

# Trends And Opportunities Of Artificial Intelligence In Human Resource Management: Aspirations For Public Sector In Bahrain

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**Abstract:** The purpose of the study is to draw an understanding of the phenomenon of using artificial intelligence (AI) in human resources, especially in the Kingdom of Bahrain. This research effort provides a future perspective of using AI to better understand the attitudes and perspectives of HR practitioners within multiple frameworks. The study revealed that the Kingdom of Bahrain with the implementation of its vision (2030 vision), the public sector will have a great opportunity to keep up with the digital transformation. This has led to a change in the composition of the workforce within business organizations. It lets women and men have competed in many jobs, and this will add a new burden on human resources management as a result of the demand for gender equality. In addition, this allows for the great integration of the feminist element. It is urged that the applications of modern artificial intelligence (AI) is an essential approach for organizations that work in an inconsistent environment.

**Keywords:** Artificial Intelligence (AI), Human Resource Management, Public Sector, Kingdom of Bahrain

## 1. INTRODUCTION

Artificial intelligence is representing a real breakthrough in business management and will have a profound impact on the way employees work, especially in the human resources and employment departments. Artificial intelligence (AI) technologies have an impact on the management of human resources in a deferent way. For instance, design training and development plans for each employee from background processes, based on big data or data analytics related to employment practices in real time. Artificial intelligence refers to technology used to do a task that requires some level of intelligence to accomplish. In other words, a tool trained to do what a human can do. The use of artificial intelligence, in a practical and effective manner, lead to improve the achievement of the human resource management work tasks, whether in the field of employment, evaluation and performance measurement, HR planning, training needs of employees, job evaluation, or even forecasting the labor market and its needs and indicators [1], [2]. With the rapid change of technologies, we are already beginning to witness a case of creative use of AI in ways that can add more positive benefits to the workflow, according to a review by the industry-leading provider of cloud-based applications for industry-specific applications. On the work of employees in the human resources and recruitment departments. Various companies and organizations have already demonstrated how AI can contribute to improve the quality of care and/or decreasing costs [3]. In about 20 years, 50% of jobs will be outdated or not needed anymore, and healthcare is not an exception [4]. Taking the time to understand the benefits and pitfalls of different methods is just as important as building the right algorithms and data infrastructure

The International Labour Organization (ILO) confirmed in its January 2019 report “there are countless opportunities in the future to improve the quality career options and closing the gender gap and repairing damage from inequality at the global level, and much more”. The report noted that it would have major ongoing economic shifts, which include new technologies, demographic shifts and climate change have adverse and transformative effects on both in our economies and at work. Significant investments are needed to identify the parameters of these transformations are directed to the creation of decent work. Therefore, states should now prioritize long-term sustainable investments that promote human development it protects the planet, in line with the 2030 Agenda for Sustainable Development. The progress of communication technologies improves our ability to measure progress towards achieving sustainable development goals. It provides opportunities to rationalize and improve efficiency and the effectiveness of our activities in all aspects of development. According to the World Economic Forum report, many employees will need to change their skills radically in favor of promoting the world. Especially if companies and institutions want to keep up with the rapid changes caused by the Fourth Industrial Revolution, organizations need to help its employees to learn new skills. Organizations that place talent and skills at the top of their business will grow especially using data analytics. And also will need administrators to learn how to look forward, analyze skills gaps and work on how to align its workforce to meet current and future challenges. According to the study published by the World Summit of Governments in February 2019, future skills have six methodologies to fill the required skills gap in the world of tomorrow. In collaboration with McKinsey & Company, they confirmed that digital transformation and automation will result in finding highly variable requirements in the workplace, and will have growing importance to continue to participate in society. “The results reveal a rich mosaic of potential shifts in occupations in the years ahead, with important implications for workforce skills and wages. Our key finding is that while there may be enough work to maintain full employment to 2030 under most scenarios, the transitions will be very challenging—matching or even exceeding the scale of shifts out of agriculture and

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manufacturing we have seen in the past". More than 800 million employees worldwide will lose their jobs (one-fifth of the global workforce) and be replaced by a robot until 2030, according to the McKinsey Global Institute study conducted in 46 countries and nearly 800 [5]. More than 800 million employees worldwide will lose their jobs (one-fifth of the global workforce) and be replaced by a robot until 2030, according to the McKinsey Global Institute study conducted in 46 countries and nearly 800. In a connected domain, depending on the status quo, 25% of the workforce today will have to find activities by 2020, or to enhance their technological skills and digital citizenship and their traditional skills dramatically, in other words enhancing their interdisciplinary skills. These skills include programming, work flexibility and adaptability, and must primary school students have to be prepared for change because by 2030, 85% they will work in careers that do not yet exist. However, over the next five years 'growth' will be included in the rate of using artificial intelligence as an indicator within global economic growth indicators as well per capita technology of the Fourth Industrial Revolution, along with rates national income, GDP, inflation, and other indicators which measures the state's economic power. To conclude the purpose of the study is to draw an understanding of the phenomenon of using AI in human resources, especially in the kingdom of Bahrain. Which provide a future perspective of using AI to better understand the attitudes and perspectives of HR practitioners within multiple frameworks.

