

Impact of Artificial Intelligence to Automate Management of Employee Benefits

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Abstract

Artificial Intelligence (AI) is transforming the way of businesses to manage employee benefits. With AI, companies can automate many of the processes involved in managing employee benefits, including enrollment, eligibility verification and claims processing. This automation can improve the accuracy and efficiency of benefit management, saving time and money for both employers and employees. This study has performed primary quantitative method with survey of 50 employees from Indian retail sector. The SPSS analysis has been done by performing Chi-square test, Sample T-test and Correlation for checking the relationship between independent and dependent variables. One major benefit of AI-powered management is to improved accuracy. By automating processes like eligibility verification and claims processing, AI systems can eliminate human error and ensure that benefits are administered correctly. This can prevent costly mistakes and ensure that employees receive the benefits they are entitled to. The result of this research represents that the impact of AI on the management of employee benefits is significant. By automating many of the processes involved in benefit management, AI systems can improve accuracy, increase efficiency and help the employer's for better understand their employees' needs and preferences. However, the employers must also be aware of the potential risks and challenges associated with using AI and take steps to mitigate them.

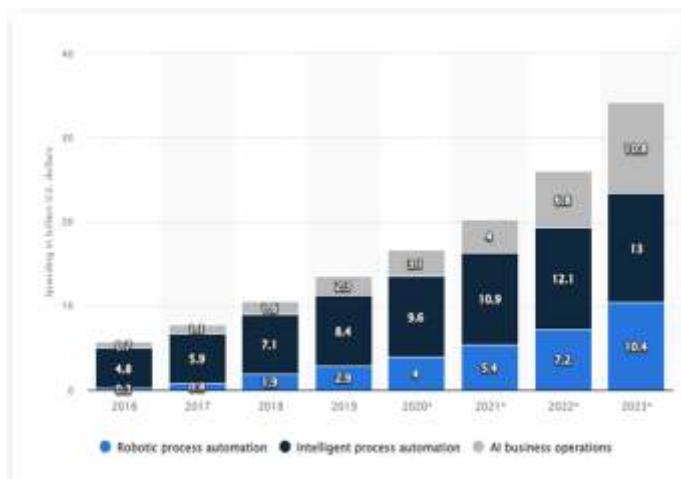
Keywords: AI Management, Employee Benefits, Automation, Accuracy and Challenges.

Introduction

The management makes the plan for the organization according to the benefit of the working environment. The management not only makes the plan for the better performance of the participant but also implements the plan among the employees of the organization (Dash et al., 2019). In recent days the use of Artificial intelligence increasing in the performance of any job. AI can also help employers better understand their employees' needs and preferences. By analyzing data from

employee surveys and other sources, AI systems can identify patterns and trends that can inform benefit design and help employers tailor their offerings to meet the unique needs of their workforce (Chi et al., 2020). For example, if an employer's workforce is largely made up of young parents, an AI system could suggest offering more generous parental leave policies or flexible work arrangements.

Figure 1: Use of AI in the Automation



Source: Statista.com, 2022.

The management of the organization makes plans for the benefits of the organization. They also analyze the lack of resources in the ongoing performance of the organization (statista.com, 2022). After the analysis of these issues, they implement the required resources in the work of the organization. In recent years the managing authority of the organization is adapting the use of artificial intelligence in the performance of the official work of the organization.

The study aims to describe the impact of Artificial Intelligence in the automation of the management of the employees of the organization. But the primary objectives of this research study is to state the impact of AI in the automation of the management of the employees and secondly is to clarify the Challenges in the automation of the employees' benefits.

Literature Review

Artificial intelligence (AI)

AI is an umbrella concept that influences and is influenced by many disciplines such as computer science,

engineering, statistics, philosophy, biology, psychology, mathematics, business and

linguistics (Buchanan, 2005; Kumar et al., 2016). Machines that exhibit cognitive abilities often associated with human minds, such as learning, interacting and problem-solving are referred to as Artificially Intelligent (Fikes & Nilsson, 1971). Automation of repetitive processes in operations and logistics has long been a goal of businesses. Organizations can now adopt AI-based solutions for management activities thanks to recent developments in processing power, the exponential growth of data and new machine-learning algorithms (Brynjolfsson & McAfee, 2017). The technical aspects of AI are at least as vital as, if not more significant than, the future of labour and the future of humanity (Wang & Siau, 2019). In the management area, AI refers to notions for automation and augmentation. While automation indicates that a human work is replaced by a machine, augmentation refers to a strong partnership between humans and machines to carry out a task (Raisch & Krakowski, 2021).

