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Empirical Study on Impact of Artificial Intelligence on HR in Aimil Ltd Bengaluru

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Abstract: *This competitive world demands for the human resources as a mandatory asset in order to improve the organizational performance. The organizations have to strive for adopting the innovative Human Resource practices to improve their performance and be different among its competitors. In near future, Human Resource Management is moving from the traditional way of Human Resource practices to more advanced progress like automation, augmented intelligence, robotics and Artificial Intelligence. Artificial Intelligence has been proved as life – changing for us. From automation of mundane and time-consuming tasks, to the augmentation and amplification of human capabilities, Artificial Intelligence has the potential to drastically transform the way we live and work. For Human Resource, this is not just an opportunity but also an urgency to adapt and adopt. The Human Resource professionals today are more towards optimizing the combination of human and automated work to gain a simple and intuitive work environment. It provides them enough time to deliver the enhanced employee performance. This paper focuses on the analysis of the literature review on the role of Artificial Intelligence on Human Resource Functions and how they will train and re-transform their workforce in understanding the Artificial Intelligence and collaborating and working with Artificial Intelligence and robotics. This study helps to identify the most, moderate and least addressed Human Resource functions where Artificial Intelligence is applied. The study concludes that the most addressed Human Resource function is recruitment process and there is a gap of study in the moderate and least addressed areas where we can conduct further researches.*

Keywords: *Artificial Intelligence, Human Resource, Performance, Automate, Functions.*

1. INTRODUCTION

In this competitive business world, for any kind of business the human resource (HR) is an mandatory asset input for improving the organizational performance. To be successful, organizations have to strive for higher customer – satisfaction which is vital key for their survival, and to achieve this, organizations have to adopt innovative HR – practices to improve their performance and be different among its competitors. In near future, HRM is moving away from its foundation administrative functionality like recruitment, selection, appraising to more advanced progress like Automation, Augmented Intelligence, Robotics and Artificial Intelligence that are completely redefining and reshaping the way of their workforce characteristics and organizations. At, present the buzz word is AI and how it is completely transforming the human resources, and how AI is seizing millions of jobs globally in each and every sector. However, HR is not traditionally associated with this emerging technology, failure to deploy AI with HR practices could prove to be a dreadful sin which makes the organizations difficult to grow big and survive in this globe driven by these advanced technologies and machines. Global workforce is completely threatened by AI and advanced self-learning machines and they are wiping away the interference or involvement of humans in each and every aspect. But, in reality any advanced technology that is created and used for the benefit of humanity not for its destruction. To compete with AI and advanced machines the real challenge now lies within the respective HR – departments that how well they train and re-transform their workforce in understanding the AI and collaborating and working with AI & Robots. AI technologies offers significant opportunities to improve HR functions, such as self-transactions, recruiting and talent acquisition, reporting, access policy and procedures. We are living in an era in which AI capabilities are reaching new heights and have a major impact on how we operate our business. Human resources executives have faith that merging into AI into HR administration functions will benefit and improve the overall employee experience.

Objective Of the Study:

The objectives of the study are as following:

- To identify the impact of Artificial Intelligence on Human Resource Management

- To identify the current Artificial Intelligence technologies being applied in Human Resources Management.
- To understand participant's perception about Artificial Intelligence
- To determine the factors affecting Artificial Intelligence.

Scope Of the Study:

This study enables to have fair knowledge about the various Artificial Intelligence technologies being applied in human resource management practices and to understand the respondent's perception about Artificial Intelligence technologies in Human Resource Management practices. An attempt is made to find out the impact of Artificial Intelligence-powered Human Resource factors on the work-life balance and impact of Artificial Intelligence on Human Resource Management.

