intelligence promises great results towards the selection area, optimizing times in searching and filtering candidates, it would improve the process of hiring workers and there would be no human bias. Thus, with artificial intelligence, human resources professionals would focus on the strategic part, with this there would be greater efficiency and acceptance.

In this study "Research Paper on Artificial Intelligence" by Pooja Agarwal, Neelara Sharma, Pooja Yadan, Ruchika Uniyal and Swati Sherma (2013), he dealt with the consciousness of humans by creating machines that act like them. There are several areas that are programming such as role-playing games, expert systems, natural language or robotics. There is currently no machine that has all these branches built in. There are great benefits if we relate it to administrative tasks, but there comes a time when the machine cannot have feelings or emotions like humans. For now there are machines capable of playing and winning chess with other human users. Later, more dazzling creations would be presented for the human future. It is argued that in this study "Artificial Intelligence and Human Thinking" by Robert Kowalski (2011), artificial intelligence applies its use in various areas. A programming with artificial intelligence on decision theory, decision making and our human behavior was studied. It can be concluded that in the study there are two ways to use artificial intelligence, being possible that to improve our decisions, it is by using artificial intelligence.

## **Artificial intelligence with Integrity and Employees' Performance**

According to Klaus Schawb (2017), it was extremely important to mention that there are technological changes that can impact the lifestyle of people in their work and personal environment. This is where the stage of the industrial revolution is born, being the protagonist, artificial intelligence. In this theory he highlights that this technology will bring success and satisfaction to all sectors. Since it will solve complex tasks quickly and autonomously, this would help make better decisions and there would be less human error or bias. However, there is some uncertainty about this issue since humanity must be made aware that it is not something negative to have such an impressive technology in our lives. The idea is still being raised that it would eliminate jobs. Artificial intelligence applies, mostly, in situations where there is a lot of paperwork or where the work is routine this is where the selection of personnel would form a close relationship with this technology. Cases such as the Unilever Company already use this technology and it is no surprise that there are large numbers of applicants, with approximately three thousand people attaching their resumes to be evaluated (Mayte Rius, 2017). Unilever uses artificial intelligence for its digital selection. They do not focus only on studies or previous experience, but on how one performs in the workplace. And they do it through a list of online games where agility, problem solving, adaptability, how the applicant makes decisions is evaluated. Highlighting the most important part is that they also conduct online interviews. This new technology is the protagonist in this selection stage. Therefore, artificial intelligence helps and brings very positive benefits. If a comparative table is made about online interviews. The first handled by AI and an interview by selection professionals.

The main thing is that there will be no prejudice, that is, gender or age will not be appreciated, and there would be no human bias. The evaluation would be transparent and therefore, the selection process will be standardized with this new methodology when using this technology. In this way, in companies where the selection process is massive and in which it is desired to search for the ideal candidate, artificial intelligence provides benefits and can be considered necessary to carry out searches and selection of personnel more quickly and efficiently, in addition to be considered as a competitive advantage for user companies.

## **Employee Integrity and Management**

Existing literature directly links employees' integrity with the organizational integrity. In other words, integrity as an overall ethical concept, requires much more just obligating the organizational rules and ethics. In this regard, the role of organizational leaders and Human Resource Managers is of greater significance as they can ensure employees' and organizational integrity in a better possible manner (Payne 2019). For example, (Rahim, Omar, and Kamaruddin 2020) cited an example of the relationship between employees integrity and their organizational citizenship behavior and performance in Malaysia. As noted that, Malaysian organizations pay a special consideration in order to ensure employees' integrity. It is notable that, Malaysian organizations pay a special consideration to their employees as organizational asset and their Human Resource Managers consistently look for the policies and strategies that not only employees' integrity but also work for their well-being. Thus, these organizational managers acknowledge and fulfill their responsibilities to ensure employees' integrity in a best

possible manner. As a result, these organizations are successfully seizing their reputation and also availing a maximum benefit from their satisfied workforce individuals.

As noted by (Ekberg 2017), sometimes organizations have to face radical challenges and changes that adversely affect its norms and workforce performance. In such a situation when uncertainty to confront and handle the problematic situation looms, employees having capability to face the challenges, follow the ethics, keep the limited resources under consideration, and overcome the difficulties can successfully handle the relevant situations. Such problems not only highlight the workforce talent that is further polished and developed by the organization, also it indicates the extent to which employees' integrity has remained as a crucial consideration for the Human Resource Managers.

**Table 1: Summary of the Literature Regarding the Relationship between Employee Integrity and Management**

Author and Date	Source	Design/Method	Summary
(Çelikdemir and Tükel 2015)	Procedia - Social and Behavioral Sciences	Case Study, Qualitative Interviews	The role of Human Resource managers is important who first ensure that the organizational ethics are according to the needs and interest of the employees, that are further adopted by the employees as prescriptive organizational norms.
(Ponomarenko 2016)	Research Repository of Phillips Graduate University	Case Study, Review Method	Today, when organizations actively decided policies based on different approaches, these approaches also demand for the management individuals to adopt the same approaches for the betterment of the organization.
(Ekberg 2017)	Research Repository of Jonköping University,	Case study, Quantitative method	Problematic situations and difficulties not only highlight the workforce talent that is further polished and developed by the organization, also it indicates the extent to which employees' integrity has remained as a crucial consideration for the Human Resource Managers.
(Rahim et al. 2020)	Journal of Critical Review	Case study, Quantitative method	Malaysian organizations pay a special consideration in order to ensure employees' integrity. It is notable that, Malaysian organizations pay a special consideration to their employees as organizational asset and their Human Resource Managers consistently look for the policies and strategies that not only employees' integrity but also work for their well-being

Today, when organizations actively decided policies based on different approaches, these approaches also demand for the management individuals to adopt the same approaches for the betterment of the organization. However, these approaches do not emphasize a direct pathway to ensure the organizational development, instead they highlight providing better opportunities and ethical obligations to the workforce individuals for ensuring organizational goals



attainment (Ponomarenko 2016). A study conducted by (Çelikdemir and Tukul 2015) also examined the proposed relationship between management and employees' integrity. The researchers adopted interview method and selected the respondents from Turkey. Results indicated that, the selected individuals expressed a strong compliance with the organizational ethics as a part of their own ethical consideration. However, the notable point remained the role of Human Resource managers who first ensured that the organizational ethics are according to the needs and interest of the employees, that were further adopted by the employees as prescriptive organizational norms.

## CONCLUSION

Using AI and its technology to manage information in an electronic format will result in a significant increase in organizational effectiveness, particularly in terms of various resources such as time and money. Administrative operations entail a large number of activities, putting a strain on every department. However, digitalization-related activities have the potential to reduce employee workloads, improve employee performance, and increase the amount of work done, which would otherwise be done manually in the UAE. Change Performance Appraisal is, first and foremost, a convincing and basic procedure through which change agents gain a knowledge of a change event. In the AI implementation process, performance appraisal will be anticipated to aid in the development of a clear picture of what has to be accomplished and why the strategic plan is required. This makes a case for the strategic plan's urgency prior to implementation, for forming broad coalitions, for empowering people to implement the strategic plan, for carefully monitoring and communicating the strategic plan's implementation progress, and for paying individual attention to those who are having difficulty implementing the strategic plan. Employee Integrity and Management has a good influence on increasing job performance among government sector workers in the UAE, according to the data.

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