## 2. LITERATURE REVIEW

According to Wang et al [6], "Artificial Intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment". In computer science, artificial intelligence (AI), refer to machine intelligence, intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and others being. Computer science defines AI research as the study of "intelligent agents": "any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals". Kaplan and Haenlein [7] defined AI as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation". Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving".

## 3. METHODOLOGY

To achieve the purpose of this study, we review diverse type of literature reviews. Also, concentrate on expert narrative overview in the context of AI applications in management and HR in particular. For the sake of finding previous studies for the present overview, we utilized electronic databases as the best effective way to begin a literature search, in particular, Science Direct, Google Scholar, and Emerald. As AI is emerging technology, we also embrace some information from international organization reports, magazines, journals, and newspapers. Keywords used for the searching process were as follows: Artificial Intelligence, HRM. Moreover, we considered English and Arabic language papers published since 2012,

pertinent to the focused purpose of the study. Furthermore, we review the application of new practices of HRM in leading organizations globally, then, find the implications on Bahrain's business environment.

## OPPORTUNITIES OF ARTIFICIAL INTELLIGENCE IN HR

In the present era, artificial intelligence is reshaping the ways of how organizations manage their workforce and develop human resource plans in order to increase productivity and raise the level of staff work. On the other hand, it has become imperative that employees' interests, not just in their skills, but also match vacancies and embracing young workers. The use of new science-backed technologies is critical in today's millennial business world, which is experiencing a revolution in work-life balance, work content, and ethics. The new generation of employees is independent and evolves. The most effective way to communicate with them is through technology, including smartphone or self-service applications. These radical changes in the workforce of institutions, enforce to adopt digital transformation in AI to attract the right employees, serve their customers, and compete. In addition, utilize of technology in the workplace should empower employees by giving them access at any time and anywhere to continue their work, in line with the new digital age. At a session of the World Government Summit on Artificial Intelligence in February 2019, where the poles of the global community of artificial intelligence met experts and specialists government officials and policy makers at meetings and sessions of the Global Forum Governance of artificial intelligence, with the participation of more than 250 experts and specialists in various fields AI applications discussed the governance of AI and the organization of its role in the science, engineering, health and communications sectors to build a better future. It confirmed that between 2015 and 2020, there are 35% changes in human skills needed in organizations. Also, the experts emphasized the importance of governments working with different partners and sectors to develop human resources to capable of keeping up the radical transformation that artificial intelligence will bring to the nature of jobs and careers specializations in the future, and launching a comprehensive community and human dialogue on the best ways to create new career paths and quality options invests the human capabilities of integration with the machine and leading automation applications, enhance productivity and cost-effectiveness, promote innovation culture and entrepreneurship. Major trends are clearly emerging due to the rapid changes in HR technology, including privatization, where there is a real opportunity to move away from the way HR programs were introduced in the past. Where one size was great for everyone, now using AI technology we can create specialized environments for each employee so that they have a personal experience that encourages them to use enterprise platforms and provides them with data as they do in their consumer lives, which means that the system recognizes them and helps them improve their work experience. Lifelong learning, as the evolution of automation and the use of technology revolutionizes, full and sustained support for lifelong learning will be essential

for the future success of human resources. It is not just about supporting the human resources of employees when it comes to assigning new jobs or hiring them in new positions, but also about ensuring that employees constantly think about how technology and business changes affect their jobs, and the skills they must acquire to continue their future success. Enterprises must build an infrastructure that supports employees in their efforts to learn new skills to develop their capabilities to cope with changes in the field.