2. LITERATURE REVIEW

CuneytDirican (2015)looked on the impacts and the disruptive changes of the artificial intelligence and robotics on the economics and the business which are earlier stages of the economy. The growth of AI is not only focused or depending on any particular area. Rather than this, we can see its influence in every area of industry. This conceptual and hypothetical paper is aiming to address and discusses the future of robots, mechatronics and AI in different perspectives. AnupamJauhari (2017)focused on the implementation of AI in the key operational areas like recruitment, performance management, payroll etc. He also discussed the advantages of implementing AI and ML in HR and barriers for adopting AI in industry. To redefine performance management, the HR leader can count on real-time data to measure employeeengagement and identify the problem areas. Through implementing AI and ML in HR, the HR leaders can individualize corporate training, evaluate the career path of each employee and prepare them for career advancement and it also simplifies the recruitment procedures. Swetha Jain (2017) studies the role and advantages of using AI in HR functions like recruitment, talent engagement, career development and training activities and have also identified the challenges of AI in HR. AI can help in providing customized career development programs. The challenges of implementing AI is, it is difficult for people to learn and adopt AI. The employees must be trained in digital skills. The highly competitive global market is forcing the multinational companies to adopt AI. Manju Amla et al (2017)examines the concept of digital transformation in HRM and how it benefits the various HR functions and its employees. The use of AI technologies like HR chatbots, machine learning, robot process automation makes HR functions faster, smarter and efficient. This paper also studies the challenges or barriers of digital transformation that companies face and provides a solution to overcome these challenges. Lochan Sharma Tandon et al (2017)studies the emergence of AI in HRM and the benefits of AI. The author has used secondary data for his study. The study says now the employers can do their works through machines effectively, still, skilled workers and professionals are required to tackle the systems. Ruby Merlin et al (2018) identifies how AI transform the HR functions. The author has collected the source from secondary data. The future of HR will most probably involve a human-machine collaboration. Now, most of the HR functions rely upon AI and brings automation which reduces the workload and saves time. The study concludes that the organization should not hesitate to adopt AI instead they should upskill the employees. Barbara Van Pay (2018)mentions about the advantages of AI and some data about the organizations where AI is implemented successfully. Many of the organizations are scared of letting a non-human entity to handle certain procedures of the business, but the day when AI robots could take over the world is not far from today. The major area where AI is used in HRM is recruitment. By using this intelligent style method much more online data can be collected and all these will enhance the recruitment process and made it much easier. Faiyaz Md. Iqbal (2018)identifies the impact of AI in recruitment, training, development and retention of employees in the organization. The study says most of the organization are still using the traditional method of recruitment. AI makes the recruitment process faster, reduces workload and cost associated with it. Machine learning AI provides training programs for employee.

Statstical Tools Used:

- SPSS
- ZOHO RECRUITMENT TOOL

3. RESEARCH METHEDOLOGY

The research design used for the study is Descriptive research design which is used to describe the characteristics and features of the samples taken for the study. It does not answer question about how/when/why the characteristics occurred. Rather it addresses "what" question.

Perccentage Analysis:

Percentage analysis uses SPSS tool for searching the desired candidates for the requirements. Designation of Respondents

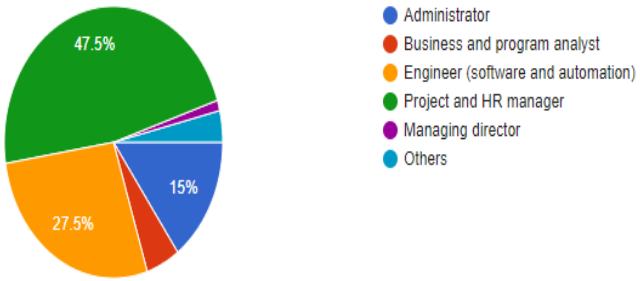
TABLE 1. Table showing the designation of respondents

Sl. No	Designation	No. of Respondents	Percentage
1	Administrator	12	15
2	Business and Program Analyst	4	5
3	Engineer (Softyware and Hardware)	22	27.5
4	Project and HR manager	38	47.5
5	Managing Director	1	1.2
6	Others	3	3.7
	Total	**80**	**100**

Interpretation:

From the above table, it is inferred that 15% of the respondents were Administrator, 5% of the respondents were Business and Program Analyst, 27.5% of the respondents were Engineer (Software and Hardware), 47.5% of the respondents were Project and HR manager, 1.2% of the respondents were Managing Director and 3.7% of the respondents were Others

Majority of the respondents were Project and HR manager.