By automating many of the tasks involved in benefit management, such as enrollment and claims processing, employers can save time and reduce administrative costs. This can free up HR staff to focus on more strategic tasks, such as employee engagement and retention (Tussyadiah, 2020). To save time, the management is making the emission of the physical employees in the working performance of the organization. This resulting the removal of the employees from the working of the organization. Therefore, the number of unemployed is increasing. This making the loss of the financial condition of the individuals (Mohammed, 2021). The more the utilization of AI increases the more the economic situation of the country decreases. The issue of this use of AI is majorly impacting the employment of employees. The issue in the use of in the management process of the organization is making the loss of physical employees. The more the utilization of AI increases the more the employees lose their jobs. In the financial condition of the country, the economic condition of the individuals of the country is dependent (Stahl, 2021). The performance of the employees in the financial condition of the make the improvement of the financial

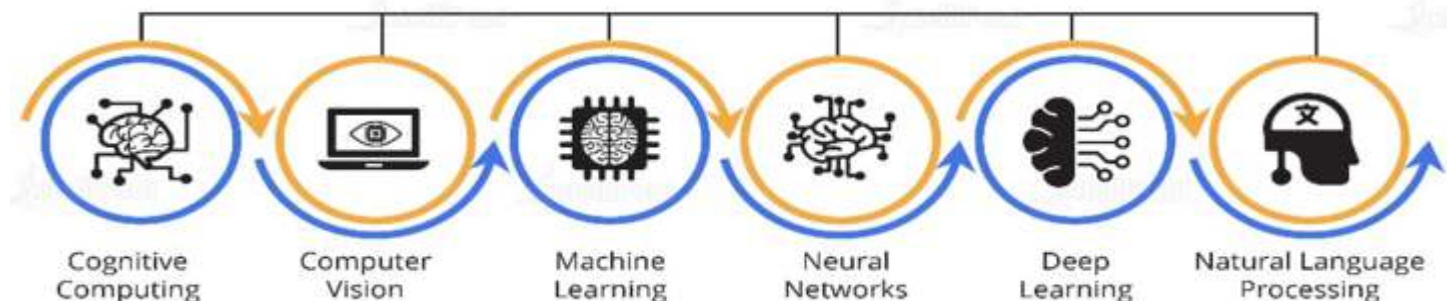
condition of the country. However, there are also potential risks and challenges associated with using AI to manage employee benefits. One concern is that AI systems could make decisions that discriminate against certain groups of employees, such as those with pre-existing conditions or disabilities. To mitigate this risk, employers must ensure that their AI systems are designed and programmed in a way that is fair and unbiased (Agrawal et al., 2019). Another potential challenge is the need to ensure data privacy and security. AI systems rely on vast amounts of employee data to operate, which can raise concerns about data privacy and security. Employers must take steps to protect employee data and ensure that their AI systems comply with all applicable laws and regulations.

In recent days after the breaking out of the pandemic situation in the world. The governing bodies of the country declared the locking down of the social environment of the

country. Therefore, the interaction of employees in the organization decreases thus leading to a decrease in the earning of the employees from the organizational work also decreases (devopedia.org, 2023). After the pandemic situation got the employees started to work on the organizational performance to earn. In that case, the organizational management adopted the use of AI for the performing of the task of the management. This helped them to quickly provide the solution to the work in the working culture of the organization (Budhwar et al., 2022). The management of the organization saw threw benefits of the use of AI in the working process of the organization.

The analysis of the situation in the above data makes a clear presentation of the actual issue of the environment of the organization. These issues are solved by the objectives of the study work.

Figure 3: Concept of AI



Source: Agrawal et al., 2019.

There are various benefits provided by AI, but the main benefit of AI is to solve the ongoing issue that was previously solved by physical labors there are now solved by the User Interface. Thus, the process of the utilization of the user interface makes the work of the management of the organization easier. So, the managing team of the organization makes increase in the utilization of this user interface in the working process of the organization (Wamba-Taguimdjeet al., 2020). Artificial intelligence makes the utilization of many works completed through the digital user interface.