## Recruitment

Many facilities use some form of artificial intelligence in their recruitment process, whether in the selection, evaluation and recruitment process, or using chat robots or others. I was surprised recently by a regional company that can accurately sort thousands of applicants by analyzing a video filmed by the candidate for himself using the tools of personal analysis, an amazing technological advance. Housman [8] explains that "In a service-based economy where the workforce is any company's most critical asset, using the decision support to make the right people decisions can be a source of competitive advantage" (p. 9). Discovering the relevant evidence, with lower costs, in short time and protected manner supports to build momentum step by step, beginning with the recruitment process. From there, AI can be efficiently interlaced into an employee's onboarding program. New employees who may want to connect with others and get more institutional information may not know where to go. Artificial intelligence has contributed significantly to enhancing the efficiency of the recruitment system and attracting competencies in institutions and companies. Monitor employment indicators in real time. In addition, this criteria reduce the disparate impact based on race and ethnicity [9]. When the database is constantly up-to-date, managers have a complete picture of their skills and experience. They can then find the right person to do a task in a matter of seconds. Using predictive analytics tools, managers can create a chart that shows what skills and individuals they will need for the next year and the year after. What an easy and fast way to organize the workforce. In the process of recruitment, instead of manually searching for candidates, what if your system automatically finds and communicates with the right people? What if that system could answer any questions the candidates might ask before the interview? The HR professional will wonder if they know the closest candidates to be suitable for your place of work. If they have a group of employees want to complete over the next year or two? Just enter some information into the rating tool and let it give you all the predictions as if it were one of the Greek city of Delphi. Predictive talent analyzes and employee travel risk models will revolutionize how HR manages to develop workforce plans. The fact that you can automatically enter data into the ranking tool for rich, relatively valuable results in relatively little time is like magic to me. But with the real world being a more complex place, a lot of human intervention is needed to create a travel risk model within a variety of scenarios. To focus on value: When AI tools carry out repetitive manual tasks, employees can focus on tasks that add value to the company, and those that need their skills and expertise to accomplish.

This will enable HR professionals to devote more time and resources to the personal care of other staff.

## Career Path

Artificial intelligent with learning management systems and training modules can be used for many years within the HR sector to provide employees with the right career path and develop their abilities to help them excel in their current positions and enhance their ambition towards higher promotions. In this approach, AI technologies can take advantage of increasingly sophisticated big data technology to mobilize large and varied data sets such as several terabytes of biographies and performance reviews, and tons of historical information, to reveal an improved training and education model dedicated to a specific career level or experience. Many organizations around the world rely heavily on artificial intelligence techniques to train, develop and empower employees, which will enhance the attractiveness of the work environment in those institutions and make it a destination for competencies and expertise. Using sentiment analysis to enhance the role of employees in their career progress. Emotional analysis techniques have been used in recent years to reveal employees' positive and negative feelings and biases towards everything from using social media such as Twitter and Instagram. As many entrepreneurs start venturing and using these technologies, we will see in the coming years the rise of emotion analysis applications to a wider level within the human resources sector to measure employee sentiment, engagement and role. When certain user answers are obtained, the core words from these answers are basically set in a lexicon and the words are given positive or negative scores. The final result will provide many benefits for those companies wishing to make the right effort to apply AI. The journey of using artificial intelligence effectively in HR practices is long but hard work is the price to pay to be a winner. According to a previous report by the World Economic Forum (October 2018), confirmed that the most important challenges facing the future workforce are: availability skills required to keep up with great technological development. It must be ensured that the workforce has the skills to support new technologies. The digital has been dividing the world between developed and developing countries and the gap widened significantly. More severe, not only because of some decisions about the cost of those technologies, but also because of the nature of high-level technical and professional skills required to design operation and maintenance of digital infrastructure, the need to master basic skills and mastery information and communication technology. The message is that skills are important to reduce inequality and reduce the knowledge gap among the labors.

## Talent Acquisition

The appointment of the most promising talents is the most important concern of HR departments. Talent management focuses on the future needs of the organization. It works within a strategic framework for the company's future goals by identifying the positions necessary for growth and the best candidates to fill those positions. If companies want to develop leaders from within the existing talent pool and have the time and resources to develop a useful and

effective talent management program, they will become an essential component of a long-term human capital strategy. There is agreement that talent management is the implementation of integrated strategies or systems designed to improve the recruitment and development of people, retain the required skills and be prepared to meet current and future organizational needs. The rapid global changes imposed a new equation on institutions and companies, which are now required to change their traditional method of recruitment, and adopt a new approach to attract talent and competencies, and maintain within the institution, and keep updated with the latest developments in the world of technology and artificial intelligence, and take advantage of these technologies in the development of a system the work. The human resources departments in many international institutions are becoming increasingly dependent on the recruitment process to attract qualified staff with using AI. Namely, talent acquisition software can scan, read, and evaluate applicants and quickly eliminate 75% of them from the recruiting process. This is a huge benefit as it allows the recruiter to spend more time analyzing and evaluating only a smaller group of eligible candidates. In such circumstances, HR units are drastically increasing the quality of hiring decisions. To support the staff, robots chat instantly answer traditional staff questions, whether the employee wants to know the balance of his remaining leave or other routine queries. The HR Analyst is therefore dedicated to addressing more complex issues. Human resources management can also monitor staff morale closely through regular, near-instant analysis. Here, the Human Resources Department uses several methods to ensure the commitment of individuals through the establishment of good incentive policies.