4. ZOHO RECRUITMENT TOOL

Zoho Recruit is a cloud-based hiring platform that gives HR teams and recruitment agencies the digital tools needed to fill roles quickly and efficiently. Zoho Recruit's world-class recruitment software will help you find, evaluate, and communicate with candidates for any role. That means a more efficient hiring process and new hires that add more value to your organization or your clients. Zoho Recruit comes with both an Applicant Tracking System (ATS) and a Candidate Relationship Management platform, often called a recruitment CRM. While an ATS focuses on faster sourcing and better hiring processes through automated workflows, a recruitment CRM has tools that to help you nurture passive job seekers and build relationships with candidates. Combined, they allow you to provide an exceptional candidate experience and better-quality placements without sacrificing efficiency or speed. After the statistics are given as input to the tool, it determines the efficient candidate who is fit for the role.

Findings:

The most prominent use of AI in HR is seen in the talent acquisition processes. From screening candidates, maintaining databases, scheduling interviews, and answering job seekers‟ queries, it reduces manpower spent on mundane tasks. It reduces hiring time significantly, allowing the HR team to be more productive in other areas like sourcing, recruitment marketing, employee management, and more. The AI-enabled screening will help in picking out the candidates with the most suitable skill set, relevant experience that fit the company's requirements.

Suggestions:

Researchers would like to suggest that companies devise a simple and concise organizational strategy to integrate AI into their recruitment process, based on the results of this study. Researcher would like to recommend that recruiters should replace easy and time-consuming tasks with smart AI technology, allowing recruiters and HR managers to concentrate more on strategic functions. Furth more, developers of smart AI technologies needs to develop such platforms keeping in mind the budgetary issue of small to medium organization as well, so that they can adopt AI in their recruitment process.

5. CONCLUSIONS

Integration of HR practices with AI based applicants definitely have a stronger impact in enhancing the organizational performance. Even though AI applications may not possess the abilities like humans the emotional and cognitive abilities, but these powerful AI based HR applications can analyze, predict, diagnose, and it is powerful resource for any kind of organization. AI-based HR applications raise employee productivity. It has the ability to analyse, predict, diagnose and become a more capable resource while focusing on employee needs and outcomes.

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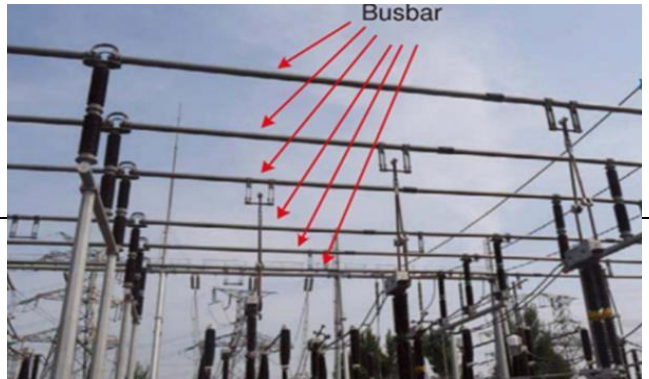
1. MODELLING OF BUS SYSTEM

In order to design a bus system, the following components are required.Components Involved:

1. Bus bars
2. Asynchronous generator
3. Transmission lines
4. FACTS device (SSSC)

Bus bars: In a power system, a bus is a vertical line that connects various parts of the system, including generators, loads, and feeders. These buses are an essential component of power systems, as they help to ensure that electrical power is distributed effectively throughout the network. Buses are connected to four different parameters that determine the



performance of the power system. These parameters include the magnitude of the voltage, the phase angle, the active or real power, and the reactive power. Voltage magnitude refers to the strength of the electrical potential at the bus, while phase angle refers to the difference in phase between the voltage at the bus and a reference voltage. Active power, also known as real power, represents the actual power being delivered to the load, while reactive power represents the power needed to maintain the voltage at the bus. Together, these four parameters help to ensure that the power system operates effectively, delivering reliable electrical power to consumers while maintaining the stability of the network. As such, buses play a critical role in power systems and are an essential consideration for power system engineers and operator

FIGURE 2. Bus bar

AC synchronous generator: An AC synchronous generator, also known as an alternator, that converts mechanical power into AC electric power through electromagnetic induction. A specific generator with a 200 MVA, 13.8 kV, 112.5 rpm rating is connected to a 230 kV, 10,000 MVA network via a 210 MVA Delta-Y transformer. A three-phase to ground fault occurs at t = 0.1 s on the 230 kV bus and is cleared after 6 cycles (t = 0.2 s).