Impact of Artificial Intelligence on the Management of the Employees

Artificial intelligence makes the innovation of new techniques in the managing task of the organization. This makes attraction of the management of the organization for making more jobs performed by AI (Chatterjee, 2021). This makes the performing of the managing task of the organization the performance of the allocated work. This procedure of managing tasks of the organization became easier and more productive with the utilization of this method. The AI makes the analysis and representation of the performance of the AI in the organization and provides the necessary effective solution to that context (Agrawal et al., 2019). The impact of AI in the management team makes a positive impact on the performance and also on the

employees of the organization involved in the working performance of the organization. This makes the increase of the effectiveness and efficiency of the working process of the organization. Thus, the unemployment of physical labors makes them lose their financial condition of them and gradually the economic condition of the country decreases (De Stefano, 2019). Therefore, the utilization of AI will make increases unemployment and the condition of the country decreases.

Challenges of AI in the organizational performance

The system of Artificial intelligence makes the management of the organization face many benefits. In the application of the user interface in the management of the organizational work. Though it has some issues in the application of the user interface as the system of the user interface is quickly responsive also it is high costing so more expenditure occurs in the application of this user interface (Fu et al., 2021). Another reason is that the collection of data is taken from the digital platform so the reliability of the provided data is not possible. These are the challenges faced by the organizations and the employees working in the working performance of the organization.

Methods in the utilization of AI in the automation of employees' benefit

The AI in the performance of the organization managing tasks of making the analysis and the performance of the managing task through digital media. The work efficiency of the management in the utilization of the user interface gets the issue of exact information about the work of the organization (Lakens, 2022). The work in the management of organizational performance makes the analysis of the environment of the organization by the use of AI. This work shows all the possible outcomes of the utilization of the user interface in the managing tasks of the organization. This makes the representation of the actual condition of the managing task of the organization in the utilization of AI. This includes the challenges of managing tasks of the organization in the automation of the employee's benefits (De Stefano, 2019). The management of the organization always focuses on making quick improvements for the organization. The methodologies provided in the work

mitigate the issues faced by the managing team and the employees of the organization using Artificial Intelligence.

Methodology

In the making of the representation of the performances of the organization, this research follows the positivism research philosophy. This analyzes the actual knowledge from the environment of the organization using the artificial user interface. This makes the analyzation of the data based on the situation of the organization. The observation of the environment makes a positive representation of the fact. This study follows the deductive approach. This includes the analyzation of the previous theories and models relating to the topic. This makes the comparisons of the existing theories applied at the time of the research work. The research provides all the missing information for the solution of the issue in the research process. In the conduction of this report the methods of descriptive designing is followed. In this, the representation of the research is made by describing the nature and the situation of the issue. This study makes a systematic presentation of all the possible outcomes of the impact of AI on organizational management. This systematic way of representing the report makes a clear concept of the work.

Total 50 employees who took participated in the online survey and offered their feedback according to questions. In that case, random sampling has been used to get better feedback. The opinion of the study is taken from the organization that is using AI in the management of the organization. For the representation of the environment of the study, the collection of the data was taken from the actual situation of the organization. The collection of the data shows the exact situation of the management of the organization using AI. This help in providing efficient methods to solve the issue quickly. This representation of the data plays a vital role in the analyzing of the situation and also in providing a better outcome of the suggested methods. The work makes a quantitative analysis of the data. This includes the analysis of the mathematical calculation and the statistical representation of the data from the environment of the organization. The proper analysis of the data includes an understanding of the situation of the organization and providing the methods to be applied in the making of the study.

Results and Discussion

Demographic Analysis

The study collected responses from 50 employees of an organization that uses AI in management in India. The responders were asked questions based on their experience in the organization. Among them, the agreed group of

people were from the age of 21-30,31-40, 41-50 and 51-60. Among them, 44% of the responders were male and the other 44% of them were female and the rest of the 12% were from others.

Statistical Analysis

Sample Test

Table 1: Sample Test report

| One-Sample Statistics | | | | |
|--------------------------------|----|-------|----------------|-----------------|
| | N | Mean | Std. Deviation | Std. Error Mean |
| Challenges of AI | 50 | 3.080 | 1.7243 | .2438 |
| Benefits management | 50 | 1.760 | .7160 | .1013 |
| AI automation | 50 | 1.240 | .4314 | .0610 |
| Management Work Easier | 50 | 2.320 | 1.3915 | .1968 |
| AI Automation | 50 | 1.320 | .4712 | .0666 |
| AI-powered benefits management | 50 | 3.120 | 1.1891 | .1682 |
| Increased efficiency | 50 | 1.680 | .8437 | .1193 |

The statistical data represents the mean value of the questions. The mean value of all the questions is greater than 0.5. This value should be more than 0.5 to make it significant. If a mean value is greater than 0.05, then the result is significant. The mean values of the questions in this

survey are significant. In this statistical analysis, there is no missing value so the work of the analysis is significant. The survey is taken from 50 respondents and none of them gave missing responses (Lakens 2022).