### Training and Development

With rapid changes taking place in technology, all employees must keep learning and improving professional skills. AI can successfully plan, organize, and coordinate training programs for all staff members. Online courses and digital classrooms are the most common solutions in that regard. The studies revealed that the average employee has less than 25 minutes weekly to train and learn; therefore, it is crucial to use that time relevant to the development of employee skills via an easy way of gaining skills. Team managers can plan digital training opportunities for their team based on skill-gap assessments. Today, computerized information systems allow workers to follow a career path in an easily and surely way and without high costs, through electronic access and from the computer to the database available information about the person can know the skills and competencies of each worker, and how well they develop his/her performance and work, and what positions and roles he has held within the organization throughout his career. There are also some self-assessment informatics applications that allow and assist working individuals by formulating and judging their careers, a range of programs are now available in the market domain such as Career Planning Center and Parys is an expert in human resources management, and Miram is an expert in this field to guide the movements of the worker during the career path [10].

### Performance analysis

The performance appraisal process is one of the major in organizations, all the organization's assets, from the highest management to the employees. In the lowest-paid jobs, the minimum production plan is one of the tools of administrative control. The actual performance is compared to the head of the project. Therefore, the process of achieving the desired objectives and result of the evaluation process. Given AI technology can efficiently source and screen employee in a short period of time and connect their objectives with their performance respectively [11], [12]. Applying AI in HR, help managers to set the adequate objectives and ensure the all departments work in line with the main vision. It enables the manager to rely only on factual information to take informed decisions while carrying out employee performance reviews. During the goal setting process, individuals have fixed targets or quotas they need to achieve within a specific time limit. AI can help to monitor this progress in real time and give feedback instantaneously, based on the status. Motivation is the process whereby individuals are encouraged and motivated to be active in their actions in order to achieve the ruler goals and the motivational policy he sets the Human Resources Officer is critical because of the impression she has on her mind in particular, if workers agree with their ambitions, the incentives may vary in nature and form. Maintaining human competencies is not easy because they involve physical factors morally, it is perhaps the big reason why human talents have migrated from developing countries to developed countries. Her opinion was the absence of a clear policy to maintain these competencies.

### Compensations

It is now possible to compile lists of wages and remuneration through a computer, software applications are available today help to speed up the evaluation process and quality. Specialized in where there are currently programs in this field working on the calculation of wages assess the performance individuals especially for large or giant organizations. These systems have also contributed to the characterization and maintain justice in awarding rewards like a system it contains a set of programs that help pension funds calculate all types of compensation.

## 4. RESEARCH IMPLICATIONS AND CONCLUSION

Economic studies emphasized, there is an urgent need to embrace the human resources with regard to the impact of artificial intelligence and automation, as there is a significant impact on the facilities and their work that support the digitization of human resources, and human resources workers must be fully prepared to support the digital transformation within their facilities, otherwise the human resources would be at risk lagging and seeing other departments, there is a great opportunity for human resources to align with the facility and add great value by becoming more digital and data-based, we hope to see facilities in our beloved kingdom in the coming years support the digitization of human resources And see how effective its transformation is [12], [13]. The current study

describes the impact of artificial intelligence on human resources and presents a perspective on this topic. It also addresses how the AI can help to improve the imagination of a transformation and design a new applications experience. After conducting the overview of existing opportunities and possibilities, the main conclusion is clear. AI plays a vital role to shift the HR functions to enter the digital era. Without a doubt the increased use of technology the information within the organization has radically changed the types of business and skills you need some activities, such as training, development and organization, will be increasingly important to adapt to these changes have occurred inside with certain activities and employees may be dispensed especially owners simple skills and routine work. Therefore, the HR should have basic information established based on computer services to overcome the challenge that most large organizations nowadays facing and increase their ability to provide valuable information to management to make informed decisions about human resources. If organizations wish to remain competitive in today's global economy, they will need to look at ways to incorporate conversational AI for HR transactions in their decision-making process. Organizations should rely on AI to perform administrative duties so that HR departments may become more efficient. HR professionals will be able to focus more on strategic planning on an organizational level [14]. Kingdom of Bahrain with the implementation of Vision 2030, the public sector has a great opportunity to keep up with the digital transformation. Given the IT facilities in business management, this has led to a change in the composition of the workforce within the organization. It lets women and men have competed in many jobs, and this will place a new burden on human resources management as a result of the demand for gender equality, this also allows for the great integration of the feminist element. This requires senior management to prepare their plans (sponsorship), so the HR department should be ready to respond to the employment of the opposite gender. Employees will be affected by the AI function in multiple ways, so it is important to focus on employee needs and possible outcomes. However, the adoption of AI in human resource functions can help in reducing the amount of time HR professionals spend on administrative tasks, reducing the burden of shared service centers and help desks by performing HR transactions and providing answers for routine queries, recruiting and retention and measuring ROI.

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