Transmission Lines: A transmission line is a conductive system that carries electrical signals and can be modeled as a two-port linear network. It can also generate electricity by converting mechanical energy, and the Transmission Line block allows it to be modeled as a stub or stubbles line. Compensating transmission lines using series capacitors can provide several advantages to the power system. One of the most significant benefits is an increase in the base-power flow and load ability of the series-compensated line. By reducing the inductive reactance of the transmission line, series capacitors can enhance the line's power transfer capacity. This increase in base-power flow can enable the system to support more load without the need for costly lineup upgrades. However, there are additional losses in the compensated line due to the improved power flow. The series capacitor increases the line's loading, which leads to an increase in the line's resistance losses. Therefore, when designing the series compensation system, it is essential to consider the trade-off between increased power transfer capability and increased losses carefully. By optimizing the design of the series compensation system, power system operators can achieve the best balance between increased power transfer capacity and acceptable levels of losses, resulting in a more efficient and reliable power system. Series compensation offers several advantages to power systems, including enhanced power transfer capability, improved voltage stability, and increased system resilience in case of line outages. Moreover, it can maintain power flow stability in case of line outages by enabling quick rerouting of power to other lines while keeping voltage stability intact, thereby increasing the responsiveness of power flow. Nonetheless, the possible downside of increased losses in the compensated line should also be considered when assessing these benefits.

FACTS device:

Introduction to SSSC: SSCCs belong to the group of series controllers that are categorized under FACTS devices. There are two types of SSCCs available: the first one is the traditional SSSC that connects to the transmission line through a transformer, while the other is the transformer less SSSC that links to the transmission line using multilevel inverters, like modular transformer less SSSIs.

Basic Principle: The SSSC, a FACTS device used for power quality improvement, involves a VSC that is connected to the transmission line through a transformer or multilevel inverters. As opposed to the STATCOM, which is connected in shunt, the SSSC is a series device belonging to the FACTS family that employs power electronics to regulate power flow and enhance power oscillation damping on power grids. By injecting a voltage Vs in series with the transmission line, the SSSC can maintain effective control over power flow.

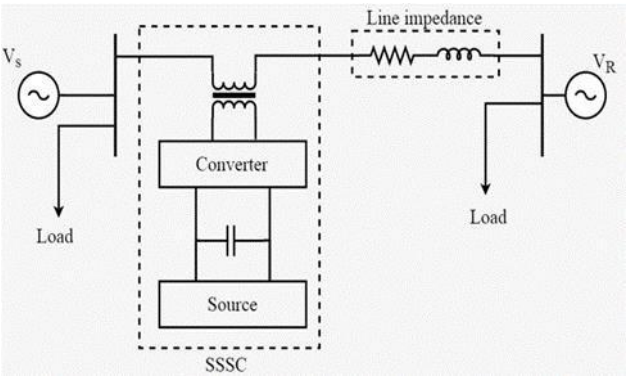


FIGURE 3. A Simple circuit diagram of SSSC device

Working operation: Load flow analysis is employed to assess the voltage profile of a power system, ensuring that every generator operates optimally while meeting the load demandwithout exceeding capacity. If a three-phase fault occurs, the system's stability may be compromised due to the reduction of voltage at the buses. By introducing a Static Synchronous Series Compensator (SSSC), power transfer capability, voltage control, and power flow control can be improved at the weak bus, resulting in better system stability.

5. SPECIFICATIONS

Generator ratings

1. System 1: Sn = 3000MVA, Active Power (P) =1210MW
2. System 2: Sn = 1200MVA, Active Power (P) =950MW
3. System 3: Sn = 1300MVA, Active Power (P) =1076MW