Correlation Analysis

Table 2: Correlation analysis

| | | Correlations | | | | | | |
|---------------------|---------------------|------------------|---------------------|---------------|------------------------|---------------|--------------------------------|----------------------|
| | | Challenges of AI | Benefits management | AI automation | Management Work Easier | AI Automation | AI-powered benefits management | Increased efficiency |
| Challenges of AI | Pearson Correlation | 1 | -.050 | -.026 | -.079 | -.133 | .075 | -.052 |
| | Sig. (2-tailed) | | .729 | .856 | .586 | .359 | .605 | .719 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Benefits management | Pearson Correlation | -.050 | 1 | .653** | .488** | .474** | -.301* | .411** |
| | Sig. (2-tailed) | .729 | | .000 | .000 | .001 | .034 | .003 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |

| Correlations | | | | | | | | |
|--|---------------------|------------------|---------------------|---------------|------------------------|---------------|--------------------------------|----------------------|
| | | Challenges of AI | Benefits management | AI automation | Management Work Easier | AI Automation | AI-powered benefits management | Increased efficiency |
| AI automation | Pearson Correlation | -.026 | .653** | 1 | .583** | .518** | -.296* | .271 |
| | Sig. (2-tailed) | .856 | .000 | | .000 | .000 | .037 | .057 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Management Work Easier | Pearson Correlation | -.079 | .488** | .583** | 1 | .619** | -.344* | .350* |
| | Sig. (2-tailed) | .586 | .000 | .000 | | .000 | .014 | .013 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| AI Automation | Pearson Correlation | -.133 | .474** | .518** | .619** | 1 | -.216 | .519** |
| | Sig. (2-tailed) | .359 | .001 | .000 | .000 | | .133 | .000 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| AI-powered benefits management | Pearson Correlation | .075 | -.301* | -.296* | -.344* | -.216 | 1 | .120 |
| | Sig. (2-tailed) | .605 | .034 | .037 | .014 | .133 | | .405 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Increased efficiency | Pearson Correlation | -.052 | .411** | .271 | .350* | .519** | .120 | 1 |
| | Sig. (2-tailed) | .719 | .003 | .057 | .013 | .000 | .405 | |
| | N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | |

The correlation of the statistical data shows the linear equation and the relation of the variables of the statistical representation. That means the variables are related to each other if one changes another also changes. The statistical analysis used Pearson correlation 2 tailed. In this correlation with the benefits of the employees from artificial intelligence, the opinion of the employees in using the AI is .836 which shows a positive relation. The

correlation between the opinion of the employees on the role of AI and the preference of the employees in recommending AI is .856 which is a positive correlation between these variables. The correlation between the automation of AI in the employee benefit and the age of the responders is .40 which shows a positive relation among this variable (Chatterjee,2021).

| Chi-Square Tests | | | |
|---|---------------------|----|-----------------------------------|
| | Value | df | Asymptotic Significance (2-sided) |
| Pearson Chi-Square | 10.028 ^a | 16 | .865 |
| Likelihood Ratio | 11.080 | 16 | .805 |
| Linear-by-Linear Association | .044 | 1 | .834 |
| N of Valid Cases | 50 | | |
| a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .20. | | | |

| Chi-Square Tests | | | |
|---|---------------------|----|--------------------------------------|
| | Value | df | Asymptotic Significance (2-sided) |
| Pearson Chi-Square | 21.983 ^a | 8 | .005 |
| Likelihood Ratio | 22.138 | 8 | .005 |
| Linear-by-Linear Association | 13.633 | 1 | .000 |
| N of Valid Cases | 50 | | |
| a. 12 cells (80.0%) have expected count less than 5. The minimum expected count is .32. | | | |
| Chi-Square Tests | | | |
| | Value | df | Asymptotic Significance (2-sided) |
| Pearson Chi-Square | 27.220 ^a | 16 | .039 |
| Likelihood Ratio | 27.537 | 16 | .036 |
| Linear-by-Linear Association | 5.860 | 1 | .015 |
| N of Valid Cases | 50 | | |
| a. 22 cells (88.0%) have expected count less than 5. The minimum expected count is .08. | | | |

The chi-square statistical analysis is a measure of the difference between the observed and the expected frequencies of the outcomes of a set of events or variables. For question number 3 the value of the chi-square test is 21.983 where the degree of freedom is 8. So, it is significant. In question 4 the person chi-square test value is

16.466 with the degree of freedom 4. In the case of question number 5, the Pearson chi-square value is 27.220 which gives a degree of freedom of 16. As per the above statistical analysis for all the questions chi-square value is effective as well as significant which offers positive results for this report.

T-test

| One-Sample Test | | | | | | |
|--------------------------------|-------------------|----|-----------------|-----------------|---|-------|
| | Test Value = 0.85 | | | | | |
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| Challenges of AI | 9.145 | 49 | .000 | 2.2300 | 1.740 | 2.720 |
| Benefits management | 8.987 | 49 | .000 | .9100 | .707 | 1.113 |
| AI automation | 6.392 | 49 | .000 | .3900 | .267 | .513 |
| Management Work Easier | 7.470 | 49 | .000 | 1.4700 | 1.075 | 1.865 |
| AI Automation | 7.053 | 49 | .000 | .4700 | .336 | .604 |
| AI-powered benefits management | 13.499 | 49 | .000 | 2.2700 | 1.932 | 2.608 |
| Increased efficiency | 6.956 | 49 | .000 | .8300 | .590 | 1.070 |

The T-test of the statistical analysis makes comparisons of the mean values of the groups. It is used to measure the effectiveness of statistical performance. This also makes comparisons of the values of the different groups of data. The t-test value of question number 3 is 12.663 with a mean difference of 2.4 so it is significant and the employees of the

organization get the benefits from AI automation. In question number 4, the t-test value is 12.631 with a mean difference of 3.8 this makes the study significant and the challenges in the organization make it successful.

Table5:ANOVAanalysis

| | | ANOVA | | | | |
|--------------------------------|----------------|----------------|----|-------------|-------|------|
| | | Sum of Squares | df | Mean Square | F | Sig. |
| Challenges of AI | Between Groups | 1.197 | 4 | .299 | .093 | .984 |
| | Within Groups | 144.483 | 45 | 3.211 | | |
| | Total | 145.680 | 49 | | | |
| Benefits management | Between Groups | 8.303 | 4 | 2.076 | 5.555 | .001 |
| | Within Groups | 16.817 | 45 | .374 | | |
| | Total | 25.120 | 49 | | | |
| AI automation | Between Groups | 3.003 | 4 | .751 | 5.524 | .001 |
| | Within Groups | 6.117 | 45 | .136 | | |
| | Total | 9.120 | 49 | | | |
| Management Work Easier | Between Groups | 17.680 | 4 | 4.420 | 2.576 | .050 |
| | Within Groups | 77.200 | 45 | 1.716 | | |
| | Total | 94.880 | 49 | | | |
| AI Automation | Between Groups | 3.480 | 4 | .870 | 5.291 | .001 |
| | Within Groups | 7.400 | 45 | .164 | | |
| | Total | 10.880 | 49 | | | |
| AI-powered benefits management | Between Groups | 7.080 | 4 | 1.770 | 1.281 | .292 |
| | Within Groups | 62.200 | 45 | 1.382 | | |
| | Total | 69.280 | 49 | | | |
| Increased efficiency | Between Groups | 5.013 | 4 | 1.253 | 1.888 | .129 |
| | Within Groups | 29.867 | 45 | .664 | | |
| | Total | 34.880 | 49 | | | |

The F test in the statistical analysis makes the comparisons between the variance of the different values. It checks the equality of the various hypothesis used in the analysis. This makes the comparisons of all the calculated data and the information from variable of the statistical analysis.

Implication and Conclusion of the study

The implications of AI for employee benefits are both positive and negative. AI can increase personalization and efficiency in benefits management, but it also raises concerns about bias and discrimination, as well as data privacy and security (Vrontis et al., 2022). Employers must carefully consider these implications when implementing AI-powered benefits management systems and take steps to mitigate any potential risks. Another implication of AI for employee benefits is increased efficiency. AI can automate many of the tasks involved in benefits management, such as

enrollment, eligibility verification, and claims processing. This can reduce administrative costs and free up HR staff to focus on more strategic tasks.

The management of the organization also adopted the use of AI in their performing task. The Impact of Artificial Intelligence to Automate Management of Employee Benefits is shown. The use of Artificial intelligence in recent days is increasing massively. As the management of the organization is getting the actual and the proper result of the work in less time. Humans and machines interact iteratively as a result of the emerging usage of AI in management. This study concludes that the importance of the utilization of AI in the automation management of employee benefits. Thus, the study shows all issues and the solution to the issues in the performance of the organization.

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